DIVERTIMENTO

Europe: motion, emotion, imagination

HERITAGE ACCESSIBILITY MANUAL

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the European Union

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1 INTRODUCTION

Heritage tourism is a knowledge based activities and local heritage is valued, only if it possesses a widely recognized identity. The European Cultural heritage encompasses everything from prehistory to modern to modern times with tangible, intangible and natural cultural heritage attractions. However in peripheral and remote destinations this diversity is more difficult to be communicated to different target publics as it is subjected to different assessments, run by separate, complicated and bureaucratic systems in each country. Lacking the common denominator for assessing heritage significance means that heritage issues may fail to carry the weight they should in wider policy debates. DIVERTIMENTO, a transnational cooperation project within the COSME PROGRAMME 2014-2020, pioneers a first attempt to investigate and assess heritage significance at spatial, scientific, social, archaeological-historical and spiritual level and communicate heritage values to different audiences

Tourism is a fiercely, competitive, specialized, rapidly easily evolving commercial sector and there are no magic formulas to make it work. Adding to the challenge, a diverse range of actors constitutes the Tourism Industry and, therefore there is no large model that fits all realities. Players include small and large hotels, tour operators, travelling agencies, local guides, entertainment companies, among others. In the Project Area the fundamental key role played by local and regional governments as it is the one establishing the priorities and, in many cases, the marketing and communication strategy for instance through the
licensing and rules. Research undertaken during the development of the DIVERTIMENTO Pilot Projects in 7 countries (GR, RO, BG, MO, UKR, GE, TR) demonstrates 3 major areas of needs:

DISCONTINUITY OF SUPPLY-DEMAND AND STAKEHOLDER FRAGMENTATION

Tourism sells is a destination experience and as such it requires sufficiently broad-based collaboration. The tourism stakeholder map in the Project area is extremely fragmented as:

a) Different institutional/legal structures and frameworks/capacities throughout the EU along with overlapping state-regional-local government responsibilities perpetuate tensions in the tourism policy context (WTO Tourism 2020 Vision; Forecast 2020) and

b) Different perceptions of tourism and tourism resources by different actors at different levels give rise to a complex set of competitive relations between the public-private sector, resulting to a great conflict in the sector to understand global trends of transformations and formulate demand for new skills for new jobs (2011 Skills and Human Capital Summit)

The mismatch between supply and demand is further sustained by old fashioned information distribution and the lack of updated sector skills to address the constantly uprising connected visitor market. In this way the selection and consumption of quality and highly customized tourism products and services is disabled at destination level.

By establishing skills and stakeholder alliances, DIVERTIMENTO addresses both skills mismatches and the stakeholder fragmentation in the heritage tourism sector. In order to ensure that smart skills, professional qualifications, services and products with commercialization potential, DIVERTIMENTO launches and operates an active collaborative scheme from the 3 spheres of economy, society and administration, uniting thus the world of education and the world of work with the policy and decision makers. By facilitating long-term synergies among public-private-third sector actors beyond the project life, DIVERTIMENTO defines a new stakeholder force to make the trainees involved in the e- and onsite Course n Heritage Tourism responsive to labor market needs with better informed choices and benefit spread across the EU and the cooperating countries.

SKILLS CERTIFICATION

Real-time accessibility to products and services is one major factor, who makes the difference in the market producing a regions' competitive advantage (EU Single Market Act, 2010). In this very volatile and constantly

changing knowledge ecosystem, traditional VET curricula in the tourism sector are not up to the task, as they address outdated organizational structures depending on individuals with outdated skill sets. Specific job related competences learned throughout education and training must be underpinned by transversal competences, especially digital and entrepreneurial competences, in order to both encourage self-directed learning rather than simple reproduction of received knowledge and to better adapt to learners and employers' needs.

By exemplifying smart products & services, delivered by higher skilled people DIVERTIMENTO ensures that creativity and entrepreneurship, fundamental for future growth, are encouraged throughout the Project's learning processes. A primary aim is to demonstrate the socioeconomic value of the Smart Tourism and deliver the right skill mix. By producing an EQF Certification for Smart Skills in Heritage Tourism, DIVERTIMENTO defends youth employability and the improvement of professional statuses with higher quality skills.

SKILLS DIVERSIFICATION AND RESILIENCE

Social Media Channels are challenging the current educational model:

a) by transforming teaching and learning practice,

b) by demanding pedagogical innovation,

c) by posing new requirements with respect to the management of processes and organizational innovation, and

d) by devising brand new tools for teaching and learning.

The challenge for the Project Area is to become 'smart' enough through developing the dynamic capabilities required to respond in 'real time' to trends expressed in market. Diversification of skills for new jobs is closely interlinked with changes happening in the creative economy and therefore the formulation of a skills code through the use of socially accessible media as a learning platform is one of the Project's main objectives.

DIVERTIMENTO identifies experienced based products & services in Smart Tourism and thus helps connect new skills and new jobs better matching job seeker and labor market needs. Following the EU Horizontal Policy 2014-2020, the New Narrative for Europe and the H2020 Grand Societal Challenges, the DIVERTIMENTO country profiles and 2023 Tourism Strategy of Turkey, the EU 2020 Strategy for smart, sustainable and inclusive growth, the EU 2020 Forecast Future Skill Supply and the 2012 EU Digital Agenda, DIVERTIMENTO pioneers a new form of co-operation among multilevel actors to fully realize a new code for the design and delivery of smart and competitive tourism products and services.

The Partnership has adopted a multilateral working basis to ensure quality of Project contents right from the start and attract newcomers. Task distribution aligns with complementarity, expertise, institutional/technical capacity and spatial-level distribution of each Partner. DIVERTIMENTO capitalizes on experiences acquired with of C.I.P Leader+Transinterpret II and C.I. Interreg Archimed IIIB Herodot: Historic Environment Tourism (2008), SEE TCP Sagittarius (G)Local Heritage Entrepreneurship (2014), MIS ETC 2617 ALECTOR (2016).

Local heritage assets are able to compete in a global economy, only if they consider physical accessibility, e.g. transport and signage at a public-private level. Information dissemination and easy access to heritage resources influence drastically the travel motive, especially if peripherality is a major obstacle to overcome. Traditionally, tourism operators concentrate on the presentation of information regarding mostly accommodation, while disregarding visitor attractions in a given area. The concept of access is essential to the create a quality Asset Floor Plan. It includes physical, mental and spiritual accessibility. Providing for access in situ and electronic environments the Asset Floor Plan develops a more comprehensive interpretation of heritage resources able to provide a richer tourism experience in a recreational environment. Accessibility is defined as the communication with the public, the accessibility of the destination and its attractions and the atmosphere of the place. It includes the existence of a strategy for tourism management at the metropolitan level, the quality of information and hospitality, the presence and quality of secondary or complementary tourist services, internal and external accessibility, attractions and events. Heritage places should be accessible to everyone, including people with mobility or sensory impairments, the elderly, parents with small children and anyone who is temporarily disabled as a result of illness or injury. Improved access can open up wider markets for owners and managers, which could be promoted to increase visitation. However, increased visitation must be managed to ensure

it does not accelerate deterioration of the original fabric. Heritage buildings have different functions, which may result in the development of a range of different access solutions. The first step in planning access improvements is to undertake an access audit. This will assess and document the barriers to access which exist within a place and its surroundings. Once an access audit and conservation assessment has been completed, an access plan can be prepared reconciling, where necessary, the needs of access and conservation. This will involve, on the one hand, assessing the significance of the asset and its setting and, on the other, the access needs of its users.

Tourism is a 'people' industry and customer service is critical: a high level visitor service, the more likely a local business will create a favourable and memorable impression, creating good word of mouth and return business. Visitors begin forming their experience once they walk in the door of a museum. Communities have to plan to deliver outstanding experiences from the first moment that visitors click on a web site or look at a brochure, to when they leave the destination. Highly-skilled staff knows what different visitors want from their experience.

Quality associated with all aspects of the visitor experience is the key to repeat visitation and word of mouth referrals, so essential to long-term destination viability. Communities that become recognized as delivering quality services and experiences enjoy the benefits of market leaders. Visitors are becoming more experienced and discerning: once dissatisfied are never to return. The range, capacity and quality of lodging, catering, retail, entertainment, public amenities and attractions are critical to the ability of a place to attract and retain visitors. Tourism is a 'people' industry and customer service is critical.

Cultural heritage managers have to plan to deliver outstanding experiences from the first moment that visitors click on a web site or look at a brochure, to when they enter or leave the Site. Impressions start at the entrance to the Site: visitors are attracted to clean, welcoming, and well maintained places. Highly-skilled staff knows what different visitors want from their experience. Public authorities may overlook the ugliness of their streets, the absence of trees, the poor lighting, trash and bad signage, **but visitors don't**. Quality service is critical to both promoting customer spending and generating visitor referrals. Accessing quality services associated with all aspects of the visitor experience is the key to repeat visitation and word of mouth referrals, so essential to long-term destination viability. Heritage places that become recognized as delivering quality services and experiences enjoy the benefits of market leaders.

1.1 Physical Accessibility

Tangible infrastructure is that part of the natural and built environment and the organizational or cultural structures of society that supports habitation of a place and rounds up the overall quality experience. This infrastructure is essential for modern society and its considered provision can enhance a place's *genus loci*. The needs inhabitants generate are met at different levels. The natural environment can satisfy some requirements by providing attractions and tourists, such as the seaside to swim in and rain to provide a water supply. Some infrastructure can be provided by tourism businesses within a heritage area. This includes hotels, shops, cleaning services and restaurants. However, other infrastructure must be provided by larger bodies such as state governments, local councils or other land management agencies. This includes roads, sewerage plants, policing, health services and a water supply. Providing tangible infrastructure is the basis of several major professional groupings, including engineering, architecture and urban design, management, law, economics, and accountancy.

1.1.1 Physical Infrastructure

Physical infrastructure includes the visible systems and structures required for the effective operation of a modern society, centers and attractions. Of the various forms of infrastructure discussed here, the physical infrastructure has the greatest direct impact on cultural visitors. Its quality will influence many of the attributes of the *genus loci* discussed above and its quantity will directly determine the capacity and marketability of the heritage area. The range covers:

- Hospitality facilities, including food and beverage outlets;
- Accommodation options, such as hotels, motels, caravan parks and camping grounds;
- Guidance and interpretation, such as visitor information centres and interpretation panels;
- Retail facilities
- Public amenity, such as malls, footpaths, public parks, landscaping, picnic areas and toilets;
- Public facilities, such as jetties, boat ramps and look outs
- Commercial facilities, such as banks, ATMs and professional services;
- Signage and direction; and
- Transport and parking services, such as transit centres, rail stations, highways and major roads, and parking areas.

The range of issues involved in assessing and managing a heritage area's physical infrastructure is too broad to be addressed here. They include all or part of the expertise base of several professions including architecture, urban design, town planning, civil engineering and facilities management. Other physical infrastructure proposed included new jetties, upgraded public amenities (such as seating, landscaping, outdoor eating areas, and public toilets) and additional visitor interpretation opportunities. Visitor surveys express often satisfaction with the public infrastructure such as roads, parking, water, waste disposal, and parks and reserves, but are occasionally disoriented in regards to the meanings of monuments.

It is probably impossible to overestimate the importance of tangible infrastructure in creating sustainable heritage assets in rural and regional areas. It is a well-recognized area of concern for tourism operators and regional planners. The capacity of the tangible infrastructure directly limits the heritage area's carrying capacity while its establishment and maintenance costs can severely test the financial and organizational capacity of managing organizations and the local community. Their provision and maintenance is particularly important to this study as it is inherently more expensive to provide and support a given level of service in a rural and regional area than it is in an urban one. Simply, the infrastructure is spread more widely and is used by a smaller number of people. Further, with a simpler economy and smaller population base, a rural and regional area generally has fewer tourists to plan and finance the construction and maintenance of infrastructure than a similar urban area.

Tangible infrastructure can be generally categorized into four groups:

- Natural resource infrastructure that includes water, soil and air supply.
- Service infrastructure that includes generally unnoticed but essential background systems such as potable water supply and health services.
- Physical infrastructure that includes visible systems and structures such as shops, information centres and attractions.
- Regulatory and organizational infrastructure that includes policy development, guidelines, governance and management.

While these are discussed separately following, provision of these types of infrastructure is closely interrelated and interdependent. They often cannot be considered separately in practice. For example, interpretation of a site or heritage area requires regulatory, organizational and physical infrastructure. Similarly, medium and small historic centers like the Varna and Drama cannot supply sufficient accommodation if suitable water supply has not been planned and provided and if building permits are now granted. The water supply is then limited by the capacity of local catchments and rainfall. Finally, the quality and location of the accommodation cannot be assured without suitable regulatory and planning regimes.

Fig. 1-4: Zil Castle: ENPI PP1 (DOKA) Pilot Project Physical Accessibility Entrance to the Zil Castle: PP7 (DOKA) Pilot Project Cognitive Accessibility: Low Readability Info Panels

1.1.2 Infrastructure Needs and Availability

This is a critical point in site evaluation. Tourists expect a high quality of services. Running water, clean washrooms, hot showers and power supply are standard in most facilities. Costs for providing these basic utilities can be high. It is important to carefully evaluate each of these costs, preferably with professional help. In rural or remote areas, some ingenuity and alternative solutions may be needed to provide services to visitors. Know these costs before committing yourself to a site. It is important to ask:

- Does the site have a secure supply of water? What is the water quality? How many litres per minute are available? Is it adequate for fire protection? Is it available year round? What are the costs to obtain or develop a water supply?
- How will you dispose of sewage? Is there an existing system? What are the costs of hook-up? Can the site physically support a septic system?
- What are the standards for tourist use?
- Where is the garbage disposal site? What does it cost for disposal? Who is responsible for collecting it?
- What are the nearest sources of power or fuel for heat, light and other needs? What are the costs of using or developing the power supply?
- Is road access of sufficient standard to attract tourists in poor weather? Is the location easily accessible by plane or other suitable aircraft and are there refueling facilities if needed?
- What emergency services are available?
- Is there fire protection in the area?
- What about police, ambulance and doctors? EU and national public health regulations specify how to handle sewage disposal, what minimum facilities must be available, and what food-handling methods are to be used. Such facilities are subjected to frequent inspections.

Fig. 5: Trabzon Ring, View from Aghia Sofia
Fig. 6-8: Trabzon, Refurbished City Center

1.1.3 Water, Sewage and Waste Disposal

An investment in tourism must have access to an adequate supply of water. In a community setting, it is required to check with the municipality to determine the costs of hooking up to the existing system and the existing development standards (e.g. pipe size requirements). A common problem in summer is that incoming visitor flows put enormous stress to the infrastructure of small communities. To have a clear picture about user rates, which can be a considerable cost for a busy tourist facility, is a sine qua non condition to ensure successful implementation. The supply and quality of water is usually the responsibility of municipal authorities. However, for remote locations, water use is subject to licensing from different organizations depending on land ownership. In any tourism setting, it is wise to discuss with the relevant authorities to find out the costs of hooking up to the sewage system. Teams working with the Local Pilot Projects should ensure that territorial standards are met with respect to the number of toilet facilities required. For remote locations, commercial composting systems are available to handle both human and kitchen waste. Waste should be disposed of according to community water license requirements, preferably directly to the sewage system.

1.1.4 Power Supply, Telephone and Wi-Fi Service

Generally, power and telephone services in an urban setting pose few problems. Check for connection charges and structural requirements. In remote areas, these amenities may not be accessible. The developer is generally responsible for supplying power and/or telephone access to the site. Satellite phones, although expensive, are a good choice for isolated locations. When choosing a power source the developer must consider availability and accessibility. Alternative or multiple power sources may be a viable option to consider, such as:

- Diesel-powered generators- for heat/ hot water purposes.
- Wood – for heating and hot water purposes.
- Solar – for electrical generation.
- Wind turbines – for electrical generation.
- Propane – for heating and appliances

A special consideration regarding the EUROTHENTICA is the availability of Wi-Fi networks in the Project area, either thought a 4G paid connection or as free Wi-Fi area offered by local businesses, authorities and municipalities. The concept of dissemination of EUROTHENTICA is adaptable to the ICT state of the art as prosumer information means to consume/interact/create quality information “anywhere and anytime". It is therefore needed that dissemination be customized for multiple online platforms e.g. mobile (3G, 4G, EDGE, WIFI). The whole dissemination system generates new information in real time through multiple networks, multiple devices, and multiple mobilities across the EUROTHENTICA Transnational Cultural Route. The EUROTHENTICA Connectivity Map is mapping the connectivity of and for 70 heritage attractions at 70 geo-locations becoming a Hot Spot access for new services and products, ensuring internet accessibility for local actors, tourist and businesses. A thematic map developed is becoming a new product in itself for the tourism sector. The Connectivity Map involves local actors in becoming Internet service providers granting full accessibility for new services and to attracting clients without further investment. Linked to Social Media the Connectivity Map is an important factor for the deployment of new heritage services and an essential tool for the EUROTHENTICA (Activity 2.3).

Fig. 9: Great Hospital of the Knights in Rhodes (Archeological Museum). Pilot Project LP (CULTUREPOLIS)
Lack of Wi-Fi Services decrease the length of stay

1.1.5 Public Safety

Developers must ensure that adequate security, fire protection and medical services are available for the development. For many tourist activities, particularly those involving outdoor sports, ambulance service, local first aid and a nearby hospital are important concerns. Meet with local authorities to discuss the needs of your development and the ability of the local community to provide the necessary services. Security, fire protection and medical services can be a particular challenge in remote, isolated locations. It is therefore essential at a full scale operation stage to involve the municipal police department, the fire department, the local emergency service, medical clinics, doctors. They can supply valuable information and potentially help obtain a better insurance rating for the development. Visitor safety police and fire protection during the season is very important. Assess ways to provide security at remote sites during the season is imperative for tourism in the long term.

Fig. 10-15 Zil Castle. Specific access points can be challenging for senior visitors and children
Pilot Project PP7 (DOKA)

1.1.6 The EUROTHENTICA Area

Throughout the EUROTHENTICA Area access to heritage places from the remote past is often difficult because earlier design and construction techniques do not usually consider the needs of visitors, but the needs of defence or other uses of populations and inhabitants. Technological improvements in assistance equipment and improvements in building design help to correct earlier inequities. Access to the historic landscape means unassisted barrier-free movement from arrival to destination. Accessibility to heritage assets should include a continuous route which allows the individual to experience a range of environments found at a given places. Whenever possible, all areas of a heritage place or building should be accessible. Access must be provided from the main access point, onto, into and through the site, historic building or historic landscape. There should be at least one accessible route using appropriate grades or ramps from a site access point, such as a designated parking space for all including visitors with disabilities, to an accessible entrance. There should be at least one accessible public entrance into a site and appropriate door width, threshold and configuration. If one public entrance is not achievable, then an alternative building entrance for the disabled should be identified (by signs) and it should remain unlocked during hours of operation. It is expected that, once inside a historic building, the public visitor or employee will have barrier-free access to all services provided to the general public. This includes bathrooms, offices, restaurant dining, etc. Corridors and interior doorways must be wide enough for a wheel chair, modest floor level changes must be ramped, and thresholds must be shallow. At a minimum, all services on the accessible entrance floor must be available to all visitors including the disabled. The extent to which a historic interior can be modified without loss of its historic character will depend on the size, scale, and detailing of the features along the accessible route.

HISTORIC PLACES

Historic places are composed of character-defining features, so that careful consideration must be given to avoiding alterations to those features that contribute to Site's significance. In some instances, complete accessibility may be possible by resurfacing an entrance path. In other instances, new trails, ramps or parking may be necessary to accommodate the public. Alterations and interventions should not change to the historic character of significant places. Alterations to non-character-defining features are acceptable in order to provide the highest level of access within the building with the lowest level of impact. Less significant interior spaces can be considered in order to provide necessary amenities on the floor of principal access. Toilet facilities should be provided for the general public and one accessible unisex unit (sized for wheelchair use and with a privacy latch) must be provided. All public spaces on at least the level of the accessible entrance should be made accessible.

VISITATION PATTERN

People tend to visit places with easy, convenient and economical access rather than those that are more remote and more costly to reach. Service infrastructure comprises the generally unnoticed but necessary background systems required for the normal inhabitation of a place. This includes such things as a water supply and a health system. Generally, these services can be divided into essential and discretionary services. Essential services are those that the local community feels are crucial for the normal habitation of a place, such as may be acceptable in a remote beachside or desert local community. This level of services is nevertheless an agreed cultural construct as what is regarded as normal in one place may be regarded as luxury in another. Some heritage places are seeking to differentiate themselves from others by not providing or allowing particular services in an area for ecological, social, cultural or political reasons.

Across the EUROTHENTICA Area, essential service infrastructure would likely include a clean water supply; a safe human waste disposal system, such as a sewerage system; electricity; basic food distribution; basic waste removal; basic medical services; roads and vehicular access; basic public transport, such as

an occasional bus; basic telecommunications, such as a phone system; and basic emergency services. Not all these services may be in the place, but all are required within a reasonable travel distance. Discretionary services are those that are desirable for normal habitation. Most of these services will not necessarily attract cultural visitors but their absence may deter them.

ACCESS TO TOURISM SERVICES

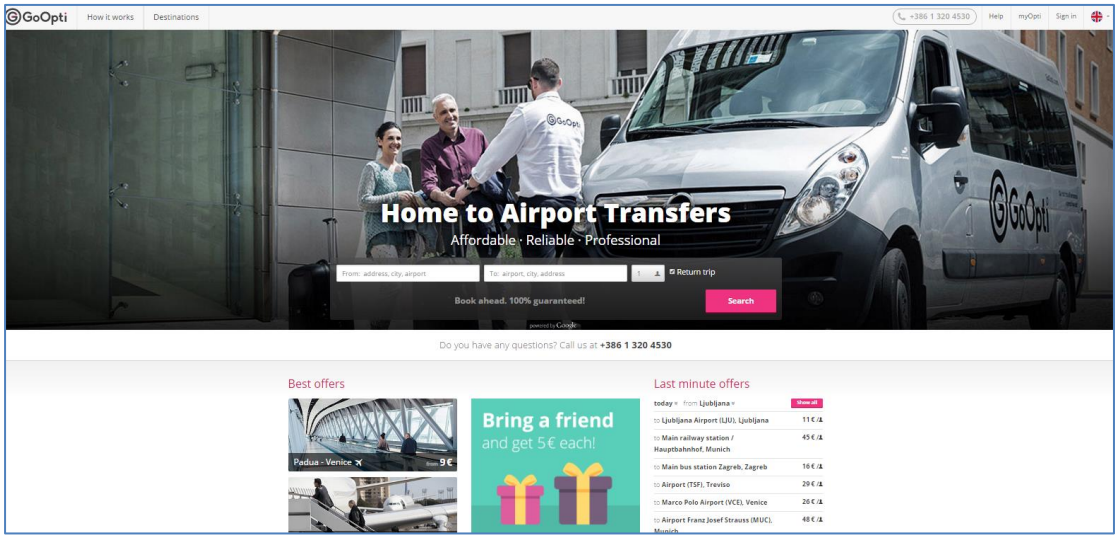
- **Readily available public transport;**
- **Regular waste removal, cleaning and maintenance;**
- **Banking and money exchange;**
- **Mail and other logistics services;**
- **General medical services;**
- **Standard telecommunications, such as phone, television and data services;**
- **Policing;**
- **Emergency services, such as a fire brigade, coast guard, and search and rescue;**
- **Storm water management;**
- **Diverse food distribution, such as a range of outlets or a market, festivals and events; and**
- **Library, educational and training opportunities.**

Table 1: Accessible Tourism Services

PUBLIC INFRASTRUCTURE

Public infrastructure is not commercial in nature, but it is a task for tourism planning to provide for signage, way finding systems, restrooms, tourist information bureaus, visitor information centres and kiosks, trails, parks, public toilets, walking tracks, picnic facilities parking and public domain attractiveness as well as effective transport means. Heritage places providing the correct mix of infrastructure elements are able to satisfy visitors and at the same time provide residents with facilities and experiences that without tourism, they would not be able to enjoy to the same extent. Frequency of access is less important than dependability. Even if transportation to a smaller community is available only two or three times a week, visitors will come if they are sure about the schedule.

Fig. 16: The Goopti Business Model.
A great solution for peripheral destinations
https://www.goopti.com/en



1.1.7 Hospitality

After visitors have discovered EUROTHENTICA, and have reached local communities, hospitality is the key ingredient in making their visit rewarding. A drink and a handshake is not all that it takes, but even that will help bring visitors back. Hospitality means making visitors feel wanted and comfortable. Communities can do a lot to make visitors feel welcome, such as:

- Good signs to help them find their way
- Information printed in an easy to read format
- Clean restrooms
- Accessibility facilities for visitors with disabilities
- Convenient hours of local stores
- A visitor center that is pleasant and efficient

To succeed at a hospitality level, EUROTHENTICA communities must realize their visitors are outside of their own familiar surroundings, they are usually a long way from home, and they
are not at all sure what to expect. Hospitality goes beyond just the interpersonal relationships between the members of the community and the visitor. It is:

- developed local attractions that are easy to find and use;
- developed public facilities such as restrooms, public telephones, park benches and flower beds;
- good signage like street signs, directional signs to major attractions, special
- routes such as driving and walking tours, shopping areas, historical areas,
- banners that make an area more attractive and can be informative, and building signs that tell what the building is.

The DIVERTIMENTO Project Area-style hospitality means caring for and about visitors. An attractive well run visitor center, good signage, convenient public facilities, and attention to special visitor needs will help make your community a success with visitors. Visitors must have a place to eat and sleep in the Project Area it is expected to stay for more than a few hours. In the tourism business, "accommodation" refers primarily only to lodging facilities. These are some of the special accommodations needs your out-of-town guest will have: In large towns, visitors will expect to find comfortable and modern hotels or apartments to rent. In smaller places, overnight facilities can be lodges, bed-and-breakfasts, rooming houses, or rooms to rent in private homes. In coastal regions, boats are used as well as accommodation. In remote locations, visitors expect simple rustic settings as long as they are clean and well-managed. There is no point in developing a visitor attraction if a proximate location does not have enough accommodations to support the expected numbers of visitors.

DISABILITY AWARENESS

The 2012 EU Disability Act mandates that access to culture is a universal right and that no individual shall be discriminated against on the basis of disability in: private sector employment; services rendered by state and local governments; places of public accommodation; transportation; and telecommunications. The three areas that probably affect tourism business the most are public services, public accommodations and transportation. The EU views documents about tourism for persons with disabilities address services and activities of local governments including public transportation. Provisions are intended to improve access in equipment (buses for example) and facilities. Special transportation services may have to be provided and there must be handicap access to all public facilities. The philosophy also addresses businesses and services operated by private entities including privately owned transportation. Individuals shall not be discriminated against on the basis of disability in the full and equal enjoyment of the goods, services, facilities, privileges, advantages and accommodations of any place of public accommodation.

HYGIENIC FACILITIES

Visitors nowadays are used to living in comfortable homes with modern bathrooms. Older visitors need better accessibility and easy to use facilities. Cleanliness is the condition sine qua non to ensure a pleasant experience with onsite facilities. In larger hotels it is expected a room with a private bath, while in smaller lodges and bed-and-breakfasts, shared bathrooms are acceptable. In rural areas, outhouses may be acceptable, but must be accessible, clean and well looked after. With the enactment of EU regulations, more and more establishments are providing rooms, dining facilities and restrooms that are accessible also by visitors with disabilities. This includes wheelchair ramps and handrails. Visitors cannot be expected to spend a day touring in heritage places without the use of restrooms. DIVERTIMENTO Partners have to pass to key stakeholders the message that the key to successful tourism development is to keep visitors happy and comfortable.

1.1.8 The Local Spirit

CULINARY EXPERIENCES

Restaurants and catering facilities of any kind may vary from the large and elegant to the small and homey. In the cityscape, visitors expect to find a variety of restaurants from which to choose. In small places travelers know that the selection is limited. They are perfectly happy to see something new and enjoy a meal with "local flavor." Tasting local specialties is, after all, an essential part of the experience, and memory shopping of local food and varieties is a rapidly emerging market.

Fig. 17-19: Santiago di Compostella. Artisan Bakey and Pastry

MEMORY SHOPPING

Recent literature affirms the rising tendency to shop for crafts, artwork, and souvenirs of all kinds from the areas they visit. They also buy postcards, personal items from a drugstore, books, snacks, maps, film, clothing (a visitor never packs every item needed), and sporting supplies. In some smaller places all of these needs may be met in one general store. Shopping is an activity visitors can pursue at their own pace, indoors, where they will be warm and dry if the weather is bad and outdoors in sunny days. Shopping is an important part of tourism success if the shops are and accessible to visitors, physically and financially. In successful tourism destinations, shops have long opening hours in the evenings and on the weekends to serve visitor flows. Understanding the crafts and the craftsmen onsite it adds to the personal value of the experience and it enables visitors to realize the signs of civilizations, the fashion of modern living, the hardship and mastery that is required for each profession. In this way many visitors are willing to pay for quality souvenirs. Souvenirs do not have to be expensive to transmit the sense of place, but they have to be typical if the identity of a place.

Fig. 20: Varna Archaeological Museum, Souvenir Shop
PP6 Pilot Project (UBBSLA)
Fig. 21: Cave of Pertosa, PP2 Pilot Project (UNICITY)
Producing Instant Memories onsite with the help of technology

1.1.9 Transport

Transportation needs do not end when the visitor arrives in your community. Visitors require a reliable means of transportation to get to and from the airport, landing strip, ferry terminal or dock. They need to get to their lodging and shopping, and from one attraction to another. All means of transportation are acceptable as long as they are safe, dependable, and reasonably priced. Taxis or vans are usually used to pick up visitors from airports, lodging, or marine vessels. Visitors must not be left stranded upon arrival in your community. If public transportation is not available for every flight, for example, telephone numbers of alternate transportation should be clearly posted so the visitor can telephone for help. School buses are perfectly acceptable to use during the time they are not needed for students. They should be kept reasonably clean and maintained. Windows should be kept clean so visitors can enjoy the view. Transportation plays important role in enriching the travel experience of a tourist depends on the mode of transportation and the frequency of use. Transportation can turn into a separate tourist attraction element; cruising, Orient Express trains, boat trips along the river and etc. are the best examples to tourist attractions. The effective factors in choosing the transportation mode in tourism are given below):

- Time limit
- Distance
- Status
- Comfort
- Security
- Benefit
- Price
- Geographical position
- Competition

LAND CONNECTIONS

- *Highway and Road Connections*
- *Railway Connections*

AIR CONNECTIONS

- *Regular flights*
- *Chartered Flights*
- *Private Airplanes and helicopters*

SEA CONNECTIONS

- *Ferries*
- *Boats*
- *Cruisers*

1.1.10 Attractions

Travelers need a reason to visit any of the 70 EUROTHENTICA locations. Interesting things to see and do are called attractions. Attractions can be natural, such as the High Mountain Plateaus in Trabzon, or constructed, like the Varna Sea Garden, an activity such kayaking in the Firtina Valley in the Eastern Black Sea or an event like the Game at the Race Castle in Slovenia. In some instances they can be developed solely for their tourism value, but the most successful attractions are rooted in local history and culture, geography and lore. Very important cultural heritage monuments can inspire travelling, but spots providing for personal memories can create points of enthusiasm and reinforcing the persona; experience on site.

Fig. 22: Varna, Archaeological Museum, treasure item of the Necropolis
PP6 Pilot Project (UBBSLA)

AN ATTRACTION CAN BE ANYTHING THAT IS SIGNIFIED

Attractions do not have to be on the scale of Unesco enlisted monuments to be a successful tourism draw, but the need to be accessible in their intrinsic qualities. Some examples are:

SCENIC BEAUTY:

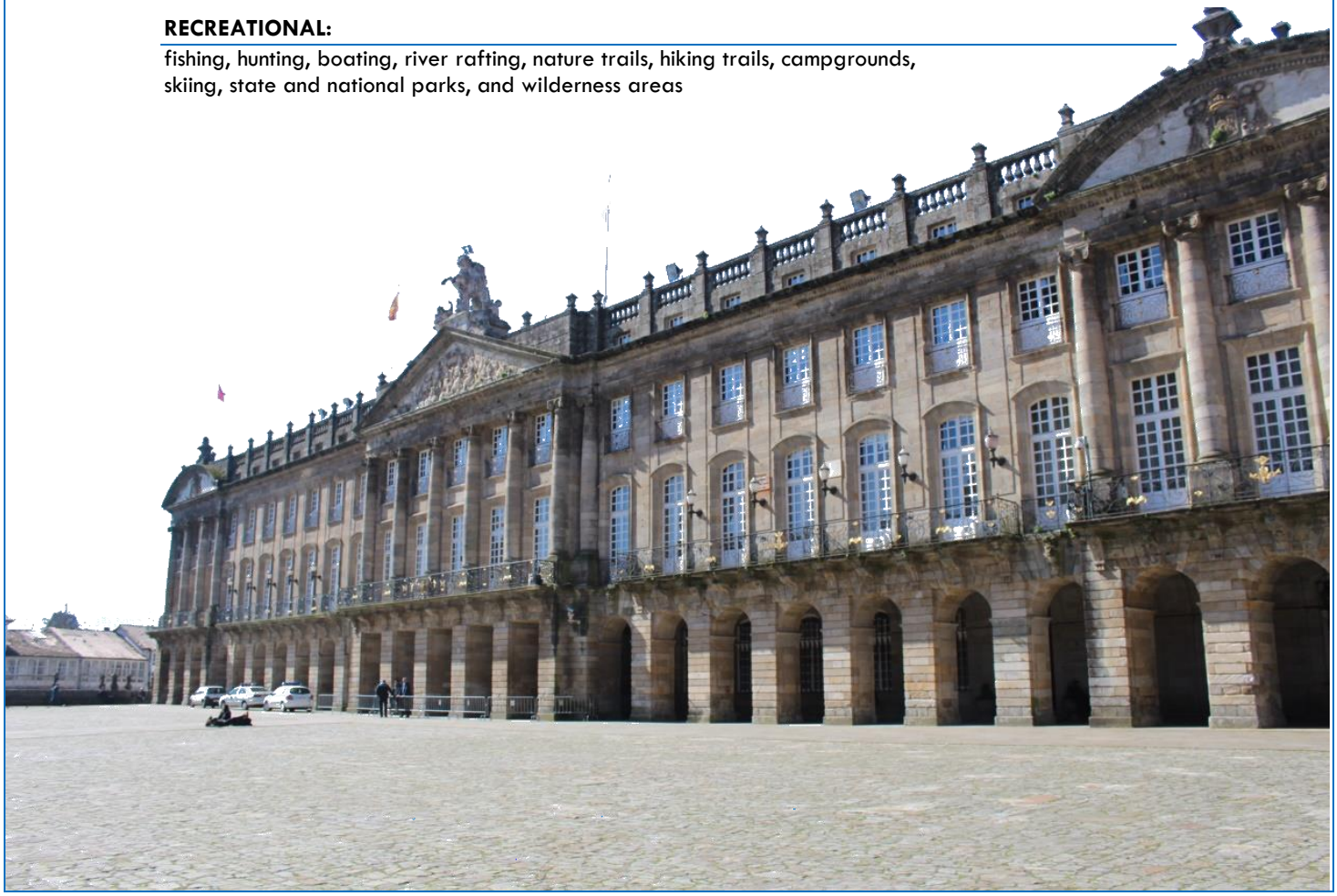
mountain scenery plateaus and slopes, glaciers, fjords, waterfalls, volcanoes. riverine landscapes, flora and fauna, designated areas (NATURA 2000, Ramsar Wetlands; Nationa Parks etc.) mountainous areas, coastal zones and scenic views etc.;

Fig. 23: Cave of Pertosa. Spectacular Light Management PP2 Pilot Project (UNICITY)

Fig. 24-25: Santiago di Compostella. Traditional Coffee Shop and Main Square.

RECREATIONAL:

fishing, hunting, boating, river rafting, nature trails, hiking trails, campgrounds, skiing, state and national parks, and wilderness areas



WILDLIFE WATCHING:

bird watching or photography, whale-watching, seal rookeries, bear sanctuaries, eagle observatories, fish hatcheries, salmon spawning streams

Fig. 26: Parco di Grancia, Basilicata. Falconry Spectacle
Fig. 27-28: Parco di Grancia, Basilicata. Falconry Spectacle

http://www.basilicataturistica.it/attrattors

NATURAL PHENOMENA:

northern lights, midnight sun;

Fig. 29-30: Lake Cerknica, Slovenia
The appearing and disappearing lake

HISTORICAL INTEREST:

historic sites, restored buildings or equipment, museums, archeological sites

Fig. 31: UNESCO enlisted Medieval City of Rhodes. The largest maintained medieval city globally.

CULTURAL INTEREST:

crafts displays or demonstrations, dance performances, museums or cultural centers, art, churches, old graveyards;

Fig. 32: Citta del Utopia, Basilicata Italy

SPECIAL EVENTS:

local holidays, festivals, fishing derbies, fairs, celebrations, contests, races, special theater cinema, and art performances.

Fig. 33-34: Santiago di Compostell, Modern Pilgrims

COMMUNITY CHARACTER:

boat harbors, waterfronts, parks, gardens, landscaping, noteworthy architecture, art in public places, theme displays.

ACCESSIBLE ATTRACTIONS

DIVERTIMENTO Partners are taught in the e- and onsite Course that they shall not assume that people will visit the selected heritage assets in a given community just because they exist. All the attractions need to be physically, mentally and emotionally accessible. For this to happen they need to be developed and promoted in order to draw visitors. The DIVERTIMENTO Pilot Projects shall will encourage visitors to explore the community include building a visitor center, organizing guided tours, and building restrooms, restaurants, hotels and shops.

ADVERTISING

Visitors will not automatically hear about heritage offers in each involved community. DIVERTIMENTO Project Partners have to communicate to prospective visitors about the benefits using the EUROTHENTICA Viral Dissemination Plan. Community members that will operate the Pilot Project Plans upon completion of the Project DIVERTIMENTO need to know about the benefits of advertising heritage offers to the general audience and the specific market segments. The most common forms of advertising are brochures, posters and other informational pieces; magazines, newspapers and television advertisements; internet sites and electronic media advertising; and personal sales efforts with travel agents, airlines, cruise and tour companies. Other sales tools include travel and trade shows, presentations, movies and videos, travel agent and travel writer familiarization tours, direct mail, news releases and various marketing programs done in combination with the state, other communities or regional marketing organizations. Throughout the Project Area, advertising and promotional activities are carried out on many levels of the tourism industry. At the state level, associations and National Tourism Organizations work to attract visitors from around the world through media advertising, travel and trade shows, international programs, niche marketing programs, and public relations efforts. These efforts are aimed at encouraging travel to a country, not to a specific community or attraction. Tour companies also do national/international advertising featuring attractions and communities that are on their established tours. Local businesses and heritage operators relate to the Pilot Projects in each community may promote their own services or products by advertising the implemented Pilot Projects.

PROMOTE THE COMMUNITY

Promoting EUROTHENTICA as a visitor destination belongs at the local level as well: city or government, visitors bureau, chamber of commerce, village council, business association or other community wide organization. All of the levels of the tourism trade from state government to local businesses have roles to play in attracting and promoting tourism. The task of EUROTHENTICA is a task for the Transnational Partnership. Tourism is a large industry in DIVERTIMENTO Project Area. Nonresident visitors have an impact on airlines, cruise lines, ferries, taxis, car rentals, air taxis, gas stations, restaurants, hotels, bed & breakfasts, guides, charter operators, tour companies, gift shops, artists, grocery stores and many other governmental and commercial enterprises. In the DIVERTIMENTO Project Area, tourism marketing has traditionally been directed towards visitors from Europe and overseas. However, people who live in one area of the state travel to other parts of the state for business and recreation. Any community wishing to promote tourism should consider marketing to the EUROTHENTICA to their neighbors, who are eager to make first hand experiences in heritage and culture.

DESIRED TARGET PUBLICS

EUROTHENTICA aims at attracting visitors who are likely to have the following characteristics:

- Arrive and depart by domestic air, trains or cruise ship arrivals
- Originate from the Europe and overseas
- Be equally distributed between females and males, the senior and youth market
- Be seniors; families with school children; students in Exchange Programmes; convention visitors and back packers
- Be making their first trip to the DIVERTIMENTO Project Area and be making a repeat visitation
- Travel in a group of two or more
- Dispose of a length of stay between 3-7 days

The DIVERTIMENTO Project Area is known for many things, beauty, splendor—and cold weather in the winter. In fact, the busiest time of the year for visitors is mid-May through mid-September, with the metropolitan area of Istanbul being an exception. This means that there are only five months for tourism businesses to make a success, and a profit, for the year. To compensate for this seasonality, many businesses have become successful at building a winter tourism base. This is

especially true for those communities that can boast of such things as spectacular viewing, as the tea communities in Trabzon, or the mountain communities around Lagopesole in Basilicata. A visit to DIVERTIMENTO Project Area continues to be the fulfillment of a life-long dream for many travelers. The scenic beauty, glacier slopes, wilderness setting and wildlife continue to attract and enthrall visitors along with the historic cities such Rhodes in Greece, Santiago in. In times of uncertainty and concern for safety, the DIVERTIMENTO Project Area has an opportunity to capitalize on the perception of both safety and an alternative to traveling abroad. While infrastructure and transportation challenges exist throughout the state, abundant resources are available for communities and business to develop cultural tourism, ecotourism, wildlife viewing, adventure tourism, and fishing opportunities.

Fig. 35: Santiago di Compostella, Cathedral

Tourism in the DIVERTIMENTO Project Area is unique for three very important reasons: seasonality, size and cost. Many communities are not only difficult to reach, but the cost of getting there is often very expensive. Travelers who chose to visit these locations often pay a lot of money and endure extreme travel conditions to get there. Communities must consider the large expense that visitors are willing to go to in order to see their area. Once the visitors arrive, they will be expecting to receive a fair return for their investment. The DIVERTIMENTO Project Area is big enough that few visitors can actually tour all regions of in one trip— they must be selective. If they choose to visit a heritage place, they are giving up the opportunity to visit another one. On the other hand, the Project Areas size encourages visitors to return again and experience all parts of EUROTHENTICA.

PECSA
www.pecsa.es

1.2 Economic Accessibility

Economic accessibility includes generally the access to the sites, building and collections, audio facilities, access to temporary or special exhibitions, catering or restaurant services provided within museums, purchases from shops located in the vicinity of the site. Pricing policies should though justify the expenditure and aim to repeat visitation. Visitors are willing to pay a price, but they should receive value in return. Pricing policies are fixed prices indicating the right to consume types of heritage. Entry prices should be based on the analysis of the services rendered presupposing visitor participation at all costs, or there can be a scale according to target groups, or a policy for networking heritage clusters with significant advantages for ticket or package holders. Pricing policies should reflect the balance between price and returned value. Once a visitor enters a heritage place on an entry price he has a 'contract' with the cultural operator. The price paid should reveal the services he is entitled to, the expected quality, behavioural norms- if necessary, the sense of contributing to a good cause (usually restoration, conservation, maintenance and expansion trails) and the ability to express his opinion regarding the fulfilment of the contract.

1.3 Digital Accessibility

Innovative technologies enable the (re)presentation, exploration, celebration and above all the dissemination of heritage resources especially at regional and local level. The use of multimedia, as synthesis of a multivariate type of information like text, video, sound, image in web pages signal a brand new way of communication with and promoting the DIVERTIMENTO Project Area. Smart devices with touch screens nowadays operated by individuals as cell phones or tablets feed off curiosity sustained by user-friendly software. Cultural information retrieval should be answering questions of who, where, why, how, when and what created, Also what was discovered and why it is exhibited. Starting with limited knowledge e-visitors try to discover additional information. Information retrieval using machine intermediaries to organize its findings, proceeds along prior knowledge to more complex schemas.. With the significance of linking given, the new task is to retrieve and navigate directly with concepts through a new systems generation which will extract the semantics from the knowledge implicit to the media, associate between media representations and semantics without a heavy manual input.

1.3.1 Connected Visitors

Participatory is a culture in which private persons (the public) do not act as visitors only, but also as contributors or producers. The term is most often applied to the production or creation of some type of media. ICT advances in have enabled private persons to create and publish such media, usually through the Internet. This new culture relates to the Internet and more specifically to the Web 2.0 tools. In participatory culture individuals creatively respond to a plethora of electronic signals and cultural commodities in ways that surprise their makers, finding meanings and identities never meant to be there and defying simple nostrums that bewail the manipulation or passivity of "visitors. The term "prosumer" originated with Alvin Toffler (1980), who defined the prosumer as someone who blurs the distinction between a "visitor" and a "producer." The term has since come to mean a variety of things, but here we define it as someone who makes little distinction between his or her home and work lives. The prosumer engages in activities belonging to either sphere, regardless of time or location. The term is also used to differentiate the traditional passive visitor with an active visitor role more involved in the process, such as *individual action* in the design or customization of the end product.

Because of their complex and mobile lifestyles, which combines a demanding workload and an active family life, prosumers embrace Web 2.0 products and services—a convergence of process innovation, global marketplaces, and advanced technologies that fundamentally changes the way visitors buy, retailers sell, and products are brought to market. Prosumers typically embrace Web 2.0 technologies such as social networking (Facebook, MySpace, YouTube, Vimeo, Twitter, Linkedin, etc.), blogging, video on demand (VoD), podcasting, VoDcasting, virtual realities (Second Life, There.com), mobile communications, and other Internet-based technologies and services that allow people to stay connected anytime anywhere, valuing any technology that enhances and serves individual needs and connectedness on the go:

- Prosumers want to connect with friends and family, and see technology as a way of balancing and helping to manage their busy lives.
- Prosumers work at home some percentage of the time, while many prosumers are full-time home workers.
- Prosumers access whichever technology subset best suits their individual preferences and lifestyles, preferring laptops to desktops because of their need to be mobile.
- Their commutes are longer, and they view their commute as time that can be spent working, connecting to others, or being entertained
- They spend more of their discretionary income on entertainment than the average visitor in this category, and are interested in multi-screen applications as the tendency is to converge the three screens—mobile, computer, and television in one device
- Prosumers rarely see television (ads): instead, they record their favorite shows and watch them when/if they have time—skipping commercials.

Fig. 36: QR Code Galllery, Biennale Venice 2012
Courtesy: D.F. Weiss-Ibanez

Witnessing the enormous popularity of Apple's iPhone and iPod, YouTube, MySpace, and Facebook and bearing in mind that prosumers are frequent, intensive users of the Internet and mobile technologies at work and home, cultural operators may reach this influential and growing market segment by mobile telephony and smart apps, considering that prosumers need to:

- stay connected to work and family—anytime, anywhere.
- use simple-to-use, seamless ICT solutions.
- to access any type of information from emails and files to destination offers at home or during commuting as easily as they do at work.
- stay mobile, and usually own several devices such as a mobile phone, iPod, and laptop computer.
- Connected visitors are explicitly seeking for authenticity and do no wish to be classified or treated as "tourists". Supported by the rapid raise of the home-exchangers worldwide, the ambitions of tourism visitors for emancipation and self-identity expression, is a well acknowledged fact, as they use social media to are able to broadcast their experiences and emotions to family and friends in real time.

Connected visitors are buyers and sellers of a place at the same time, marketing virally and in real time both destination and community at the same time, their assets, products and services, in the case their experiences have been met (sweet spots). Among connected visitors, it is the young audience that celebrates diversity regarding travelling as opportunity for self-actualization, self-gratification, self-enrichment and enhancement of self-image (Vasile at al., 2014b:50). In this vein both applications within the EUROTHENTICA will map the factual information for a better understanding of independent travel practices and raise awareness among local businesses for the development of new traveling activities through which they can mobilize tourism consumption exposing visitors' self-identity utilizing mobile tourism services to provide for direct connectivity to the assets of the place. Information technology has reached the remotest places on the planet. Mobile telephony frees individuals from fixed-line communications, making them reachable when away from home delocalizing and de-materializing the overall experience. New mobile services free individuals from the communication and socioeconomic context in which they are embedded, giving them access to ideas and markets that aren't constrained by location. an ever increasing dynamism in data production and consumption. During the last 3 years there have been significant changes in the hospitality sector, the marketplace and its operations. Example of these are the role of social media, the multiple reservation channels, the shift of the visitor into prosumer, a creative personality producing and consuming information in real time such as videos, photos, and commentaries using pervasive media affecting thus the state of equilibrium in the city.

Pervasive Media are basically any experience that uses sensors and/or mobile/wireless networks to bring content (film, music, images, games) sensitive to personal situations – which could be where a person is, how s/he feels, or who s/he is with. Pervasive Media are digital media delivered into the fabric of real life and based on the situational context at the moment of delivery. With the advent of pervasive technology and social media to the digit landscapes of cities there is

1.3.2 Social Media and the Smart City

Smart Cities are places that make a conscious effort to uptake innovative ICT based solutions to improve conditions of living and working and support a more inclusive and sustainable urban environment. The Smart City is a conurbation that leverages human and social capital together with traditional (e.g. transport) and modern (e.g. ICT) communication infrastructure in order to sustain economic growth and a produce a higher quality of life through participatory management and governance. Diversification of skills for new jobs is closely interlinked with changes happening in the Smart City. ICT infrastructure embedded in the Smart City becomes the central nervous system of the City pulling and pushing information whenever and wherever it is needed. An effective ICT infrastructure can be the means through which a Smart City and its various stakeholders can use data in order to significantly transform the experiences of those that live within its boundaries. With the advent of pervasive technology and social media to the digital landscapes of today there is an ever increasing dynamism in data production and consumption: tribes of talented prosumers produce and consume videos, photos, and commentaries using pervasive media affecting the state of the City equilibrium. Social media can assist businesses in the in both the Hospitality and Cultural Heritage Sector to earn attention and ultimately relevance, if Return On Investment (ROI) is tied to the connected customer. Although different for every business, social media create a balance between reaching the traditional and the connected visitor. Traditional customers still find value in classical media. However, social or connected customers want a more engaged, enriching, and efficient relationship. The challenge for both the EUROTHENTICA is to design and deliver new business models for both target publics and monitor the performance of each product and service for achieving optimization of ROI and gaining new insights for future trends. The challenge is for destinations and their stakeholders is to become 'smart' enough through developing the dynamic capabilities required responding in 'real time' to trends expressed in the real time data. However, having access to real time data is but one side of the coin – the other being the ability of such organizations to innovate their internal operations, customer interfaces, and products (i.e. goods and services) in response to trends in the data. Times of political, economic, social, or technological flux can demand a radical shift in the change in the needs of visitors and potential visitors. The challenge is for tourism organizations – both public and private – is to innovate their business models accordingly and to offer new experiences to visitors and potential visitors. As a result of these individual changes, tourism and culture shall be viewed as a whole and as domains in a constant state of regeneration as it reconstructs itself in response to both internal and external influences.

1.4 Cognitive Accessibility

Our ability to learn and solve problems may be superior to other animals on earth but is most unlikely to be qualitatively different. Accordingly, the probability may be slim that effective instructional designs can be found that assume cognitive processes such as, for example, a unique teachable/learnable general problem solving skill. If even the rudiments of such a teachable/learnable general skill cannot be found elsewhere, it is unlikely to be a central feature of human cognitive architecture and as a consequence, attempts to teach such a skill are likely to be futile. The following sections discuss aspects of human cognitive architecture and by finding analogues to processes required by evolution by natural selection, provide evidence for a general information processing system that underlies intelligent behavior. The presentation of the complex cognitive structures added to the requirement that the visitors can process in novel visitation environments and new domains (far transfer) asks much from them. To design, development, and implement such presentations — in which cognition, metacognition and transfer are the most important variables — requires to better understand and make use of the possibilities and take into account the

limitations of the human mind. Human cognition, thus, places its primary emphasis on the ability to store seemingly unlimited amounts of information including large, complex interactions and procedures in long term memory. Human intellect comes from this stored knowledge and not from long, complex chains of reasoning in working memory which is incapable of such highly complex interactions using elements not previously stored in long term memory. It follows, that instruction (and instructional design) that require learners to engage in complex reasoning processes involving combinations of unfamiliar elements are likely to present problems and not work well. Instruction, thus, must consider how is this information stored and organized in long term memory so that it is accessible when and where it is needed.

Human cognitive architecture offers an unlimited long term memory able to hold mental representations of varied automaticity degrees, but a limited capacity working memory with independent subcomponents to deal with auditory and visual material. The constraints inherent in the working memory should be the determinants for the design of effective mentally accessible presentations. Humans are conscious of and monitor ONLY within working memory content: unless it is brought to working memory all other cognitive functions remain unused. working memory holds +_ 7 items or information elements at a time and processes info at several environments simultaneously: organizing, contrasting, comparing, etc. (Miller, 1956). Humans deal with up to two or three elements simultaneously. Interactions between elements in the working memory require (more) working memory capacity, reducing the number of elements that can be dealt simultaneously. working memory is incapable of highly complex interactions using novel elements. Humans are poor at complex reasoning unless most of the elements with which they reason are previously stored in long term memory. working memory is used to process all conscious information, but is very limited with respect to the number of elements it can handle. Its capacity may be enhanced if information is processed using both the visual and auditory channel.

All material handled by working memory can be transferred to long term memory. Everything that is learned as a consequence of information processed in working memory is stored in an effectively limitless long term memory in the form of schemas that can vary in their automaticity degree. Both schema construction and automation have the dual function of storing information in long term memory and reducing working memory loads. The main difference between academic learners and non captive audiences is the obligation and possibility to rehearse study material. Repetition and rehearsal is a quality advantage of formal education, but has no relevance whatsoever in leisure settings. Any presentation and/or information transmission that ignores working memory limitations is ex principio deficient, and totally inappropriate for non-captive audiences. Presentations that require recreational learners to engage in complex reasoning processing involving combinations of unfamiliar elements are likely to be ignored. Presentation content in leisure settings should be analyzed from a cognitive load perspective (CL), since limited working memory is a defining aspect of human cognitive architecture and directs learners' attention to relevant learning processing. Audiences should access and comprehend information presented in a manner that ***no*** repetition is needed, if they are to spend happily their leisure time. The more detailed the audience's profile, the easier it is to select appropriate media, but this is only one aspect of the problem. An alternative framework is urgently needed to support recreational learning and information presentation by optimizing knowledge transfer through the activation of memory mechanisms and prior knowledge.

The prime goal of information presentation in leisure settings should be the ease with which information is processed in working memory. The use of procedures able reduce cognitive loads should not be though at the expense of understanding. Construction and automation of schemas, useful of solving problems of interest, may very well be utilized to reduce cognitive loads, and capture visitor attention in the long term. Schemas are stored and organized in long term memory but information that constructs them is processed in the working memory. Familiarity allows the human brain to expend less effort to concentrate on personal and meaningful content, and therefore use of known schemata facilitates perception of novel items in recreational settings. The fact that conscious experience and working memory interact (Baars and Franklin 2003:166), should lead heritage managers, curators and tourism planners to consider meaning making experiences as indispensable components for a successful information processing of novel items.

Learning mechanisms specifically designed for non-captive audiences must include interacting elements in familiar schemas. These can be then treated as single elements in working memory, and effectively reduce loads provoked by novel items.

1.4.1 Human Memory

Human memory is a space hosting complicated procedures that take place in the 'learning machine', the human cortex. Human memory is the collective function of the human ability to perceive and learn, to cognize: a property genetically intrinsic only to humans. Memory is not only the information storage place, but also the information processor, whereas memory functions are distributed in the cortex and sub-cortex. The human memory processor consists of short-term memory, working-memory and long-term memory (Robinson, 1998:306). In order to deliver effective heritage presentation the DIVERTIMENTO Trilogy tries to make fruitful use of the anatomy and functions of both working and long-term memory. All instructional material is selected to fit working memory limits through the manipulation of cognitive loads. The Model also strives to encourage the development of automated schemas that will be the result from the hierarchical sequences of cognitive chunks and can be easily harbored in long-term memory.

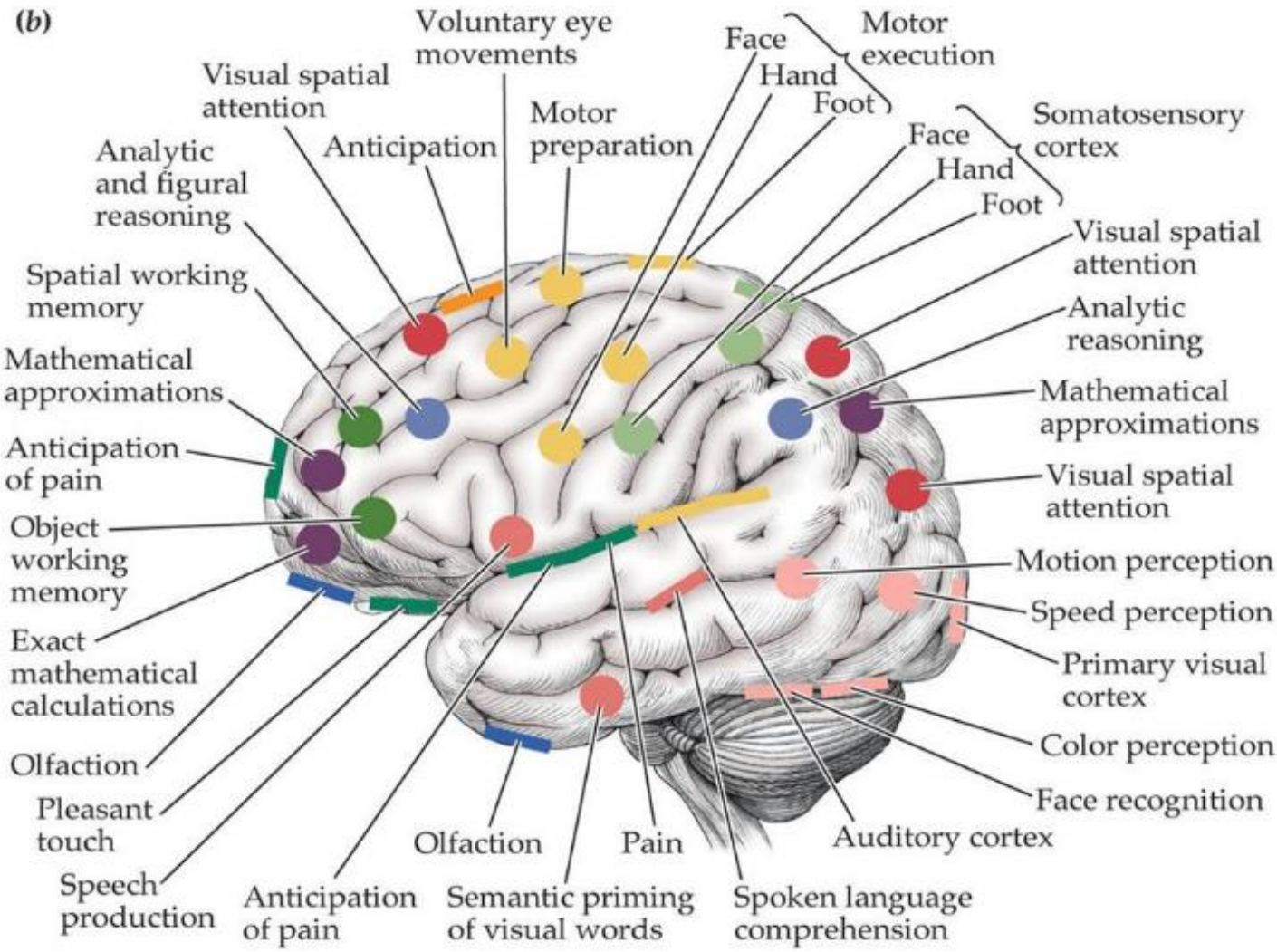
THE HUMAN MEMORY PROCESSOR		
DESCRIPTION	CAPACITY	OPERATIONS
Sensory Memory	**Finite Storage Capacity** **Time Frame: less than 1 sec**	-retains impressions of sensory information -operates outside of conscious control
Working Memory	**Finite Storage-Retrieval Capacity** **Specific Processing Capacity** **Time Frame less than 30 sec**	-workspace that manipulates visual, auditory data - organizes and integrates data with existing knowledge - governs and directs attention
Short TermMemory	**Finite Storage-Retrieval Capacity** **Time Frame less than 15 sec**	- comprises the storage structures of working memory - enhances its performance by chunking and rehearsal
Long Term Memory	**Unlimited Storage-Retrieval Capacity** Time Frame: from 30 sec up to a lifetime	- the human' brains permanent knowledge repository

Table. 2: The Human Memory Processor

Prime goal of effective instruction should be the construction and automation of schemas, useful of solving problems of interest. CLT is concerned with the ease with which information is processed in working memory, but not with procedures that reduce cognitive load at the expense of understanding. As cognitive load is to be understood a construct that represents the load that is imposes on the cognitive system when a particular task is performed. Three load types are distinct, whereas the relationships between them are extremely complex:

- The mental load is imposed by task demands (task intrinsic aspects, element interactivity, immune to instructional manipulations and to task extraneous aspects)
- The mental effort represents cognitive capacity (resources) allocated to accommodate task demands
- The performance represents the individual performance associated with learners.

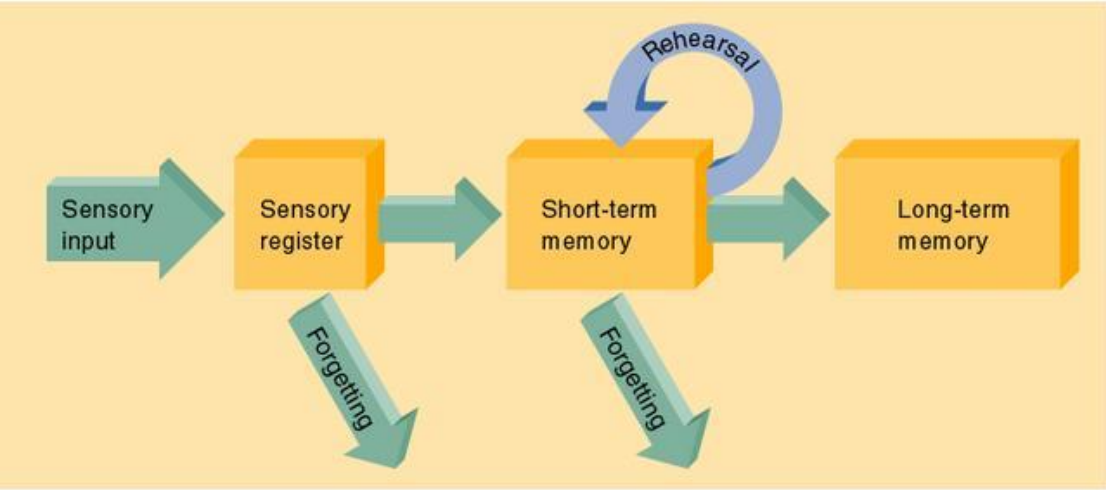
Fig. 37: Human Brain
Source: D. Grayson Tuesday, October 13, 2015



1.4.1.1 Sensory Memory

Sensory Memory (SM) is our ability to retain impressions of sensory information after the original stimulus has ceased. It operates within the approximate time frame of less than 1 second and is outside of conscious control (i.e. it happens automatically and unbidden). Despite retaining information for a very short period if time, it is not to be confused with Short Term Memory (STM) which typically lasts 10-15 seconds without rehearsal of the remembered material and is so named to distinguish it from long term memory which can store information for as long as a lifetime. Sensory memory is the first level of memory, as explained in the paragraph levels of memory. Sensory memory retains the brief impression of a sensory stimulus after the stimulus itself has ended. When the object has disappeared, it may still be vivid in your memory. Sensory Memory holds a short impression of sensory information even when the sensory system does not send any information anymore. There are various specific issues about sensory memory: first, it is a high capacity form of memory registration of visual data. Second, information in the sensory memory is un-interpreted. Third, sensory memory is short; visual information, for example, fades away in less than a second. If we want to use the information in the Sensory Memory, we must quickly encode it it into a more durable form. Processing begins with attention, which selectively determines what will 'get through' for further examination and what will not. Attention allows us to focus on parts of the stimulus and thereby to recognize some of its features. Obviously, any shortcomings in sensory memory can create problems for further processing of sensory information. Sensory Memory allow us to take a 'snapshot' of our environment, and to store this information for a short period. Only information that is transferred to another level of memory will be preserved for more than 1 à two seconds. Information not transferred from the sensory memory towards the other memories is inevitably lost.

Fig. 38: Sensory Memory
Source: http://www.mhhe.com/socscience/intro/ibank/set3.htm



1.4.1.2 Short Term Memory

Short Term Memory (STM) is a finite capacity memory, which means that it stores a limited amount of information for a limited amount of time (roughly 30- 45 seconds). The information held in short-term memory may be recently processed sensory input, items recently retrieved from long-term memory, or the result of recent mental processing, which is related to the concept of Working Memory. It is generally considered that some or all memories pass from a short-term to a long-term store after a small period of time, a model referred to as the ***"modal model"*** - described by Atkinson and Shiffrin in 1968.

The relationship between Short-Term Memory and Working Memory varies between authors, but it is generally acknowledged that the two concepts are distinct: Working Memory (working memory) is defined as the framework, structures and processes used for temporarily storing and manipulating information, while STM generally refers only to the storage structures involved and is thus considered a subset of working memory. STM is an active memory system, including sensory memories with short residence times, and longer residence phonological and working memories. A variety of attention effects are governed in this system: Expectations concerning coming events are set in place here. Sensory information about new events enters STM where attention selects attended portions for longer residence and further processing. In STM, attention is used to generate probes for long-term retrieval, and used to select from the information retrieved (Schiffrin, 2003:344). In order to overcome its finite capacity, and retain information for longer, information must be periodically repeated, or rehearsed- either by articulating it out loud, or by mentally simulating such articulation. In this way, the information will re-enter the short-term store and be retained for a further period. Prior to the creation of current memory models, Miller argued that human short-term memory has a forward memory span of approximately seven items. Memorising 12 digits (e.g., 1, 7, 8, 9, 1, 9, 4, 5, 2, 0, 1, 0) is a difficult task, but memorising them as three dates (i.e., 1789, 1945, and 2010) is comparatively easier task. This is because the first approach requires storage of 12 separate items, whereas the second only requires the storage of 3 familiar schemas. This process was referred to by Miller as "chunking a strategy for making more efficient use of short-term memory by recoding information (Miller, 1956:81-97). It is crucial for interpretive planners to know, that recreational learning environments are not suitable for any kind of repetition and that chunking of information is the most appropriate way to present complex material within the short time frame visitors have at their disposal.

1.4.1.3 Working Memory

The intermediary in between short and long-term memory is called working memory. Working Memory is the collection of structures and processes within the brain used for temporarily storing and manipulating information. Working Memory, the minds' 'blackboard', the key to human intelligence, enables humans to problem solving and planning. Working Memory is a mental workspace consisting of a small set of data items representing the current state of knowledge of a system at any stage in the performance of a task, and which is transformed into a new set, in humans by the application of a discrete mental operation (operator), and in production systems on the firing of a new production rule. Working Memory manipulates and organizes new information and integrates it with existing knowledge. Working Memory consists of three main sub-processors:

- **the Central Executive** is the managing processor for the other two structures, it alone distributes the tasks into the appropriate areas and assigns priority and mental capacity to whichever task is decided important.
- **The Visuospatial Sketch Pad** deals with pictorial information based on visual Working Memory (Gruber and von Cramer, 2003:807-808).
- **The Articulate Phonological Loop** deals with the manipulation and retention of auditory data.

The Model intends to effectively use Working Memory capacity by stimulation of both sub-processors. Elements, e.g. anything learnt and frequently schemas, which are processed in Working Memory have various degrees of interaction. The levels of element interactivity are determined by counting the numbers of interactive elements with which people are likely to deal at a particular expertise level from low to high. Instructional material and individual expertise may very well determine the interactivity level: Learning in isolation elements that do not interact, learning in serial procedures rather than simultaneously, tasks understood and learnt without holding more than a few elements in Working Memory at a time, move in a low interactivity level. Working Memory load depends on the number of elements that must be processed simultaneously in Working Memory and on intrinsic CL, which is low when non- interactive elements are learned in isolation or serially. Within this framework we may define understanding as high element interactivity held in Working Memory. High element interactivity material is difficult to hold in Working Memory. These tasks require simultaneous manipulation of several elements with procedures that cannot be learnt sequentially and result in heavy cognitive loads.

Baddeley and Hitch's have delivered a working memory model whose basic constructs are easily testable. Their model assumes that the storage of limited amounts of either verbal or visuospatial material is mediated by three domain-specific 'slave' systems: the articulate phonological loop, the visuospatial sketch pad and the Central Executive. The Articulate Phonological Loop is a structure, a buffer dealing with the manipulation and retention of auditory data. The phonological loop can be further divided into a pure storage buffer and a rehearsal process, with rehearsal responsible for recirculating decay-prone information in the buffer via internal speech. The Visuospatial Sketch Pad is a buffer specialized for visual spatial material. It holds images and visual data and from that manipulates and processes the stimuli in order to produce the desired outcome, for examples judging distance while driving uses this function. These buffers are governed by a "central executive" that utilizes the information contained in them. The Central Executive is a limited capacity able to perform more complex memory activities that include a substantial processing component.
The central executive is for the storage and retrieval of information, directing the flow of information through the short-term memory system as a whole, the control of action, and planning . Since in cognitive cycles, conscious experience and working memory interact, we may conclude that interpretive presentations should consider meaning making experiences as indispensable components for a successful information processing and retention of novel items.

Working Memory is equated with consciousness. Humans are conscious of and monitor only within working memory content: unless it is brought to working memory all other cognitive functions remain hidden. On the other hand working memory processes information at several environments simultaneously by organizing, contrasting, comparing (Oberauer et. al., 2003:167-193). Humans deal with up to two or three elements
simultaneously. Interactions between elements in the Working Memory require (more) working memory-capacity, reducing the number of elements that can be dealt simultaneously. working memory is incapable of highly complex interactions using novel elements: humans are poor at complex reasoning unless most of the elements with which they reason are previously stored in Long Term Memory.

Working Memory is limited in capacity with respect to the number of elements it can handle, so rehearsal is necessary to prevent information loss. It is a task for any instructional design though to enhance its capacity if material is processed using both the visual and auditory channel, whereas working memory-constraints should be the determinants for effectiveness. Although human intellection resides in Long Term Memory, all conscious cognitive activity occurs in a structure (working memory) whose limitations preclude all but the most basic processes. Therefore any instructional and interpretive design that ignores Working Memory limitations is ex principio deficient. There three types of loads that should seriously be taken into:

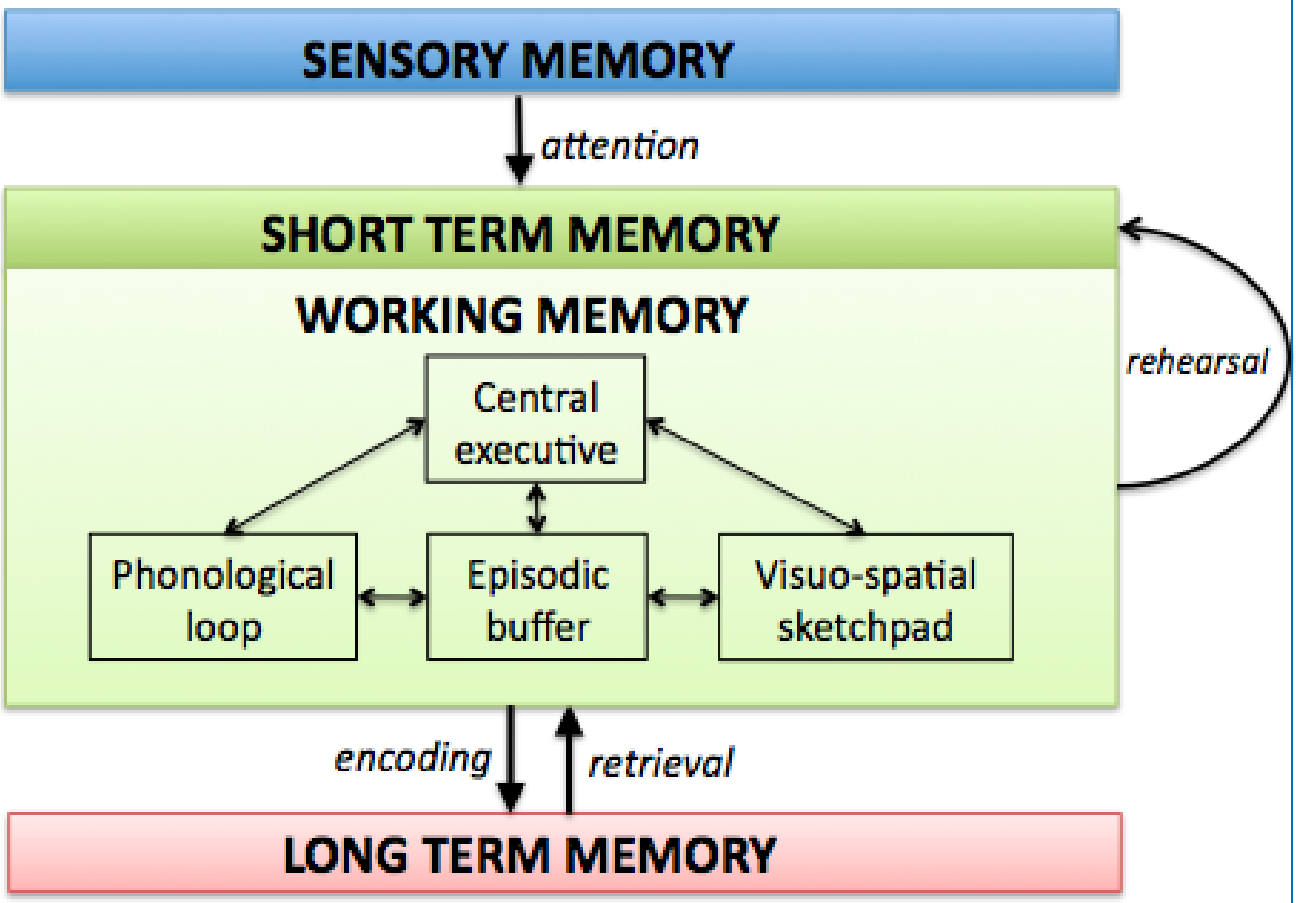
a- The intrinsic cognitive load (ICL) is affected by the intrinsic nature of material and cannot be altered by instructional interventions. The intrinsic CL depends on the interactivity of the elements, on the nature of the material to be learnt, as\ well as on the expertise of learners.

b- The extraneous cognitive load (ECL) is generated by the manner in which material is presented rather than by the intrinsic characteristics of the material and by required activities. It may very well be altered and even determined by instructional interventions.

c- The germane CL (GCL) reflects the effort that constitutes schema construction and may be increased by instructional interventions.

Considering Working Memory-architecture we may assume that the extraneous CL is not a problem if intrinsic cognitive load is low, but a high extraneous cognitive load leads inevitably to inadequate instructional design. On the other hand a high CL may not be a problem if it is relevant to schema construction leading this way to optimal design and the increase of germane cognitive load. Should the total cognitive load exceed Working Memory limits, this can be fatal for learner motivation and success. On the other hand non-excessive cognitive load redirects learners' attention to learning relevant processes, to schema construction and resulting to increase germane cognitive load and last but not least it deviates attention from irrelevant processes that cause extraneous cognitive load.

Fig.39 : Working Memory
Source: https://memorisingmusic.com/2013/02/24/music-in-working-memory-literature-review/



1.4.1.4 Long Term Memory

Long-Term Memory (**long term memory**) is memory, stored as meaning, that can last as30 seconds or as long as decades. It differs structurally and functionally from working memory or short-term memory, which ostensibly stores items for only around 30 seconds. Biologically, short-term memory is a temporary potentiation of neural connections that can become long-term memory through the process of rehearsal and meaningful association. The proposed mechanism by which short-term memories move into long term memory storage is via long-term potentiation, which leads to a physical change in the structure of neurons. Notably, the time scale involved at each level of memory processing remains under investigation.

As Long-Term Memory is subject to fading in the natural forgetting process, several recalls/retrievals of memory may be needed for long-term memories to last for years, dependent also on the depth of processing. Individual retrievals can take place in increasing intervals in accordance with the principle of spaced repetition. This can happen quite naturally through reflection or deliberate recall, often dependent on the perceived importance of the material. Humans are not conscious of Long-Term Memory, because Long-Term Memory awareness is filtered through Working Memory. Information stored in Long-Term Memory has a high degree of connectivity, includes large and complex interaction and procedures, holding schemas and varied degrees of automation. The intellectual ability comes from stored knowledge and not from the ability to engage in complete reasoning that takes place in Working Memory. Intellectual skills are constructions of large numbers of increasingly sophisticated schemas with high degree of automation. A schema is anything learnt as a consequence of information and if automated, it is then treated like a single entity. Schemas deal with huge amounts of information: allowing huge arrays of elements acquired over many years to be treated by working memory as a single entity, whereas multiple elements treated as a single element allow myriads of irrelevant elements to be ignored.

Effortlessly working memory processing means that lower level schemas have been incorporated in higher level schemas and do no require working memory capacity. Problem solvers using automated rules have substantial Working Memory reserves (to search for solutions). Automated rules reduce Working Memory load, freeing in this way working memory Working Memory capacity for other activities. While familiar tasks are performed accurately, unfamiliar tasks (that partially require automated processes) are learned with maximum efficiency because maximum Working Memory capacity is available. Non-automatic processing takes places when learners are confronted with unfamiliar structures: novel tasks are then impossible to complete until prerequisites are automated because insufficient Working Memory capacity disables learning and performing new tasks, while familiar tasks are clumsily and slowly completed.

Learners construct schemas (conscious cognitive processing), when intrinsic cognitive load (instructional material) is low, when extraneous cognitive load is low (instructional procedures) or when the combination of low intrinsic and low extraneous cognitive load stays within Working Memory limits. Both schema construction and automation have the dual function of storing information in long-term memory and reducing the load on Working Memory. Planning for interpretive products and services within this research is concerned with techniques designed to reduce extraneous cognitive load and by increasing relevant mental effort (germane cognitive load) to facilitate schema construction. The knowledge we store in long term memory affects our perceptions of the world, and influences what information in the environment we attend to. long term memory provides the framework to which we attach new knowledge. It contrasts with short-term and perceptual memory in that information can be stored for extended periods of time and the limits of its capacity are not known.

1.4.2 Mental Representations

Research demonstrates that prior knowledge and unfamiliar environments influences travel decision and length of stay. Facilitating access to unfamiliar environments in leisure settings, e.g. opportunities for connections to visitors as well as memorable experiences, is a task that requires adequate management of information with tourism value. Brain literacy is an indispensable factor to facilitate information and meta-cognitive awareness in leisure settings. Humans acquire, store, recall, code and decode information about the relative locations and attributes of phenomena in their everyday spatial environment. They orientate using perception and memory to create cognitive maps. Contents of informational material should therefore adjust to the principles of human cognitive architecture: eye scan path movements, a limited working memory (working memory) and an infinite long term memory (long term memory) (. Information management presupposes a limited working memory capacity to deal with visual, auditory and verbal material as well as an almost unlimited long-term memory, able to retain schemas (mental representations) that vary in their degree of automation. Interpretive design pursuits the reduction of working memory load, the reinforcement of the association chain by provocative use of schema construction and automation and the use of concept mapping. Information structure will provide visitors with specific knowledge acquisition, especially designed on a basis of sequential segments in order to free working memory from irrelevant cognitive load, enabling new cognitive content to relate to prior knowledge. Facilitating information in this way heritage places are promoted within the consumers' conscience. Heritage resources become then indispensable components of the local tourism product, followed by the consumers' willingness to pay for quality products.

A mental model is a kind of internal symbol or representation of external reality, hypothesized to play a major role in cognition and decision-making. Once formed, mental models may replace carefully considered analysis as a means of conserving time and energy. Retreat is the result of the application of the mental model, and would probably not be the immediate reaction of one whose mental model of wild animals was formed solely from experience with similar stuffed toy animals, or who had not yet formed any mental models about wild raccoons or snakes. Martin and Deutscher (1966), developing a causal theory of memory, argued that the past experience itself must have been causally operative in producing (intervening) states which are in turn causally operative in producing the present recollective experience. a 'trace' acquired in past experience somehow 'represents' that experience, or carries information about it, is at the heart of 'representative' or 'indirect' realism in the philosophy of memory. This has been the dominant view of memory in modern philosophy of mind, and it is assumed in much work on memory in cognitive science. Research programmes for representative realism thus seek to clarify the nature of representations in memory, and the various processes in which they are involved. A memory trace could then *mediate* between past and present without rendering our access to the past problematically indirect. Indeed, the contrast between 'direct' and 'indirect' access to the past may seem to lose its grip if representations are not thought of as objects of immediate awareness. [1]

Information is normally stored in long-term memory in organised form and there may be no limits to the amount of such organised information. For example, if we consider the information associated with the word "restaurant" it includes much of what we know of food, the preparation of food, eating, the serving of food, aspects of a financial system and its relation to goods and services, the architecture of buildings and furniture, social relations between humans etc. It may be difficult to list all of the information elements associated with the word "restaurant". These elements, appropriately organized, are all held in long-term memory. They can be brought in their entirety into working memory from long-term memory as a single element without overloading working memory in any way. The amount of familiar information that can be processed in working memory after storage in Long-Term Memory can be barely compared to the amount of novel information from Sensory Memory that can be similarly processed.

[1] (compare Schwartz 1996 on perception).

1.4.3 Schema Production and Automation

Schemas are mental models of the world. Information in long term memory is stored in interrelated networks of these schemas. These, in turn, form intricate knowledge structures. Related schemas are linked together, and information that activates one schema also activates others that are closely linked. This is how we recall relevant knowledge when similar information is presented. These schemas guide us by diverting our attention to relevant information and allow us to disregard what is not important. Since long term memory storage is organized into schemas, instructional designers should activate existing schemas before presenting new information. This can be done in a variety of ways, including graphic organizers, curiosity-arousing questions, movies, etc. long term memory also has a strong influence on perception through top-down processing, our prior knowledge affects how we perceive sensory information. Our expectations regarding a particular sensory experience influence how we interpret it. This is how we develop bias. Also, most optical illusions take advantage of this fact.

According to *schema theory*, knowledge is stored in long term memory in schemata. Schemata categorise information elements according to how they will be used (Chi, Glaser, & Rees, 1982). A schema can hold a huge amount of information, yet is processed as a single unit in working memory. Schemata can integrate information elements and production rules and become automated, thus requiring less storage and controlled processing. Skilled performance consists of building increasing numbers of increasingly complex schemas by combining elements consisting of lower level schemas into higher level schemas, limited number of elements at a time, the size, complexity, and sophistication of elements is not. A schema can be anything that has been learnt and is treated as a single entity. If learning has occurred over a long period of time, a schema may incorporate a huge amount of information. In summary, schema construction aids the storage and organization of information in Long-Term Memory and reduces working memory load.

A schema is a cognitive construct that organizes the elements of information according to the manner with which they will be dealt. An early discussion of schemas was presented by Bartlett (1932). He demonstrated that what is remembered is only partly dependent on the information itself. Novel information is altered so that it is congruent with knowledge of the subject matter. Knowledge of subject matter is organized into schemas and it is these schemas that determine how new information is dealt with. For example, consider schemas that deal with common objects such as trees. No two trees have identical elements but each tree seen can be instantly incorporated into a tree schema. As a consequence, if asked to describe a particular tree from memory, a person's description will be heavily influenced by a tree schema rather than entirely by the particular tree elements (leaves, branches, colour etc.) actually seen. Tree schemas allow people to deal effortlessly with the potentially infinite variety of objects called trees.

Schemas can be used to explain most of the learned, intellectual skills that people exhibit. People are able to read the infinite variety of the printed and handwritten versions of text that they can potentially encounter because they have acquired schemas for each letter, many words and probably even many word combinations. Learning to solve problems occurs by learning problem categories defined by the moves required for solution. These schemas permit people to readily solve problems that otherwise they would have immense difficulty solving if they had to rely solely on constructing a solution based on first principles. There are 5 steady steps to allow any information become knowledge and to allow knowledge solve problems of logic:

1. SCHEMA CONSTRUCTION IN WORKING MEMORY

– information sections retrieved and manipulated in working memory
– skilled performance: building of increasing numbers of ever more complex schemas into higher level schemas (active constructive process – Schemas with huge amounts of information: huge arrays of elements acquired over many years are held in working memory as a single entity – Single activities are processed effortlessly in working memory – lower level schemas incorporated in higher level schemas do no require working memory capacity – A schema consisting of a single element in working memory has no limits on its informational complexity – Learner construct schemas (conscious cognitive processing), when o Low intrinsic CL (instructional material) o Low extraneous CL (instructional procedures) o Combination of low intrinsic and low extraneous CL only if total CL stays within working memory limits

Table 3: Working Memory Schemata

2. SCHEMA AUTOMATION

– working memory: Conscious processing
– Conscious effort = working memory-load – Young vs experienced reader – long term memory: Automatic processing (after exclusive practice)

Table 4: Automation

3. CONSCIOUS PROCESSING / NON-AUTOMATION leading to UNFAMILIAR STRUCTURE

– Working Memory capacity impediments→ not possible to extract meaning
– Familiar tasks are clumsily and slowly completed – Unfamiliar tasks overburden working memory – Novel tasks are impossible to complete until prerequisites are automated because insufficient working memory capacity disables learning / performing new tasks

Table 5: Non-Automation

4. REDUCTION OF WORKING MEMORY LOAD

– Storage and organization of information in long term memory
– Categorize elements of information according to the manner in which – they will be used (sophisticated production rules: grand masters – categorize board pieces into patterns) – Categorize letters / words / combinations – Store in long term memory, reduce working memory load. Schemas are stored in long term memory but information that constructs themes is processed in working memory.

Table 6: Working Memory Reduction

5. KNOWLEDGE

– Anything learnt and treated like a single entity
– Basis of human intellectual skill – Anything stored in long term memory

Table 7: Knowledge

6. PROBLEM SOLVING

– automatic fashion / automated rules = familiar structure
– Problem solvers using automated rules had substantial working memory reserves (to search for solutions)
– automated rules free working memory space and reduce working memory load
– free working memory capacity for other activities
– familiar tasks are performed accurately
– unfamiliar tasks (that partially require automated processes
– are learned with maximum efficiency because maximum
– working memory capacity is available

Table 8: Problem Solving

1.5 Cognitive Load Theory

Cognitive Load Theory (CLT) is an internationally well-known and widespread theory, which has been empirically confirmed in numerous studies. Cognitive load theory (CLT) can to assist in the presentation of information in a manner that encourages learner activities that optimise intellectual performance. It is based on a cognitive architecture that consists of a limited working memory, with partly independent processing units for visual and audio information, which interacts with an unlimited Long-Term Memory. According to the theory, the limitations of working memory can be circumvented by coding multiple elements of information as one element in cognitive schemata, by automating rules, and by using more than one presentation modality. CTL assumes that:

- All information that must be processed in working memory can be placed on an element interactivity continuum.
- The elements of low element interactivity material interact minimally and so can be learned serially without imposing a heavy working memory load.
- These materials can be characterized as having a low intrinsic cognitive load. In contrast, interactions between the elements of high element interactivity material require them to be processed simultaneously in working memory resulting in a high intrinsic cognitive load.
- Learning reduces that load by embedding interacting elements in schemas that can be related as a single element in working memory.

These cognitive and information structures can be used to generate appropriate instructional designs that accord, rather than conflict, with our cognitive architecture. Most of the instructional designs and procedures described were intended to reduce an extraneous cognitive load in the presence of a high intrinsic load. CLT assumes a limited working memory connected to an unlimited Long Term Memory. As a result of this limitation instruction should be designed such that working memory is capable of processing the instruction (i.e. the information that constitutes the instruction). CLT, thus, is concerned with the limitations of working-memory capacity and the measures that can be taken to promote learning, that is the construction of schemata, by imposing adequate levels of CL. In other words: How can the instructional designer assure that the limits of the learner's working memory load are not exceeded when he or she is processing instruction? Both causal and assessment factors affect CL. Causal factors can be characteristics of the subject (e.g. cognitive abilities), the task (e.g. task complexity), the environment (e.g. noise), and their mutual relations. Assessment factors include mental load, mental effort, and performance as demonstrated below:

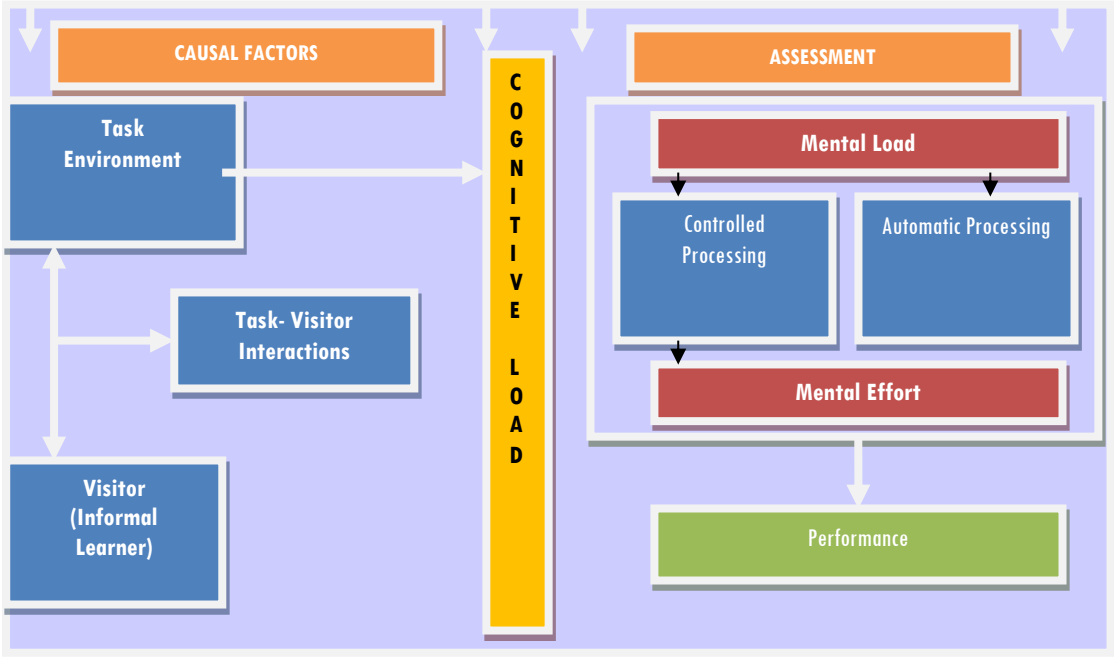


Fig. 40: Factors determining the level of cognitive load.
Adopted: Kirschner, 2000

The prime goal of CLT lies within the definition of factors which ease information processed in working memory and within procedures to reduce CL at the expense of understanding. In principle, cognitive processes taking place in working memory can be controlled externally by presenting certain instructional formats. For instance, one can control the input into Working Memory by presenting a certain type and amount of information within the instruction. Additionally, learners control CL internally, for example, when regulating the learning process by deciding what and how to learn. Moreover, a reduction of CL by ideal instructional format does not per se guarantee that all free mental resources will be allocated for deeper schema construction and automation. Thus, it is argued that optimal management of cognitive resources must distinguish between *external management* through adequate instructional format and *internal management* based on adequate recipients' strategies of dealing with high CL.

Cognitive load management is based on cognitive theories of human architecture, and one major assumption is that a human's working memory has only a limited capacity. When learning, humans allocate most of their cognitive resources to this activity, and in many cases it is the instructional format which causes an overload. Consequently, the basic idea is to reduce such external load in order to make available more capacity for actual learning so that better learning and transfer performance is achieved. Cognitive loads arise from a triple source. The third source is referred to as "germane cognitive load" (GCL); it occurs when free working memory capacity is used for deeper construction and automation of schemata. In general, the main difference between contributions is the degree to which they are based on CLT; some encompass additional theoretical approaches and constructs. Further differences are the types of CL (i.e., ICL, ECL, GCL) investi- gated in connection with different instructional formats (worked examples, completion problems, etc.)

In principle, cognitive processes of working memory can be controlled externally by presenting certain instructional formats. For instance, one can control the input into working memory by presenting a certain type and amount of information within the instruction. Additionally, learners control CL internally, for example, when regulating the learning process by deciding what and how to

learn. Moreover, a reduction of CL by ideal instructional format does not per se guarantee that all free mental resources will be allocated for deeper schema construction and automation. Thus, I argue that optimal management of cognitive resources must distinguish between *external management* through adequate instructional format and *internal management* based on adequate learners' strategies of dealing with high CL.

Aiming to better knowledge transfer and performance, CLT is concerned to reduce possible working memory loads assuming that all information that has to be processed in working memory can be placed on an element interactivity continuum. Elements in low interactivity material interact minimally and so it can be learned serially without imposing a heavy working memory load. These materials can be characterized as having a low intrinsic cognitive load. In contrast, interactions between the elements of high element interactivity material require them to be processed simultaneously in working memory resulting in a high intrinsic cognitive load. In order to facilitate knowledge transfer at leisure settings, a framework is suggested, that manages types of cognitive loads (CL) involved in the learning process. The missing advantage of repetition and rehearsal is substituted by the empowerment of associations, which are constructed through the help of schemas. Any instructional design that ignores working memory limitations is ex principio deficient, and for non-captive audiences totally inappropriate. Presentations that require recreational learners to engage in complex reasoning processing involving combinations of unfamiliar elements are likely to be ignored. Presentation content should be analyzed from a cognitive load perspective (CL), since limited working memory is a defining aspect of human cognitive architecture and directs learners' attention to relevant learning processing.

The prime goal of information presentation in leisure settings should be the ease with which information is processed in working memory. The use of procedures able reduce cognitive loads should not be though at the expense of understanding. Construction and automation of schemas, useful of solving problems of interest, may very well be utilized to reduce cognitive loads, and capture visitor attention in the long term. Schemas are stored and organized in long term memory but information that constructs them is processed in the working memory. Familiarity allows the human brain to expend less effort to concentrate on personal and meaningful content, and therefore use of known schemata facilitates perception of novel items in recreational settings. The fact that conscious experience and working memory interact, should lead interpretive presentations to consider meaning making experiences as indispensable components for a successful information processing of novel items. Learning mechanisms specifically designed for non-captive audiences must embed interacting elements in familiar schemas. These can be then treated as single elements in working memory, and effectively reduce loads provoked by novel items.

1.5.1.1 Intrinsic Cognitive Load

The first one is called "intrinsic cognitive load" (ICL) and is connected with the nature of the material to be learned. High ICL occurs in case of high element interactivity and when learners do not yet have sufficient command over appropriate schemata. There are three levels of element interactivity within ICL: The first level is determined by counting the numbers of interactive elements with which people are likely to deal at a particular expertise level (low, high). The second level is determined by the instructional material per se and the individual expertise per se. Low element interactivity is always connected with serial, non parallel processing:

- Vocabulary learning (Fe = iron, red= rouge, red = rot, house=Haus, house= maison, maison=casa etc.)
- Learning in isolation (elements that do not interact)
- Serial procedures (rather than simultaneous)
- Tasks understood and learnt without holding more than a few elements in working memory at a time

- Elements : anything learnt, frequently schemas

In general the Intrinsic Cognitive Load is low, when non interactive elements are learned in isolation. We may conclude that since heritage presentation materials differ in the way the impose working memory load, successful interpretive products should be designed on a ECL-ICL-GCL balance, reducing loads and avoiding parallel processing. Working Memory loads generally depend on

- the number of elements that must be processed simultaneously in working memory, which means that visitors may be very well overburdened with unnecessary technical terms

- the number of elements processed simultaneously in working memory (frequently schemas), which means that planners should not presupposed any prior knowledge in expert topics, or/and to avoid parallel processing for novice audiences, to plan for variously segmented audiences.

The process of understanding takes places when high element interactivity is held in the Working Memory. Empirical research has verified the hypothesis, that it is easy to understand, when low element interactivity takes places, e.g. when material easily held in working memory is being processed. It is difficult to understand when high element interactivity takes place, e.g. when material is hard to be held in the Working Memory.

Research results has distilled the following recommendations[2] for novel visitation environments in regards to high element interactivity tasks, such as archaeological and science exhibitions, World Heritage Sites, other high density cultural heritage sites etc.) because all elements are processed simultaneously. In these cases cognitive loads imposed are high accelerating in this way (mental) visitor fatigue. Below are specific recommendations developed during the 3 phase of the research and apply to interpretive design:

[2] EUROTHENTICA follows strictly the recommendations given above

1. Interpretive design requires simultaneous manipulation of several elements {grammar and syntax, pictorial elements and multimedia (if any)}
2. Elements should interact hierarchically one at at time, because they cannot be learnt sequentially (one element at a time)
2.1 Elements held simultaneously in working memory cause an intrinsic overwhelmingly high CL
2.1 Experts in a domain
2.3 Understands procedures
2.4 Held material in working memory despite the large numbers of elements involved
2.5 Construct schemas
2.5.1 interacting despite the large numbers of elements incorporated
within the elements involved
2.5.2 schemas are not considered individually in working memory
2.5.3 schemas act as single elements in working memory, imposing minimal MW load, especially, when automated
3. Learner group features shall be investigated at the frond-end evaluation phase already
3.1 knowledge analysis (hierarchical analysis of the material to be perceived)
3.2 target group analysis (should be integrated in hierarchical analysis of the material to be perceived)
3.3 intrinsic CL depends on
o element interactivity
o nature of the material to be learnt
o learners expertise

Table 10: Interpretive Design

The intrinsic cognitive load (ICL) is affected by the intrinsic nature of material and cannot be altered by instructional interventions and depends on the interactivity of the elements, on the nature of the material to be learnt, as well as on the expertise of learners.

1.5.1.2 Extraneous Cognitive Load

The second load type is called "extraneous cognitive load" (ECL) and has its roots in poorly designed instructional e.g. presentation materials. Such ECL does not contribute to learning—instead it reduces working memory capacity for learning. The extraneous cognitive load (ECL) is generated by the manner in which material is presented rather than by the intrinsic characteristics of the material and by required activities. It may very well be altered and even determined by instructional interventions.

EUROTHENTICA focuses on the re-arrangement of information with tourism value in recreational learning environments. Although at present time human brain functions are not fully mapped, information architectures followed by the applications link causal mechanisms of human cognitive architecture and instructional design in order to facilitate higher cognitive results in a non-fully formative setting, being at the same time lesser time-consuming for the course participants. All applications are designed within the framework of Cognitive Load Theory, striving especially to reduce extraneous cognitive load from all types of product categories. Applications are designed to facilitate presentation of information in a manner to optimize intellectual performance and knowledge transfer, encourages visitor activities, predict effective learning if problem formats are used that decrease extraneous cognitive load (CL) in combination with structures that increase germane CL. It is generally assumed that:

- Specific factors that may be responsible for learning disabilities have to be predicted and isolated by the designers.
- Learning material should be design in a manner that accords and not conflicts with human cognitive architecture.

- All information that must be processed in working memory (working memory) should be evaluated as an element interactivity continuum
- Low interactivity elements (low intrinsic cognitive load) interact minimally and so material can be learned serially without imposing a heavy working memory load.
- Interactions between the elements of high interactivity material require simultaneous processing by the working memory and therefore result in a high intrinsic CL.
- Embedding interacting elements in schemas working memory processing is facilitated, only if multiple, complex elements are treated like single elements.

- The instructional designs and procedures within the DELIGHT framework intend to reduce an extraneous cognitive load in the presence of a higher intrinsic load, generating if possible a medium to high germane cognitive load.

The main aim for professional interpretive products and services should be to conjugate heritage knowledge with tourism planning, using a cognitive "interpretation framework" and didactic tools deriving from instructional design familiar with brain architecture. Addressing the general public, the aim is to connect knowledge and visitor needs with tools, methods and policies that are based on shared values, heritage's elements and local identity. Interpretation thus becomes a way of imparting messages to audiences in a memorable way. Delivering high added value interpretive products and services, is an effective way to establish a place's identity and create the desirable attachment to tourist destinations through cognitive processing of information with tourism value and specific communication policies in recreational settings. Key stones in the cultural communications are:

- the planner's ability to master human cognitive mechanisms of acquiring and retaining information and
- the adaptation of scientific contexts through hermeneutical information processing to a recreational learning environment.

The extraneous load has been managed within the applications in a series of diverse products and services. The table below demonstrates a compact product typology:

TAILOR-MADE PRODUCTS	MEDIAL – AIDED PRODUCTS
Informal Contacts	Interpretive Signage
Interpretive Talks	Off Site Interpretation
Interpretive Walks	Print Media
Roving Interpretation	Multimedia
Living History	Web-Based
Guided Trails	Self-Guided Trails
Children Interpretation	Interpretive Programs
Environmental Education	Interpretive Heritage Strategy

Fig.11: Interpretive Products and Services. Management of ECL

For the communication to be interpretive, it must provoke the audience's attention, relate with the visitors' everyday life, reveals the meanings and relationships of the heritage resources by bridging the gap between the tangible form of the resources and its intangible meanings, and last but not least strive for message unity using a holistic planning approach. However empirical research[3] has shown that interpretation is definitely not information although the latter constitutes the backbone of the first one. While information presents merely series of facts, interpretation combines informational data and processes these on a multidisciplinary basis in order to reveal meanings and relationships of a given object / topic. A complex series of various cognitive procedures piled one over the other enable interpretive design to adapt a topic on the needs of specific target groups. A constant consideration is how humans acquire and retain information, how human memory processes data. As a communication process interpretation also translates the technical account of the experts into a communication message that the visitor can relate to his everyday life and experiences. Informational translation into the language of the visitor means, to put ideas and concepts into a format that attracts, interests and inspires visitors. It is the desire for knowledge that makes learning a pleasure generating process: interpretation enables visitors to receive, understand and remember messages and motivates them to use and evaluate the information in certain ways. Interpretation aims to involve visitors in the explorative learning and entertainment process, in edutainment or recreational learning.

Heritage presentation that requires visitors to engage in complex reasoning processing involving combinations of unfamiliar elements are likely to be deficient, downgrading significantly the quality of visitor experience. Interpretive Project Applications, as implemented within this research, have intentionally reduced reduce extraneous CL and redirected attention to cognitive processes that are directly relevant to schema construction. They present information effectively, facilitate domain specific knowledge acquisition, directs learners' attention to relevant learning processing and last but not least students needs are to be considered and special skill builders could be redesigned during the first running phase. All interpretive design is be analyzed from the perspective of Working Memory limitations, element interactivity and the three types of cognitive loads, since these constitute main traits of the Human Cognitive Architecture.

1.5.1.3 Germane Cognitive Load

CLT research has primarily studied instructional designs meant to decrease extraneous CL. Studies have been conducted in which germane CL was increased when it was considered directly relevant to schema. The basic assumption is that an instructional design that results in unused working memory capacity because of a low intrinsic CL imposed by the instructional materials and/or low extraneous CL due to appropriate instructional procedures may be further improved by encouraging learners to engage in conscious cognitive processing that is directly relevant to schema construction. Clearly, this approach can only work if the total CL of the instructional design (intrinsic CL+extraneous CL+germane CL) is within working memory limits. This is the new frontier of instructional design.

[3] MIS ETC 2617 ALECTOR/SCRIPTORAMA The Black Sea Open Street Museum (2007-2013)
SEE/B/0015/4.3/X SAGITTARIUS The Roving Museum (2007-2013)

1.5.1.4 Interaction of Working and Long Term Memory: implications for cultural communication

One of the most influential proposals about the cognitive architecture of working memory is due to Baddeley (1986; 1992; 2014). He assumes that working memory is composed of three major components: a buffer specialized for verbal material (the "phonological loop"), another buffer specialized for visual spatial material (the "visuospatial sketchpad"), and a "central executive" that regulates the activities of the two buffers and utilizes the information contained in them. The phonological loop can be further divided into a pure storage buffer and a rehearsal process, with rehearsal responsible for re-circulating decay-prone information in the buffer via internal speech. Does the neural circuitry for working memory depend on the kind of stored information? qualitative in one case between spatial and object working memory and between spatial and verbal working memory. They provide converging evidence that certain regions are part of the network for the various kinds of working memories. To focus on the strongest cases, different studies show that: the right-hemisphere posterior parietal and premotor regions are part of the network for spatial working memory, whereas the left-hemisphere posterior parietal and Broca's regions are part of the network for verbal working memory. In that Broca's area is adjacent to the left-hemisphere premotor cortex, there is substantial symmetry between the regions involved in verbal and spatial working memory. The dorsolateral prefrontal cortex may be critically involved when computations must be performed on the contents of working memory. These three points have implications for cognitive analyses.

Recent research distinguishes between storage and rehearsal mechanisms and suggests a qualitative difference between the processes that sustain basic working memory and the processes involved when computations are performed on working memory. This supports the distinction in Baddeley's (1986) model between the buffers on the one hand and the central executive on the other, and is contrary to proposals that combine the two functions into a pool of common resources. However, as argued elsewhere, the "central executive" seems to include a set of distinct higher level processes, not a single factor.

The main difference between learners and non-captive audiences is the possibility to rehearse material. Repetition and rehearsal is a quality and at the same time an advantage of formal education, but has no relevance whatsoever in leisure settings. Audiences should to access and comprehend information presented in a manner that no repetition is needed, if they are to spend their leisure time in recreational learning environments. The more detailed the audience profile, the easier it is to select appropriate media, but this is only one aspect of the problem.

An alternative framework is proposed to support recreational learning and information presentation by optimizing knowledge transfer through the activation of memory mechanisms and pre-existing knowledge. Human cognitive architecture offers an unlimited long term memory able to hold mental representations of varied automaticity degrees, but a limited capacity working memory with independent subcomponents to deal with auditory and visual material. The constraints inherent in the working memory should be the determinants for the design of effective interpretive presentations. working memory is used to process all conscious information, but is very limited with respect to the number of elements it can handle. Its capacity may be enhanced if information is processed using both the visual and auditory channel. All material handled by working memory can be transferred to long term memory. Everything that is learned as a consequence of information processed in working memory is stored in an effectively limitless long term memory in the form of schemas that can vary in their degree of automaticity. Both schema construction and automation have the dual function of storing information in long term memory and reducing working memory loads.

Working Memory is equated with consciousness. Humans are conscious of and monitor only within working memory content: unless it is brought to working memory all other cognitive functions remain hidden. On the other hand working memory processes information at several environments simultaneously by organizing, contrasting, comparing. Humans deal with up to two or three elements simultaneously. Interactions between elements in the Working Memory require (more) working

memory-capacity, reducing the number of elements that can be dealt simultaneously. Working memory is incapable of highly complex interactions using novel elements: humans are poor at complex reasoning unless most of the elements with which they reason are previously stored in Long Term Memory. Working Memory is limited in capacity with respect to the number of elements it can handle, so rehearsal is necessary to prevent information loss. It is a task for any interpretive design though to enhance its capacity if material is processed using both the visual and auditory channel, whereas working memory-constraints should be the determinants for effectiveness. Although human intellection resides in Long Term Memory, humans are conscious of and monitor ONLY within working memory content: unless it is brought to working memory all other cognitive functions remain unused. working memory holds +_ 7 items or information elements at a time and processes info at several environments simultaneously: organizing, contrasting, comparing, etc. Humans deal with up to two or three elements simultaneously. Interactions between elements in the working memory require (more) working memory capacity, reducing the number of elements that can be dealt simultaneously. working memory is incapable of highly complex interactions using novel elements. Humans are poor at complex reasoning unless most of the elements with which they reason are previously stored in long term memory. Information stored in long term memory has a high degree of connectivity, includes large and complex interactions and procedures. Human intellectual ability comes from stored knowledge and not from the ability to engage in complete reasoning that takes place in working memory. Intellectual skills are construction of large numbers of increasingly sophisticated schemas (mental representations) with high degree of automation. Schemas consist of multiple elements treated as a single element allowing myriads of irrelevant elements to be ignored, whereas automated schemas allow fluid performance of familiar tasks and facilitate performance of unfamiliar tasks.

It is assumed that all information that has to be processed in working memory can be placed on an element interactivity continuum. Elements in low interactivity material interact minimally and so it can be learned serially without imposing a heavy working memory load. These materials can be characterized as having a low intrinsic cognitive load.
In contrast, interactions between the elements of high element interactivity material require them to be processed simultaneously in working memory resulting in a high intrinsic cognitive load.

In order to facilitate knowledge transfer at leisure settings, a framework is suggested, that manages types of cognitive loads (CL) involved in the learning process. The missing advantage of repetition and rehearsal is substituted by the empowerment of associations, which are constructed through the help of schemas. Any interpretive design that ignores working memory limitations is ex principio deficient, and for non-captive audiences inappropriate. Presentations that require recreational learners to engage in complex reasoning processing involving combinations of unfamiliar elements are likely to be ignored. Presentation content should be analyzed from a cognitive load perspective (CL), since limited working memory is a defining aspect of human cognitive architecture and directs learners' attention to relevant learning processing. The prime goal of information presentation in leisure settings should be the ease with which information is processed in working memory. The use of procedures able reduce cognitive loads should not be though at the expense of understanding. Construction and automation of schemas, useful of solving problems of interest, may very well be utilized to reduce cognitive loads, and capture visitor attention in the long term. Schemas are stored and organized in long term memory but information that constructs them is processed in the working memory. Familiarity allows the human brain to expend less effort to concentrate on personal and meaningful content, and therefore use of known schemata facilitates perception of novel items in recreational settings.Learning mechanisms specifically designed for non-captive audiences must embed interacting elements in familiar schemas. These can be treated then as a single element in working memory, can effectively reducing loads provoked by novel items.

Transfer of learning is a phenomenon of learning more quickly and developing a deeper understanding of the task if we bring some knowledge or skills from previous learning. Therefore, to produce positive transfer of learning, we need to practice under a variety of conditions. We benefit and suffer from prior experiences. People improve in their ability to learn new skills more proficiently because of prior practice on a series of related

tasks. This helps us to acquire new views on a topic by looking at the task from a different approach, which strengthens our understanding of the topic. For example, practicing to drive a variety of cars provides experience with different stimulus situations and makes new learning easier.

Another example is that greater learning occurs not by rereading the same text, but by reading another text on the same subject matter. Transfer of learning begins with the learning of a task in a unique situation and ends when we quit learning (experimenting) with that task. The power of varied context, examples, different practice scenarios, etc. cannot be overemphasized. No matter if we learn simple discriminations or complex concepts, stimulus variations are helpful. Encouraging transfer of learning in the classroom provides the skills and knowledge for its successful implementation outside of the classrooms.

1.5.1.5 Working Memory Management

An alternative framework is proposed optimize knowledge transfer through the activation of memory mechanisms and pre-existing knowledge in recreational learning environments. Leisure visitors tend to be very heterogeneous groups, often comprised of multi-generational members. Capturing and keeping their attention high up during and possibly after the visit means to create bridges between the inherent values of phenomena selected for presentation, and the audiences. Far beyond the dissemination of factual information, interpretation aims to create in visitors meaning, so that they can put a place into personal perspective and identify with it in a way that is more profound and enduring way. Interpretation is a meaning making attitude formatter. As such it produces meanings that bond people to the places they visit and create in them *the* sense of the place. Meanings are contextual in nature, including a linguistic, spatial and a social context. To understand the meanings of given items is to understand those meanings within the given context. Meanings, embedded in language and culture, are culturally and socially constructed and consequently shared by all who access them, but not by those who are unable to decode them- in our case the 'visitor'. Meanings are communicated through the use of language. One of the most significant contexts of meanings is spatial context, the sense of place. Meanings extracted from a visit to place, heritage or natural site, collection etc. constitute the high added value experience a visitor takes away in memory. In this vein, meaning *is* the experience- the only experience any visitor has with a place Interpretation, creatively conceived and powerfully delivered, lies at the heart of this process. **Familiarity allows the human brain to expend less effort to concentrate on personal and meaningful content.** Defining this method as "self-referencing," Ham emphasized the importance of getting the audience to "think about themselves and their own experience" Ham suggests that "[self-referencing] causes [the audience] to connect the new ideas [interpreters] are giving them with something they already care about, themselves".

1.5.1.6 Management of Information with Tourism Value

Informational asymmetries between visitors and producers result in unsustainable use of the destinations assets. Major fame attractions receive the maximum pressure of the tourist flows, causing severe disfigurement of a destination's assets and competitiveness loss, whereas emerging fame heritage resources stay unexploited. Accessibility to resources and ease of experiencing the destination, the efficiency of transportation systems are critical considerations for visitors. The time needed to find information, to book a hotel, to reach the destination, or to access a specific place when visitors arrive, the distance visitors have to travel can directly influence the length of their stay and the level of the expenditure. The visitors' '*Quest*' for visitors seems to be the searching of information with tourism value. Asymmetric information between consumers and producers of tourism goods almost always result in stay-time reduction, in reduction in consumption & expenditure in congestion of major fame attractions, as well as in creation of monopolies, especially a business' proximity to attractions is evident. It is therefore critical tourism planning to provide for visitor accessibility and convenience. Timely and relevant information distribution is one of the most essential elements for a destination's success. Providing appropriate and stimulating information before and during a trip can be one of the most effective strategies for destinations to attract and extend the length of stay of visitors. Visitor friendly, quick to access information impinges on the way visitors spend their time, where they go, what services they use and ultimately on the travel expenditure at community level.

While information presents merely series of facts, interpretation combines informational data and processes these on a multidisciplinary basis in order to reveal meanings and relationships of a given object / topic. The process to do this is a complex series of various cognitive procedures piled one over the other such as adapting a topic on the needs of a specific target group. A constant consideration is how human beings acquire and retain information, how human memory processes data. In doing so, CIP systematically takes into account the visitors' experiences and tries to create interactions between visitors, scientific phenomena, and tangible and intangible heritage resources. The outcome of the hermeneutical process is a framework of contents, which is made up by:

- a central message , which describes "the essence" of the heritage site, work of art, intangible values, landscapes or even signage dealing with the management of cognitive loads by facilitating information retention

- a storyline that holds the visitors' attention, reinforcing the association chain. A successful easy to grasp and follow storyline not only realizes education in recreational environments by defeating boredom and provoking interest, but also satisfies consumers of secondary tourism goods, who have invested their money and valuable leisure time in selecting specific recreational facilities. Such story-lines are not lectures; they always allow visitors to interact with the surroundings. Even in off-site or roving interpretation, where visitors are not confronted with guides or multimedia in visitor centers, they have the chance to actively participate to the interpretive happening: any possible stop or selected exhibit should provide for fun and curiosity, insight and meaning, participation and entertainment, encourage interaction, familiarize with novelties, vary the visual, auditory and narrative styles, even provide for quiet spaces, relaxation and immersion.

Usually there are two main objectives to accomplish: learning and behavioural objectives in recreational settings:

- Interpretive services enhance leisure experiences by incorporating educational elements in recreational settings, meeting an audience's demand, which prefers educational interactive entertainment to passive observation. Learning objectives are met if enthusiasm is created among visitors for the goals of the managing agencies. In leisure settings, however, learning experiences are not imposed by conventional instruction methods. Learning in recreational environments is tailored to non-captive audiences, a fact that differentiates instructional design from formal academic settings. In contrast to

formal education, where learning motivation is often dependent on fear of punishment or on forfeiture of reward, learning content must rather be willingly embraced by visitors. In leisure settings audiences select freely to attend or ignore communication content; in addition, visitors' perspective regarding the experience and the learning outcomes may be paramount to recreational objectives. Interpretive products and services should therefore offer enjoyment and relevance to audiences based on clearly organized message nuclei, if they are to attract visitors.

- Behavioural objectives are a constant consideration for site managers. In generally they wish to reduce environmental and cultural damage by explaining the impacts of various behaviours and suggesting appropriate alternatives. They may wish to substitute experience for places that are very fragile and/or difficult to visit (e.g. caves, sacred temples), or topics that are impossible to experience directly (e.g. chemical procedures, prehistoric, cosmic conditions) In particular they wish for instance to prevent visitors from picking up "souvenirs" at archaeological sites, such as pieces of marble - a constant problem at heritage places in Greece. Interpretive offerings tailored to this objective would get the visitors to appreciate the value of artefacts left intact in their place. They should create the feeling that by not touching anything visitors are contributing to the site's maintenance, which would then benefit all interested parties. Research evidences that interpretive programs successfully target an audience's behavioural, normative, and control beliefs and are effective influencing the behaviours for which those beliefs are salient.

Applications developed organize information within the framework of Cognitive Load Theory (CLT). CLT is concerned with the effective instructional design in accord to human cognitive architecture. As cognitive load (CL) is to be understood a construct that represents the load imposed on the cognitive system when a particular task is performed. There three specific types of loads that the EUROTHENTICA has considered. The intrinsic cognitive load (ICL) is affected by the intrinsic nature of material and cannot be drastically altered by instructional interventions. It depends on the interactivity of the elements, on the nature of the material to be learnt, as well as on the expertise of learners. The extraneous cognitive load (ECL) is generated by the manner in which material is presented rather than by the intrinsic characteristics of the material. It may very well be altered and even determined by instructional interventions. To reduce this type of loads all applications have excluded technical terms and has layered information in a double format. Non-highlighted parts are governed by personalized, easy to follow narratives structures, highlighted parts include "do you want to know more" structures and are easily to identify optically. A challenge for the quality of information within this framework presents the germane cognitive load (GCL), which generally reflects the effort that familiar schemas are used to acquire knowledge and may be increased by instructional interventions. Constructing new schemas is made possible by the step by step insertion of novel items.

2 SIGNAGE AND LABELLING

Directional Signage includes roadside signs for motorists, drivers and simple navigation before, during and after a trail, warning signs of both informative and preventative nature, navigation to facilities and recreational opportunities within a heritage area (park, archaeological site, museums, etc.). It manages any information that is related to attractions: accessibility, (parking and transport possibilities, bus schedules, etc.) amenities, detailed description of the site / place, maps, route markers and street names, diagrams and photographs, other available tourism packages, activities in proximity or connections to other attractions and ancillary services, such as local tourism bureaus, maps, regional products, etc. Directional Signage also includes any forms of identification and information signs, "Welcome" signs, signage for accredited and non-accredited visitor information services, regional tourist drives, themed tourist routes, regulatory signage (parking, no-parking, prohibited, free etc.), roadside advertising, guide and service signs, signage in rural and urban areas etc.. In the research area directional signage does not follow a unified system, nor is it regionally planned. This causes confusion to visitors, when selecting heritage asses in the landscape. Applications developed manage information with tourism value by linking causal mechanisms of human cognitive architecture and instructional design in order to facilitate higher cognitive results in non-formative settings. Design and delivery of information with tourism value facilitates perception of phenomena and rule with less effort in shorter time periods. The purpose of any tourism signposting and signage is to inform visitors and travellers of the key aspects of a regions tourism industry. They include a- natural, tangible cultural feature signs erected to indicate the location of natural, cultural or historic features, b- commercial tourism facility signs erected to indicate the location of a commercial tourism facility (accommodation, catering, shopping, transport, entertainment and infrastructure possibilities). Information flows are concerned with and exterior environments, irrespectively of the media's nature, and aim to reduce the visitor's needs to prepare for their visit, and to provide them with information comfort during their stay time. Identified are two major categories: directional which corresponds to tourist signposting and interpretive, which by nature aims to attract the attention of non-captive audiences.

2.1 Directional Signage

Directional Signage includes roadside signs for motorists, drivers and simple navigation before, during and after a trail, warning signs of both informative and preventative nature, navigation to facilities and recreational opportunities within a heritage area (park, archeological site, museum, etc.). It manages any information that is related to attractions: accessibility, (parking and transport possibilities, bus schedules, etc.) amenities, detailed description of the site, maps, route markers and street names, diagrams and photographs, other available tourism packages, activities in proximity or connections to other attractions and ancillary services, such as local tourism bureaus, maps, regional products, etc. Directional Signage also includes any forms of identification and information signs, "Welcome" signs, signage for accredited and non-accredited visitor information services, regional tourist drives, themed tourist routes, regulatory signage (parking, no-parking, prohibited, free etc.), roadside advertising, guide and service signs, signage in rural and urban areas etc.

Tourism product labels are "tags" that certify and most importantly, communicate to consumers that a service, equipment, site or activity has certain attributes or fulfils a number of requirements, raising the consumer's perception of value. Two main conditions have to exist for cultural tourism to take place:

- On the demand side – the will to know, to understand and learn about new places and the history behind them, present or past. The consumption of a product that contains cultural significance: monument, work of art, tradition, historical site, design and architecture, music and folklore, traditional food and wine, cultural exchange etc.
- On the offer side – the intervention of a mediator, being a person, a written or visual document (traveler guide, product portfolio, information leaflet, product labels) that has the role of highlighting the cultural value of a resource, to present it and explain it to the consumer, making it become a cultural-touristic product.

The role of the quality product labels in cultural tourism is to:

a. **Supply Side** – they make sure that the attraction, resource, site, service etc., complies with some basic quality of the experience requirements:
   - Technical quality. Necessary for the consumer to understand and experiment the attributes ad characteristics of cultural resources and attractions. Ex: guides, information boards, leaflets etc;
   - Service quality. Security, comfort, accessibility etc. Ex: lighting, heating, toilet facilities, souvenir shops, restaurants, road signals, infrastructure etc;
   - Resource quality. The site is up to the standards to be "experienced". Ex: Degree of restoration and maintenance

b. **Demand side –** for the traveler it involves being able to:
   - Understand what it has been seen. Give it a meaning, really experience it;
   - Feeling safe;
   - Having a good meal afterwards or buying a souvenir;
   - Having a nice sleep in a nearby hotel

c. **Implementation**
   - National level
   - More of internal use than external use

Table 12: Signage Guidelines I

The role of the special product labels in cultural tourism is to

a. **Supply Side**
   - It helps to create the cultural product offer
   - It supports its positioning
   - Powerful promotion and communication tool
   - For a resource, establishment, service etc. …to belong to a special label it has to meet a set of attributes or criteria that convey the essence of the label. Ex: **Camino de Santiago**

b. **Demand Side**
   - It provides the traveler with important information on the special or different elements of the cultural offer of a country, region etc.
   - It raises notoriety
   - It helps the trip planning process

c. **Implementation**
   - Regional, local level
   - More of external use

Table 12: Signage Guidelines II

2.2 Interpretative Signage

Interpretive Signage strives to attract visitor attention by producing connections to meanings and phenomena and is strongly related to persuasive communication theory. Interpretive Signage describes the sensitivity and significance of each heritage resource and has to be educational, accurate and narrative. Interpretive Signage coordinates communication with the public by presenting the mission and the values of tangible and intangible resources. Interpretive content assists visitors to develop an awareness and understanding of local cultural heritage, to recognize ecosystem and cultural values, to encourage actions taken in relation to protection of natural and cultural heritage. It is includes a variety of programs and services such as audiovisual programs, historic furnishings, museum exhibit labels, publications, wayside exhibits, graphics design, interpretive, site signage, contextual design, websites. There is a complete lack of directional signage. The task here it to explore the specific conditions required to creating quality experiences for non-captive audiences in leisure settings. Specifically prerequisites and conditions under which successful encoding of visitor relevant messages takes place have been examined within the EUROTHENTICA. By exploring the dynamics of the human cognitive architecture and the relationships between working and long term memory we define the implications Interpretive Signage strives to attract visitor attention by producing connections to meanings and phenomena.

Interpretive Signage describes the sensitivity and significance of each heritage resource and has to be both educational, accurate and tell the stories of past and present landscapes. Interpretation content needs to assist visitors to develop an awareness and understanding of local cultural heritage, to recognize ecosystem and cultural values, to encourage actions taken in relation to protection of natural heritage and cultural heritage. Interpretive Signage coordinates communication with the public by presenting the mission and the values of tangible and intangible resources. It is includes a variety of programs and services such as audiovisual programs, historic furnishings, museum exhibit labels, publications, wayside exhibits, graphics design, interpretive, site signage, contextual design, websites.

With an increasing proportion of visitors touring the country in their own vehicles the need for signage to tourism attractions and facilities becomes more important. Currently the incidence of internationally recognised brown tourism signs is patchy. Good signage not only

assists visitors to find their selected destination, but also alerts them to other tourist attractions and facilities, which may encourage additional visits and longer stays. Provision of official format signs also reduces the need to plant often unsightly and obtrusive informal signs. The authorisation and installation of brown tourism signs with white lettering and pictograms according to European norms is normally undertaken at local level. However, there is a need to set national standards in order to ensure continuity of approach. The provision of brown tourism signs for "public" destinations such as natural attractions, churches and monasteries, cultural attractions, accommodation etc., is usually a responsibility of the local and roads authorities at their cost. However, it is increasingly common for signs for commercial attractions such as water parks, resorts and rural accommodation to be paid for by the beneficiaries.

Fig. 41: Natural Heritage Interpretation
C.I.P. Leader+ 2006-2006
Transinterpret II Project Record

Interpretation has been happening ever since people have visited places because they thought them interesting. Freeman Tilden, who was involved in the early interpretation work of the US National Park Service, and wrote the first book on this subject, described it as: "… the work of revealing, to such visitors as desire the service, something of the beauty and wonder, the inspiration and spiritual meaning that lie behind what the visitor can with his sense perceive".

Other authors define Interpretation as a communication process designed to reveal meanings and relationships of our cultural and natural heritage, to the public, through first hand involvement with objects, artefacts, landscapes, or sites. The interpretation is all we have to do for sharing with others our enthusiasm for somewhere, or something which is significant, is a part of how we manage and understand our heritage, is an important part of tourism developments; it is all to do with communication.

Interpretation is the way organizations facilitate connections between visitors and heritage assets. For example, land management agencies across the country use signs, exhibits, publications, tours, and other media to connect visitors with natural, cultural, and recreation heritage assets. Interpretive planning includes planning for visitor centers; kiosks or bulletin boards with information, education, or safety messages; publications such as educational brochures, booklets, checklists, or flyers; exhibits and exhibits labels; guided walks, talks, tours, or interpretive demonstrations and programs; Orientation and way-finding information such as directional signs and maps, interpretive signs and waysides; safety information, rules, regulations, and use policies; educational programs or activities for families, school groups, or other visitors.

Deities of the classic Greek and Roman pantheon (Jupiter, Apollo, Diana, Venus, Dionysos-Bachus, Fortuna, Nemesis, Hercules, Hecate, Thanatos), Oriental deities (Cybela, Isis, Jupiter, Dolichenus, Glycon, Mithras) and local deities (The Thracian Rider, The Danubian Riders) are represented in works which are copies of classic representations or in original achievements)".

It gives visitors a mental structure for what is coming next, the exhibition has a logical order to it, which makes it easier for visitors to follow.

COMMUNICATION PRINCIPLES

- getting attention;
- making it enjoyable;
- making your communication relevant to your audience;
- giving it a structure.

Getting attention

Devices to hold peoples attention include: a large title on a panel to gab the interes of passers-by; a newspaper headline can summerise the main point of a message; activities which peoples can do as a group or a family, and providing variety in the media you use in an exibittion.

Making it enjoyable

People will pay attention to something which pleases them.

Making your communication relevant to your audience

Sam Ham in his book „Environmental Interpretation", suggests that if something is to be relevant to an audience it must be both meaningful and personal.

The idea of being meaningful is to build bridges between what people already know, and the new information you want them to understand.

Making inerpretation personal means finding ways of linking it to your visitors own lives.

Giving it a structure

If the introductory text of an exhibition says: *"The exhibition dedicated to Art and Religion in Roman Times illustrate through images and three-dimensional pieces the role played by art in the promotion and development of religion.*

BASIC RULES

- Topic Research and Profound Subject Matter Knowledge The interpreter should know as much about the subject as possible. Read, talk to people, and study what's already been done
- Knowledge of the Audience Interpreters should discuss with the agencies, who is the audience. This is very important -- it will save a lot of time and effort later on in the process
- Information Layering; Development of the Central Message Message have to be organized and prioritized and one should have to decide ahead of time what he/she really wants your audience to know
- Following rules is necessary, but having several people all trying to steer

the creative process will make the job much harder and the end result mediocre; therefore writings shall be entrusted with experts

Fig. 42: Natural Heritage Interpretation
C.I.P. Leader+ 2006-2006
Transinterpret II Project Record

- Interpretive messages shall be constructed with: the fewest possible words to carry the meaning; every word should count; the heart of the matter and go straight to the point; the active voice; simplicity

- Respect. Visitors might know nothing about a site or a topic, but they are intelligent. Experts might always be among visitors and compromise interpreters not profoundly knowledgeably about the assets history

- Interpreters should always avoid: propaganda because people really aren't much interested in the "mission" or "objectives" of an agency, but they are very interested in the sites and what's happening to them; abbreviations, scientific jargon, or obscure and complicated messages which lead to high cognitive loads; judgments and excessive adjectives shall be avoided. The interpretive goal is to present a picture, situation, or concept in a clear, uncluttered way so that the reader can react and draw judgments. Interpreters should not tell the readers how to react and what to feel. They can figure out if a view is spectacular or a tree is majestic or a river is mighty. Therefore the use of verbs and nouns is much more important than the use of adjectives.

- Review - interpreters should listen carefully to experts on your topic and make sure your writing is accurate, but they have to be careful during the reviews not to forget the real audience.

Fig. 43: Natural Heritage Interpretation
C.I.P. Leader+ 2006-2006
Transinterpret II Project Record

2.3 Acknowledged Labels

Labels will be created to certify that a particular product complies with specifically predefined qualities and attributes. The labels will be used to stress the variety and quality of the heritage tourism products. The selection of the labelling criteria will be the starting point, they can be of both qualitative and quantitative nature. The committee will ensure the destination/attraction really complies with all the criteria. The labels will be used in the form of signs at the destination but above all in the marketing channels of each country.

IMPLEMENTATION

A Label Committee will be created to manage the regional tourism labelling system. This Label Committee will be composed by Marketing & Competitiveness Clubs of each sector, as well as government and employers representatives. This Label Committee will be in charge of the labelling implementation, which will:

1. Define the criteria and specifications of each label (needed requirements that a player, tourist infrastructures, equipment or destination has to fulfil to deserve a specific label, etc.)
2. Identify the selection of hotels, restaurants, villages, towns, parks, beaches, etc., that fulfil the requirements for these distinctions
3. Define the names and symbols used for each label
4. The communication of the characteristics of each label to the markets through ad-hoc campaigns
5. The control of the labels' application in order to guarantee to the travelers that all agents who have these distinctions fulfil specific requirements
6. The production of graphic symbols to be shown to the tourist. This symbol could be used by tourist players or destinations who received the label in their communication materials and marketing campaigns.
7. A label audit annually in order to maintain the prefixed standards plus annual investigation of possible new candidates for each label category. Incorporate the labels to the regions' main communication materials, namely website and some collaterals

SUCCESS FACTORS

- Selection and rigid and frequent application of the right criteria per label.
- Good application of labels across all marketing channels as categories/navigators, especially online information and reservations systems.
- National campaign to expose the results and allow participants to get public recognition of their strife for improvement.
- Monitoring the reactions of the sector and the consumers to identify potential improvement areas.

2.3.1 The UNESCO World Heritage label

Fig. 44 - UNESCO World Heritage label - www.unesco.org

The UNESCO world heritage is composed by natural and cultural objectives of worldwide importance which need to be conserved at all costs for the future generations. The monuments selection in order to entry in the UNESCO world heritage is made taking into account a lots of criteria, belonging to two big groups, cultural and natural.

CULTURAL

Monuments: architectural works of monumental sculpture and painting, elements or structures of archaeological nature, inscriptions, cave dwellings and the elements that have outstanding universal value from the point of view of history, art or science;

Assemblies: building ensembles', isolated or grouped, which, because of their architecture, unity and their integration into the landscape, are of outstanding universal value from the point of view of history, art or science;

Sites: works of man or the combined works resulting from the actions of man and nature, and areas including archaeological lands have outstanding universal value in terms of historical, aesthetic, ethnological or anthropological.

NATURAL

Natural monuments consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
Geological and physiographical formations and precise delineated areas which constitute the habitat of threatened animal and plant species that have outstanding universal value from the point of view of science or conservation;
Natural sites or precisely delineated natural areas that have outstanding universal value from the point of view of science, conservation or natural beauty.
The importance of cultural heritage which is part of UNESCO in the development and promotion of tourism is important by many factors:

- economic, representing an important resource for tourism and culture;
- socio-cultural, being a decisive factor in establishing the identity of a tourist destination;
- educational, providing people information about the evolution of human life and the environment;
- political, being used to promote certain political values and ideas;
- tourism can help promote the idea of UNESCO heritage conservation elements in different ways: firstly, it can generate funds for conservation of heritage, it makes use of the economic value of heritage; secondly, the tourism could contribute to raising awareness of the

conservation of heritage, attracting the world's attention on the importance of maintaining them for future generations; finally, the tourism is one of the most important means of cultural exchange, allowing visitors to know the areas with unique cultural meaning.

By declaring a natural or cultural objective as UNESCO World Heritage, can lead to a significant increase of tourism for the region, this labeling contributing to improving the competitive position of the destination. Establishments displaying this award will offer specific provision for guests attending cultural events or venues. This scheme is currently only open to accommodation providers in Edinburgh and the Lothians.

In addition to tourism signs and symbols used for public and visitor information, the tourism sector is witness to an increasing number of logotypes which serve as distinguishing emblems or devices for organizations, companies, products, campaigns, programmes, destinations or even countries.

Some logotypes may have a labelling function, in order to identify companies and organizations following a pattern of criteria, certified or not, within a specific programme such as aimed at ethics, ecology, safety and security, health and hygiene etc.

For the purpose of this chapter, logotypes can be assembled in four broad groups relating to:

- special campaigns or programmes
- cultural routes
- labelling in cultural tourism
- sustainability label

2.3.2 The EDEN initiative

Fig. 45: EDEN Logo (www.edenineurope.eu)

EDEN is an initiative promoting sustainable tourism development models across the EU. The initiative is based on national competitions that take place every other year and result in the selection of a tourist 'destination of excellence' for each participating country. Through the selection of destinations, EDEN effectively achieves the objective of drawing attention to the values, diversity and common features of European tourist destinations.

2.3.3 European Heritage Label

The European Heritage Label was established in 2011 by the European Union. It originated out of an intergovernmental initiative under which 68 sites in 19 countries were labeled since its creation in 2006. The new European Heritage Label is intended for sites that not only have made a contribution to European history and culture and/or the building of the Union, but also carry out activities to highlight their European dimension (the project) while demonstrating their operational capacity (the work plan): these criteria are outlined in Decision 1194/2011/EU establishing the **European Heritage Label**.

Fig. 46: European Heritage Label – www.ec.europa.eu

The procedure for attributing the European Heritage Label is carried out in two stages:

Candidate sites are preselected at the national level while the final selection is done at European level by the Commission, based upon the recommendations of a panel of independent experts. In 2013, the first year of the action at the EU level, the nomination of sites was restricted to those Member States which did not participate in the intergovernmental initiative.

During that first selection year, the European Heritage Label was attributed to four sites: the Peace Palace in The Hague (Netherlands), the Great Guild Hall in Tallinn (Estonia), the archaeological site of Carnuntum in Petronell-Carnuntum (Austria), and Camp Westerbork (Netherlands).

2014, the second selection year, was reserved for candidate sites from those Member States which had participated in the 2006 intergovernmental initiative: they could pre-select up to four candidate sites. The Commission received 36 applications from 13 Member States. The applications showed a great variety of cultural heritage sites including one thematic national site but no transnational site. The assessment of the applications have to be conducted within the specific framework of the criteria laid out in Decision 1194/2011/EU.

Extract of Decision 1194/2011/EU of the European Parliament and of the Council of 16 November 2011, article 7, criteria

1. The attribution of the label shall be based on the following criteria ('criteria'):

(a) Candidate sites for the label must have a symbolic European value and must have played a significant role in the history and culture of Europe and/or the building of the Union. They must therefore demonstrate one or more of the following:

(i) their cross-border or pan-European nature: how their past and present influence and attraction go beyond the national borders of a Member State;

(ii) their place and role in European history and European integration, and their links with key European events, personalities or movements;

(iii) their place and role in the development and promotion of the common values that underpin European integration.

(b) Candidate sites for the label must submit a project, the implementation of which is to begin by the end of the designation year at the latest, which includes all of the following elements:

(i) raising awareness of the European significance of the site, in particular through appropriate information activities, signposting and staff training;

(ii) organizing educational activities, especially for young people, which increase the understanding of the common history of Europe and of its shared yet diverse heritage and which strengthen the sense of belonging to a common space;

(iii) promoting multilingualism and facilitating access to the site by using several languages of the Union;

(iv) taking part in the activities of networks of sites awarded the label in order to exchange experiences and initiate common projects;

(v) raising the profile and attractiveness of the site on a European scale, inter alia, by using the possibilities offered by new technologies and digital and interactive means and by seeking synergies with other European initiatives. The organization of artistic and cultural activities which foster the mobility of European culture professionals, artists and collections, stimulate intercultural dialogue and encourage linkage between heritage and contemporary creation and creativity is to be welcomed whenever the specific nature of the site allows this.

(c) Candidate sites for the label must submit a work plan which includes all of the following elements:

(i) ensuring the sound management of the site, including defining objectives and indicators;

(ii) ensuring the preservation of the site and its trans- mission to future generations in accordance with the relevant protection regimes;

(iii) ensuring the quality of the reception facilities such as the historical presentation, visitors' information and signposting;

(iv) ensuring access for the widest possible public, inter alia, through site adaptations or staff training; (v) according special attention to young people, in particular by granting them privileged access to the site;

(vi) promoting the site as a sustainable tourism destination;

(vii) developing a coherent and comprehensive communication strategy highlighting the European significance of the site;

(viii) ensuring that the management of the site is as environmentally friendly as possible.

2. As regards the criteria laid down in points (b) and (c) of paragraph 1, each site shall be assessed in a proportionate manner, taking into account its characteristics.

In 2015 – All Member States that confirmed their participation in the EHL

AUSTRIA - BELGIUM - BULGARIA - CROATIA - CYPRUS - CZECH REPUBLIC - DENMARK - ESTONIA - FRANCE - GERMANY - GREECE - HUNGARY - ITALY - LATVIA - LITHUANIA - LUXEMBURG - MALTA - NETHERLANDS - POLAND - PORTUGAL - ROMANIA - SLOVAK REPUBLIC - SLOVENIA - SPAIN

Fig. 47: European Institute of Cultural Routes

3 SUSTAINABILITY LABELS

3.1 Austrian Ecolabel for Tourism

The Austrian Ecolabel stands for higher living standards and environmental quality, clear and transparent information, highly informative environmental policy in ownership of companies and organizations, and high-level co-operation with excellent facilities.

Fig. 48: – Austrian Ecolabel for Tourism – www.ec.europe.eu/environment/ecolabel

3.2 Cycling Denmark

It goes without saying that a bicycle is the most sustainable and environmental way of getting around and exploring your destination. In Denmark it is no different and with more than 10,000 km of cycle routes it is the perfect way to see all that Denmark has to offer. Hostels that display the 'Cycling Denmark' logo have been approved by The Danish Tourist Board as a cycle-friendly accommodation.

Fig. 49: Cycling Denmark logo - www.ec.europe.eu/environment/ecolabel

3.3 Ecolabel

The European Ecolabel is a voluntary scheme which encourages businesses to market products and services that are kinder to the environment. The European Eco-Label confirms that the enterprise to which the label was awarded reduces its consumption of energy, water and waste, uses environmentally friendly materials, and buys environmentally compatible goods.

Fig. 50: Ecolabel - www.ec.europe.eu/environment/ecolabel

3.4 Green Tourism Business Scheme

Green Tourism Business Scheme', otherwise known as GTBS, is the national sustainable tourism certification scheme for the UK. Originally developed in partnership with Visit Scotland, it is now the only certification scheme validated by Visit Britain, through the International Centre for Responsible Tourism (ICRT). Businesses opting to join Green Tourism are assessed by a qualified grading advisor against a rigorous set of criteria, covering a range of areas, like energy and water efficiency, waste management, biodiversity and more. Those businesses that meet the required standard, receive a Bronze, Silver or Gold award based on their level of achievement.

Fig. 51: Green Tourism Business Scheme - www.ec.europe.eu/environment/ecolabel

3.5 Nature's Best

Nature's Best' certifies ethical, high quality nature tours in Sweden. It was the first national quality label for ecotourism in the northern hemisphere designed to offer the traveler an unforgettable nature experience. It combines responsible nature conservation with more environmentally friendly ways of travelling that care for cultural heritage, local community and the environment.

Fig. 52: The Nature s Best - www.ec.europe.eu/environment/ecolabel

4 EUROPEAN CULTURAL ROUTES

Cultural tourism is a key potential for development. It is estimated that more than 40% of all international tourists are "cultural tourists". In Europe, more than 12% of GDP comes from tourism and tourism-related activities. It is one of the world's top tourism destinations, with cultural and heritage tourism being a focal point.109 A major step in integrating cultural and natural heritage into tourism strategies is firstly helping communities and the local authorities understand "the tourism industry" and the need to plan for it. While tourism can bring great rewards in economic terms as well as in stimulating the revival of cultural traditions and the preservation of assets, there are always repercussions. At the global scale, this has tended to be focused around the environmental degradation accompanying mass tourism, which must be a necessary consideration in EU regions as well. However, there is an increasing danger that local cultures become altered within themselves in order to fit the demands and expectations of the tourism industry and tourists. While tourists seek exotic cultural experiences, local communities and products may become a commodified which affects the authenticity of cultural assets and their value to local communities. For example, countries with more developed tourism have seen a rise in pastiche architecture, kitsch products and mimicked cultural spectacles. This "reconstruction of ethnicity" in turn tends to have a negative effect on the historic and cultural value of those assets, comprehension of them by younger generations, and on tourist potential.

Accompanying cultural heritage are cultural rights, which underpin the concepts of sustainable development and sustainable tourism. Local communities therefore need to be actively involved in designing more detailed local strategies for cultural and natural tourism that ensure that the concerns of all members of the community are addressed (and limits to tourism set, if required), that cultural practices and assets are represented and safeguarded authentically, and that the economic and environmental benefits – and burdens – are equally borne.

In terms of the protection of cultural heritage, "it is the respect of the world cultural and natural heritage which must take precedence over any other considerations however justified these may be from a social, political or economic point of view." Cultural assets should not be preserved as a mere tool for development; rather, they should be safeguarded as an inheritance that has to be passed on to future generations whether or not they generate gains in the present. In this sense, the ICOMOS Charter of Cultural Tourism also emphasizes that "from school age onwards children and adolescents [should] be educated to understand and respect the monuments, the sites and the cultural heritage and that all written, spoken or visual information media should express to the public the elements of the problem thereby efficaciously contributing to effective universal understanding".

For the purpose of the *Heritage Accessibility Manual* European Cultural Routes have been selected, which can serve as guiding factor for the design and delivery of EUROTHENTICA. All the routes are marked with a special emblem, giving them a special identity and differentiating the routes from other local trails. Symbols (plants, leaves, flowers, animals) are used for signposting.

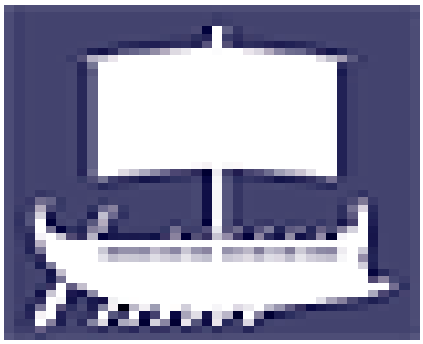
4.1 The Legacy of the Vikings

Destination Viking is a new travel experience concept. Partners from a number of countries have come together to develop a borderless tourism destination focusing on the Viking world. Quality is a key word for Destination Viking - as a visitor you expect quality at every level, and we will deliver it. Quality means quality of activities, quality of presentations, quality of workmanship, quality of sites, quality of food, quality of souvenirs. In short: quality experience. The Viking Cultural Route is a far-reaching and significant cross border collection of sites, stories and heritage relating to the shared Viking legacy of Europe and beyond. The route was certified by the Council of Europe in 2004 as a Major Cultural Route

Countries: Belarus, Belgium, Denmark, Estonia, Finland, France, Germany, **Greece,** Iceland, Ireland, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Russian Federation, **Spain,** Sweden, Turkey, Ukraine, United Kingdom.

Fig. 53: The Legacy of the Vikings logo – www.culture-routes.eu

4.2 The Phoenicians' Route



The Phoenicians Route is the network of the great nautical courses which Phoenicians used since the twelfth century B.C. as their main trade and cultural lines of communication in the Mediterranean Sea. These routes became an integral and basic part of the Mediterranean culture. Nowadays Phoenicians are the intercultural model on which a "Cultural Itinerary of the Council of Europe" is based. This Itinerary passes through the countries of 3 continents and through over 80 towns of Phoenician origin. **Incorporated** into the programme "The Council of Europe Cultural Routes": 2003

Countries: Algeria, Croatia, Cyprus, Egypt, France, **Greece, Italy,** Lebanon, Libya, Malta, Morocco, (Palestinian Territories), Portugal, Spain, Syria, Tunisia, **Turkey,** United Kingdom.

Fig. 54: The Phoenicians Route logo - www.culture-routes.eu

4.3 The European Route of Jewish Heritage

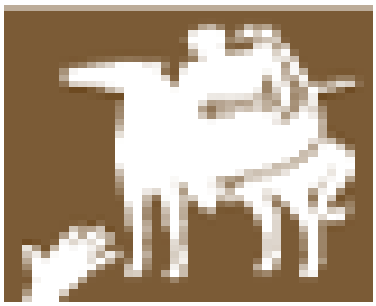
Jewish heritage is an integral part of European history and culture. Much of it is rooted in Europe, with a story of migrations, persecutions and precariousness; but also of exchanges, humanism and a profusion of mutual enrichment.

Incorporated into the programme "The Council of Europe Cultural Routes": 2004

Countries: Austria, Belgium, Bosnia-Herzegovina, **Bulgaria,** Croatia, Czech Republic, Denmark, France, Georgia, Germany, **Greece,** Hungary, Ireland, **Italy,** Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, **Romania,** Serbia, Slovakia, **Slovenia,** Spain, Sweden, Switzerland, **Turkey** and the United Kingdom

Fig. 55: The European Route of Jewish Heritage logo - www.culture-routes.eu

4.4 The Saint Martin of Tours Route



Saint Martin of Tours has been part of Europe's collective memory since the fourth century. A tireless traveler around Europe for his entire life, this European ahead of his time, who symbolizes the universal value of sharing, was born in 316 in Pannonia, now Hungary, to pagan parents. Having been raised in Pavia, Italy, where his father served in the Roman army, he himself was enrolled in the army at the age of about fifteen. In 337, while stationed in Amiens, France, he cut his cloak in two to give half to a poor man who was dying of cold. His faith was then revealed to him and he became a Christian. Living as a hermit near Poitiers, he established a monastery in Ligugé, the first in the Western world. He became a bishop in 371; he founded the abbey of Marmoutier and the first rural churches in Gaul, while travelling extensively throughout part of Europe. Saint Martin died on 8 November 397 in Candes and was buried on 11 November in Tours.

Incorporated into the programme "The Council of Europe Cultural Routes": 2005

Countries: Albania, Andorra, Austria, Belgium, Bosnia and Herzegovina, **Bulgaria,** Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, **Greece,** Hungary, Iceland, Ireland, **Italy,** Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, **Romania,** Serbia, Slovakia, **Slovenia, Spain,** Sweden, Switzerland, "The former Yugoslav Republic of Macedonia", Ukraine, United Kingdom.

Fig. 56: The Saint Martin of Tours Route logo - www.culture-routes.eu

4.5 The Routes of the Olive Tree

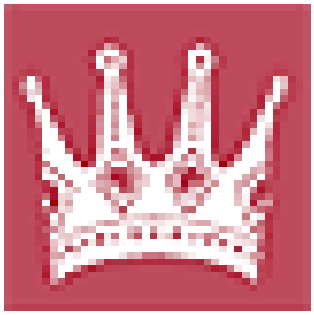
The presence of the olive tree has marked not only the landscape but also the everyday lives of the Mediterranean peoples. A mythical and sacred tree, it is associated with their rites and customs and has influenced their ways of life, creating a specific ancient civilisation, the "olive tree civilisation".

Incorporated into the programme "The Council of Europe Cultural Routes": 2005

Countries: Albania, Algeria, Bosnia-Herzegovina, Cyprus, Croatia, Egypt, France, **Greece, Italy,** Jordan, Lebanon, Libya, Malta, Morocco, Portugal, Serbia, **Slovenia,** Spain, Syria, Tunisia, **Turkey**

Fig. 57: The Routes of the Olive Tree logo - www.culture-routes.eu

4.6 The Via Regia



The route Via Regia is the oldest and longest road link between Eastern and Western Europe. It goes through Spain, France resp. Belgium on to Germany and Poland to Belarus, Lithuania resp. the Ukraine.

Incorporated into the programme "The Council of Europe Cultural Routes": 2005

Countries: Belarus, Belgium, France, Germany, Lithuania, Poland, **Spain,** Ukraine

Fig. 58: The Via Regia logo - www.culture-routes.eu

4.7 Via Transromanica

A journey along the Romanesque Routes of European Heritage means travelling back into medieval times. TRANSROMANICA guides you to castles, cathedrals and monasteries built between the 10th and 13th centuries. Main characteristics of the Romanesque architecture are the use of round arches, thick walls and symmetrical plans, all together giving a harmonious appearance of simplicity.

Incorporated into the programme "The Council of Europe Cultural Routes": 2007

Countries: Austria, France, Germany, **Italy,** Portugal, Serbia, **Romania, Spain**

Fig. 59: Transromanica logo - www.culture-routes.eu

4.8 The Iter Vitis Route

The Iter Vitis Route in Europe, involving 18 countries, has its origins in the role of the agricultural landscape linked to wine production as an element of European identity. It brings together European citizens from the Atlantic to the Caucasus, and from the Mediterranean to the Baltic, representing the diversity of European identity.

Incorporated into the programme "The Council of Europe Cultural Routes": 2009

Countries: Armenia, Austria, Azerbaijan, Croatia, France, Georgia, Germany, **Greece,** Hungary, **Italy**, Malta, Republic of Moldova, Portugal, **Romania, Slovenia, Spain,** "The former Yugoslav Republic of Macedonia"

Fig. 60: The Iter Vitis Route logo - www.culture-routes.eu

4.9 The European Cemeteries Route

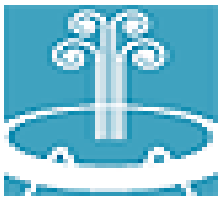
The European Cemeteries Route is composed of 67 cemeteries in 54 cities in 20 European countries. The European Cemeteries Route is a proposal for tourism and heritage promotion, developed by Association of Significant Cemeteries in Europe (ASCE), through which citizens and visitors get in touch with the important cultural heritage reflected in cemeteries.

Incorporated into the programme "The Council of Europe Cultural Routes": 2010

Countries: Austria, Bosnia and Herzegovina, Croatia, Denmark, Estonia, France, Germany, **Greece,** Ireland, Italy, Norway, Poland, Portugal, **Romania,** Russian Federation, Serbia, **Slovenia, Spain,** Sweden, United Kingdom

Fig. 61: The European Cemeteries Route logo - www.culture-routes.eu

4.10 European Route of Historic Thermal Towns



Thermalism has marked Europe from ancient times to the present day. The most well-known sites were built during the 19th century, when a wide range of new medical and health treatments were developed. The prestigious political and cultural elite travelling to Europe's spas, creating centres of cultural exchange in numerous cities, may be said to have launched health tourism and even modern tourism as we know it. These celebrities made the reputation of these resorts and gave birth to a real trend, the development of prestigious hotels and a variety of leisure activities, ranging from the first casinos to musical theatres, to covered promenades and landscaped gardens for the entertainment of fashionable tourists.

Incorporated into the programme "The Council of Europe Cultural Routes": 2010

Countries: Germany, Belgium, Croatia, France, **Spain,** Hungary, **Italy,** Czech Republic, Portugal, **Romania, Turkey,** United Kingdom

Fig. 62: The European Route of Historic Thermal Towns logo - www.culture-routes.eu

4.11 ATRIUM - Architecture of Totalitarian Regimes of the 20th Century in Europe's Urban Memory

The ATRIUM cultural route (Architecture of Totalitarian Regimes of the 20th century in Europe's Urban Memory) has its basis in a common urban and architectural heritage in Europe which may be termed "uncomfortable" or "dissonant". The totalitarian regimes which characterized much of Europe during the central decades of the twentieth century, had a major impact on urban landscape. Incorporated into the programme "The Council of Europe Cultural Routes": 2014

Countries: **Italy,** Croatia, Bosnia-Herzegovina, **Romania, Bulgaria, Greece**

Fig. 63: ATRIUM logo - www.culture-routes.eu

4.12 The Réseau Art Nouveau

Appearing in the late nineteenth century, Art Nouveau spread rapidly in Europe through international exhibitions, travelling artists, letters and journals. The common impulse of many European artists to revolutionize previously used formal vocabulary makes it a decidedly European movement. Each country's creative centres brought their own flavour to the style by appending local specificities (Jugendstil in Germany, Liberty Style in Italy, Modernisme in Spain, Sezessionsstil in Austria) in the field of architecture and decorative arts.

Incorporated into the programme "The Council of Europe Cultural Routes": 2014

Countries: Austria, Belgium, Cuba, Finland, France, Germany, Hungary, **Italy,** Latvia, Norway, **Romania,** Serbia, **Slovenia, Spain,** Switzerland, United Kingdom

Fig. 64: The Reseau Art Nouveau Network logo - www.culture-routes.eu

4.13 The Roman Emperors and Danube Wine Route

The Roman Emperors and Danube Wine Route consists of archaeological sites, each with their own unique histories that are monuments to the leadership of the Roman emperors in their defense of the Danube Corridor. Incorporated into the programme "The Council of Europe Cultural Routes": 2015
Countries: **Bulgaria,** Croatia, **Romania** and Serbia

Fig. 65: The Roman Emperors and Danube Wine Route logo - www.culture-routes.eu

5 ACCESSIBILITY STANDARDS

Research demonstrates that cognitive mapping of unfamiliar environments influences travel decision and length of stay. Facilitating access to unfamiliar environments in leisure settings, e.g. opportunities for connections to visitors as well as memorable experiences, is a task that requires adequate management of information with tourism value. Brain literacy is an indispensable factor to facilitate information and meta-cognitive awareness in leisure settings. Humans acquire, store, recall, code and decode information about the relative locations and attributes of phenomena in their everyday spatial environment. They orientate using perception and memory to create cognitive maps. Contents of informational material should therefore adjust to the principles of human cognitive architecture: eye scan path movements, a limited working memory and an infinite long term memory.

Information management within EUROTHENTICA presupposes a limited working memory capacity to deal with visual, auditory and verbal material as well as an almost unlimited long-term memory, able to retain schemas (mental representations) that vary in their degree of automation. Interpretive design pursuits the reduction of working memory load, the reinforcement of the association chain by provocative use of schema construction and automation and the use of concept mapping. Information structure will provide visitors with specific knowledge acquisition, especially designed on a basis of hierarchical sequential segments in order to free working memory from irrelevant cognitive load, enabling new cognitive content to relate to prior knowledge. Facilitating information in this way heritage places are promoted within the visitors' conscience. Heritage resources become indispensable components of the regional tourism product, followed by the visitors' willingness to pay for quality products.

5.1 Basics

Communication

- What message do we want to convey?
- What do want the audience to do?
- What audience are we targeting?
- What considerations do we need to meet for people with disabilities?
- Will a brochure or something similar need to accompany our signs?
- Do we need to offer an alternative for those who speak another language?

Design

- Who will draw our illustrations?
- Who will take our photographs, or what sources do we have to obtain them?
- What artwork or photo credits to we need to give, or are there copyright issues to consider?
- What resolution size and file format do our photos need to be in? Do we want to use black and white or color?
- Who will design the layout of our sign?

Sign Information

- Where will we get our information?
- What information credits or source listings do we need to give, or are there copyright issues to consider?
- How will we identify what notable features, topics, places etc. should be featured by a sign?
- Are there local organizations or groups that could help?
- What text do we want to include?

Budget

- Are we going to get bids?
- What companies could we use? How many signs do we want to print?
- What is our budget? Is there a possibility of fundraising or grants?

Sign Installation

- Who will install our signs?

- Are there any regulations we need to consider, such as road right of ways etc?
- Where will we install the signs? What will the sign be affixed to (existing wall, new post etc)?
- Is a frame needed?
- Will drivers have room to park if they pull in near our sign, will walkers be able to see the sign from the trail, etc.?
- How much traffic do we expect the sign to receive?
- Who is responsible for maintenance after the sign is installed?

Printing

- What company will we use to print the sign?
- What file format do they need the sign to be in?
- Are there specs the company requires?
- Of what material does our sign need to be composed?
- Will it be indoors or outdoors?
- How long do we expect our sign to last or be used? Do we anticipate vandalism?

Logistics

- Who is responsible for this project?
- What are our deadlines?
- Timeline?
- How will we evaluate our project?

Marketing

- How will the public find out about our signs?
- Press releases, websites, emails, newsletters, etc.?
- What groups could help us with our advertising and outreach?

5.2 General Guidelines

1.1 All design elements of an interpretive shall fit into the overall design concept, as otherwise the mental efforts required are too high to ensure long-term attention. Different styles and designs within a concept results in higher mental fatigue and disoriented visitors.

1.2 Bold and Italic type, and other means of emphasizing body text, should be used sparingly, as they required higher attention levels.

1.3 Visitors' attention should be directed quickly to the significant features that can be seen or perceived (at a trail stop, a heritage place, a museum collection and the like).

1.4 Introductory panels has to be positioned and orientated towards approaching visitors, in order to quickly capture the attentions of incoming flows

1.5 Non-linear exhibition design encourages explorative behavior as it provides for a balance among extraneous and intrinsic cognitive loads, offering the opportunity to realize the germane cognitive load (enable the learning process). In this way captured attention may be maintained.

1.6 The majority of stops should be situated in the first half of a self-guided trail. At the beginning of a trail, visitors are still fresh while towards the end they can become tired and can suffer from information overload.

1.7 Too many stops in interpretive trails tire visitors both mentally and physically. Mental fatigue leads to higher dropout rates and make visitors less receptive to the interpretive product.

1.8 Written interpretation shall eliminate mental fatigue and follow information layering according to significance of contexts and chunking of information up to 5 novel structures, so as to free the working memory of parallel processing.

1.8.1 Texts have been proofread and contain no spelling mistakes.

1.8.2 Titles draw attention and provoke interest.

1.8.3 Long body text blocks are structured by sub-headings.

1.8.4 Longer bodies of text start with an interesting introduction ("hook").

1.8.5 Important elements of text (e.g. titles, headings) shall be visually emphasized.

1.8.6 Include a highlight in the final paragraph of a text passage.

1.8.7 Closing the text with a brief and memorable statement reactivates attention.

1.8.8 Combinations of text/image make reading more vivid and interesting, while a higher attention rate is achieved across the learning space.

1.8.9 Providing a surprising turn of events, a new insight, a humorous punch-line at the end revitalizes the recipients' attention

1.8.10 Panels and labels must be mounted at a height and an angle that allows visitors to read the text easily and

comfortably.

Table 13: Genera; Guidelines

5.3 Guidelines: Attention

1.1 Visitors of interpretive facilities are non-captive audiences. They pay attention only if what is on offer is interesting and attractive to them. A significant statement about a heritage asset, object, natural phenomenon and the like is a good reason for visitors to spend time at a stop.
1.2 The introduction must create the conceptual framework for the whole interpretation in order to arouse the interest of visitors in the successive parts of the interpretation.
1.3 The entrance of an exhibition attracts attention and allows orientation.
1.4 Visuals make presentations more interesting and memorable.
1.5 Address visitors directly or indirectly at text and/or oral level. Attention increases considerably when visitors feel addressed or when they ask themselves if they are being addressed or not.
1.6 The choice of stops in interpretive trails shall be based on objects and stories that may arouse visitor attention.
1.7 In the case of children, being addressed by a fairy-tale character, or even an animal, can help to catch their attention and maintain their interest. The approach, suitably devised, can also work for adults.
1.8 Presented objects support the message and can help catching the attention. Showing or using an object should lead to a clear conclusion. On guided walks, present suitable original objects, models, photographs or drawings. Visitors who cannot see the presented object can't follow the presentation and become frustrated.
1.9 Items can help to make an interpretive presentation more dynamic: mobile objects, tools that can be demonstrated, drawings that can be made into collages, comparative photographs etc. and thus keep up the audiences' attention.
1.10 Elements which don't belong to the exhibition but which are visible draw the visitors attention. The visual field of a viewer in a small room is filled with more vertical areas as horizontal areas. It could be helpful to make a sketch of each wall and fix the position of such elements previously. Tangible traces of previous exhibitions have to be removed.

Table 14: Attention

5.4 Guidelines Associations

1.1 Young children associate primarily to the stimulus' perceived contexts, adults to its abstract thematic contexts: interpretation contexts have to provide for both environments
1.2 Humans learn chunks or associations between adjacent items in sequences, therefore interpretive contexts have to provide for layered information serving the visual and the cognitive requirements of perception.
1.3 The strength of association between elements in semantic memory plays a critical role in determining specific content effects on reasoning, as the latter is affected by changes in the content of premises that reflect the structure and organization of knowledge in long term memory. Interpretive contents shall be consistent with the internal structure of semantic memory.
1.4 Interpretation usually has emotional objectives - it should make visitors feel as well as think. This can be achieved by using references to intangible and universal concepts and ideas that have a strong emotional component. These include sentiments such as love, hate, trust and mistrust, fear, joy etc. This way is ensured the creation of an association chain, which becomes a fulfilling experience for visitors

Table 15: Associations

5.5 Guidelines Metaphors and Analogies

1.1 Metaphoric nouns affect sentence comprehension to a greater extent than do metaphoric verbs. However there exists a comprehension deficit for anaphoric noun metaphors even when they are preceded by context.
1.2 An analogy with a known (source) domain is a powerful device for elucidating causal relations in a novel (target) domain: Russia is 1882 times bigger than Greece).
1.3 Schema induction is maximized when the schemas are made salient and the cognitive system is not overloaded. Interpretive contents shall enable prominent schema representations.
1.4 Metaphors take longer to process than the literal meanings therefore an inductive context can shorten the processing time.

Table 16: Metaphors and Analogies

5.6 Guidelines Connections

1.5 A red thread throughout the interpretive product shall link individual elements.
1.6 Props should be self-explanatory. When a new prop is shown, the audience assumes that it relates to the presentation. When using more than one prop at the same time or when comparing two or more props make sure that mental linkages are ensured and as a result everyone knows what it is meant.
1.7 Objects and props that are presented have to be visible for everyone.
1.8 All interpretation has to relate to the experience of visitors: it shall be relevant and meaningful to audiences addressed. Empirical research shows that interpretation to which people cannot relate will seldom arouse interest and therefore will not be internalised.
1.9 Written and oral interpretation shall foster the creation of connections for visitors
1.9.1 A linking statement, question, riddle or task can create a helpful transition from one stop to the next.
1.9.2 A teasing link arouses curiosity and can help visitors to anticipate the next step in the story.
1.9.3 For panels and leaflets, links have to be very brief because there is frequently little space.
1.9.4 The principal message at a stop must relate to the key feature at the location and reveal its significance.
1.9.5 A person or character can also contribute to the narrative structure that links the stops
1.9.6 Use of analogies is usually a good remedy as it frees working memory from inutile processing. If an analogy was used throughout the interpretation it should also be rounded off.
1.10 Visitors should be encouraged to participate actively. However, as adults do not like to be treated like children, it is essential to consider the best ways of getting them involved
1.10.1 Involve the audience by posing questions.
1.10.2 Hands-on tasks for visitors.
1.10.3 Stimulate visitors to discover something.
1.10.4 Integrate interactive features.
1.10.5 Offer sensory experiences.

Table 17: Connections

5.7 Guidelines Comprehension

1.1 Each interpretive unit should have only one central message
1.2 The number of interpretive units should not make unacceptable demands on visitors.
1.3 Visual interferences or deflections like gibs, light switches, security facilities on walls etc shall be avoided.
1.4 Audio-visual media are well comprehensible and animate visitors to think actively.
1.5 Users of non-interactive video presentations need substantially more time than users of the interactive videos to acquire the necessary skills for tying the knots.
1.1 Interactive media that ask for solutions should address the family as a whole.
1.2 Interactives should automatically reset to initial state or be reset by staff as soon as visitors leave them.
1.3 Computer-based exhibits are comprehensible and easy to operate even for unskilled visitors.
1.4 Audio-visual media should only take a short time.
1.5 Visitor motivation and interest to listen or try out is limited - especially if there is much more to discover. Apart from that other visitors wish to use the audio-visual stop. If they have to wait for someone who is occupying a stop for a long time, dissatisfaction will arise. Time limits may prevent visitor congestion.
1.6 Duration times of different audio-visual media types:
1.6.1 3-4 minutes for a single exhibit
1.6.2 10- 15 minutes in separate projection rooms.

2. Time displays counting down to the end or time displays to announce next presentation start inform visitors who have to wait.
3. Avoid monotonously descriptions of what is being seen on screen which can see visitors by themselves. Ask questions or stress some special details which can be overlooking.
4. Music and sound not used without thinking or as a filling component. They intensify the message and fits to the pictures.
5. The screenplay follows the conceptual principles of interpretation.
6. Also historic films or films which were not shot specific for the exhibition have to be interpreted.
7. Language (written, spoken) should be to the point and as expressive and concrete as possible.
8. A panel informs about length, start-time etc. and arouses interest.

9. Some visitors need to be encouraged in order to start dealing with interactives.
10. Unclear formulations may cause misunderstandings and visitors might think that the installation does not work. This causes disappointed and dissatisfied visitors.
11. Exhibit labels for and inscriptions on interactive installations are encouraging, provide clear instructions, and give hints on what should be observed.
12. An adequate number of headphones at an audio point helps to avoid congestions. Take visitor numbers at peak times and the duration of the clips into account when determined the adequate number of parallel systems.
13. A summary of what is shown in the audio-visual media is available without seeing the film/presentation. Visitors who don't want to watch a film should have the possibility to get the main messages.
14. The use of illustrative devices to aid comprehension of abstract concepts, unfamiliar processes or facts.

Table 18: Comprehension

5.8 Working Memory Decongestion

5.8.1 Cognitive Processing

1.1 Every interpretive unit should be built upon one central message in order to provide for a balance among intrinsic, extraneous and germane cognitive loads.
1.2 All representations that exceed processing capacity stay unresolved, e.g. are not acquired.
1.3 For people to remember, interpretation must be meaningful, i.e. it must relate to their personal knowledge, experiences and/or values.
1.4 Active involvement in finding a solution intensifies understanding and the ability to memorize the message.
1.5 Exhibit labels for and inscriptions on interactive installations shall be encouraging, provide clear instructions, and give hints on what should be observed.
1.6 Left side ranging of text is more readable than justification to both margins.
1.7 Texts have to be readable without problems at normal reading distance.
1.8 Reflections and dazzling effects deteriorate readability
1.9 Texts shall be proofread and shall contain no spelling or syntactic mistakes.

Table 19: Cognitive Processing

5.8.2 Content Layering

1.10 The number of interpretive units should not make unacceptable demands on the cognitive capacity
1.11 Long body text blocks are structured by sub-headings.
1.12 Lines that are too long (relating to the characters) are difficult to read, as to much punctuation is needed to separate them.
1.13 Lines that are too short without subject-verb-object development disturb the reading flow.
1.14 Do not exceed 60 characters (including word spaces) in any line of text, as it may prolong time required for the working memory to process contents.
1.15 Interpretive panels should not contain more than 200 words
1.16 The use of too many adverbs and adjectives require substantially more processing time and affect reasoning negatively.Adjectives and adverbs can often be replaced by stronger verbs and better-chosen nouns.
1.17 Avoid hyphenation wherever possible, as too much chunking is tiring the working memory.
1.18 Avoid phrases and sentences based on nouns and noun phrases as verbs provide for better orientation
1.19 Use recurrent elements to strengthen the continuity of the storyline
1.20 Use the passive voice sparingly and depending on the content.
1.21 Each interpretive unit should have only one central message.
1.22 Each interpretive unit should be per se understood without assuming information or explanation presented by previous units. Expectations must be met at the next stop, otherwise visitors will be dissatisfied. The announced message is interesting the whole time and affords a surprising punch line. For self guided tours this would be possible if visitors only go in one direction.
1.23 The central message of each interpretive unit stop should be expressed as a complete sentence
1.24 The relationship between the overall interpretive topic and the central message of each interpretive unit must be made clear.
1.25 Explanation of the central message in the introduction to support the conceptual framework, as preparation for the remainder

of the interpretation.

1.26 Providing hints towards the central message in the introduction to support the conceptual framework, but in effect posing questions and raising curiosity in visitors. This prepares the way for more powerful revelations throughout the rest of the interpretation.

1.27 No more than five main ideas should support the central message.Visitors should not be overloaded with too much content at any one stop as they will become weary and lose interest.

1.28 The introduction describes the characteristics of the interpretive product.

1.29 The introduction must create the conceptual framework for the whole interpretation in order to arouse the interest of visitors in the successive parts of the interpretation.

1.30 The introduction shall create the conceptual framework for the whole interpretation in order to arouse the interest of visitors in the successive parts of the interpretation.

1.31 The final part of the interpretation shall round off the central message and the principal supporting ideas

1.32 Include a highlight in the final paragraph of a text passage reactivates the recipient's attentions.

1.33 The concluding part of the interpretation should provide further information and orientation, should round off the central message and the principal supporting ideas. An interpretive unit without a conclusion leaves visitors unsatisfied and discourages problem solving.

Table 20: Contents

5.8.3 Grammar, Lexicon and Syntax

1.34 Avoid phrases and sentences based on nouns and noun phrases. Using noun phrases makes text sound bureaucratic or scientific and creates an impression of aloofness, while verbs provide for more vivid descriptions.

1.35 Actions, processes and developments should be expressed by using active verbs.

1.36 Do not use too many adjectives and adverbs. Overuse of adverbs and adjectives leads to more complicated text and a flowery style.

Table 21: Grammar, Lexicon and Syntax

5.8.4 Prior Knowledge

1. Children and older audiences can't understand certain abstraction or technical tricks. Techniques like "flashbacks" or symbolic representations shall be avoided.

The interpretive product should be devised to work across the generations in order to capture the attention of the whole family.

1. Finding solutions together requires all the family to talk and work as a group. If questions are directed only to children, this may cause stress associated with competitiveness and failure to achieve good results may result in distress and discourage further participation. Achieving results will help the family to remember the principal message at the stop.
2. Each interpretive unit should be comprehensible on its own without assuming information or explanation that was presented at other units, trail stops and/or locations.
3. Expert language and technical terms that will be unfamiliar to target audiences shall be avoided, as they always create high cognitive demands and slow down working memory processes. The use of technical terms alienates people who are not familiar with the topic. Even if explained, technical terms may interrupt the flow of the storyline.
4. If the technical term is essential for the interpretation, and there is no non-technical equivalent, then the term should be explained.
5. Features, plants or animals presented might not be known to visitors, so provide information on how to recognize and distinguish them from others.
6. Visitors are disappointed if they cannot identify what is being described. The text helps to identify the plant that is described. A picture helps visitors to appreciate the plant when it is not in flower.
7. It should always be clear to visitors from whose perspective the interpretation is presented.
8. Variables such as age, educational and cultural background, occupation, lifestyle, personal interests and attitudes, and circumstances of the visit etc play a role here.
9. It is important to understand who is interested in what subjects, and also why they are interested in those subjects.
10. Known Structures (translate the language of the experts)

Table 22: Prior Knowledge

6 EUROTHENTICA

The competitiveness of the tourism industry depends increasingly on its ability to generate and manage knowledge and innovation. The recent global economic recession \is urgently calling for a combination of productivity and innovation. And both productivity and innovation are capabilities increasingly dependent upon the art and practice of connectedness (EU Digital Agenda 2012; EU 2020 Smart Sustainable and Inclusive Growth Strategy). The types of changes taking place in the global tourism industry present both challenges and opportunities to public and private sector organizations around the world as they seek to achieve an innovative and sustainable tourism industry. An examination of the primary research results during the design of the DIVERTIMENTO Pilot Projects for EUROTHENTICA, the Project's EUROTHENTICA and observations world tourism trends can provide a basis for the discussion of important change agents, on both the supply side and the demand side of tourism. Innovative strategies can be implemented at the DIVERTIMENTO Project Area destination level including key stakeholders and tourism operators so as to avoid strategic drift for their regions and organizations and to develop tourism in a sustainable way. Due to rapid and continuous changes in modern tourism, the liberation mobile telephony has brought with it, tourism experience innovation involves mainly incremental innovations of individual tourism products and services, as discussed by DIVERTIMENTO, the tourism experience a product or service, that is new at business and destination level in the Project Area. Despite the wider development of e-business (i.e. e-commerce, e-sales, e-marketing), especially in tourism sectors such as air transport and travel agencies, it seems that SMEs operating in the Project Area, do not exploit the available technology to take full advantage of integrated systems and e-business solutions. Additionally many cultural heritage tourism suppliers, e.g. authorities involved in the protection, conservation and promotion of heritage attractions, are still hostage to the outdated production fashion.

The extent of innovation (new product development, procedures and structural innovation) seems to be limited, due to the lack of national, entrepreneurial ICT infrastructure and the lack of personal ICT skills of both employees and employers. However, all tourism firms have the intention to become or to continue being innovative. Local and non-local networks have been identified of high importance regarding the innovation activities. Data, information and knowledge (vertical and horizontal) dissemination and dispersion, provide firms with the ability to offer additional production benefits. In the Project Area, tourism companies tend to see each other competitors, rather than partners.

Tourism, and heritage tourism in particular is the business of attracting and servicing the needs and visitor expectations. Anyone who is traveling away from home, even if only for day, is considered a tourist or visitor. People travel for many reasons, the most popular of which are for a vacation, business, or to visit family and friends. The DIVERTIMENTO Cross Border Partnership does not look at tourism in the Project Area with unrealistic expectations. Tourism will not solve all the problems that may already exist in a community. Occasionally it can make some problems worse. Lack of restrooms or places to eat and sleep, for example, may become major problems if your community is considering bringing visitors to the area. Visitors come to a (heritage) place for the beauty and excitement, but they expect at a minimum to enjoy the standard service. It is important for each DIVERTIMENTO Partner to weigh the possible benefits and costs that can result from new or expanded tourism development. Local communities, successful in tourism, are those able to anticipate and mitigate the consequences of their development decisions.

PROS	CONS
Create new jobs and boost local economy	Increase maintenance costs and land value
Create seasonal jobs and businesses	Increase investment in demand on public services and public facilities
Bring new money into the economy	Conflict with subsistence activity
Lead to lifestyle changes	Lead to lifestyle changes
Foster conservation of natural and cultural heritage	Put pressures on heritage and culture
Contribute to the local tax base	Result in higher taxes and fees
Increase community pride	Increase potential for crowding, congestion and crime

Table 23: Tourism Development: Advantages and Disadvantages

6.1 Travel Motivation

Tourists select destinations from different reasons and perspectives: because of cultural affinity, or because the attach meanings and values to certain attractions; because they may be attracted by the quality of nature or by a range of diverse activities, or the quality of services offered at destination level. Several supply-side related factors such as quality, resources, destination environment, infrastructure, and a range of values attached to local assets can influence the tourist's intention to opt for a destination. People travel for different reasons. To many the DIVERTIMENTO Project Area might represent the last frontier, as it is not a mature and well known tourism destination. People come here for adventure, for the spectacular scenery, or for the wildlife and for culture. They may also come to experience different cultures. Knowing why visitors come, and what they expect to find when they arrive, this Handbook can help local communities prepare for their visit. The challenge is to convince people to visit your community, and to be sure they enjoy their stay.

HOW TO MAKE TRAVELERS CHOOSE THE EUROTHENTICA AREA?

Travel may be for a long period of time and far from home, or for only a few hours' drive or a short flight to a nearby community. The variety of travel and travelers is nearly endless. The challenge is to convince people in local communities to include in their tourism planning the 70 EUROTHENTICA assets, and that this act will benefit the community in multiple ways. The important ingredients for developing a successful tourism industry are:

- **Attitude**
- **Access**
- **Accommodations**
- **Attractions**
- **Information Dissemination**

Scholars report in 2012 that all investments made in the name of the holiday village brand are merely fragile (Zotic et al. 2012:204). It is evident that visitors, tourists and holiday makers are not anymore satisfied with landscape and infrastructure. In order for a heritage asset to be mentally, emotionally and spiritually accessible, it has to be transformed into an easy to follow structure, into a joyful experience communicating to visitors meaning, and. Especially communities seeking to promote public visitation to their assets should develop a visitor-centered heritage interpretation model, able to transform an asset into a powerful experience. Visitors want to be engaged and discover what is unique about a place and its people. Interpretive products and services at local level add value and visitor are willing to pay a premium price for the right experience: It is this interpretation of a heritage place that will define local identity and hence difference in the market. In order to survive, local level attractors have to satisfy the needs and expectations of experience-seeking visitors. Visitor centred communication policies and staff with basic interpretive skills play a significant role: it is not just a collection or a site visit that ensure satisfaction, therefore communities should give close attention to continued professional development of those involved in the heritage and this must include skills in management, business management, marketing and fundraising.

A successful tourism industry cannot be measured simply by the number of tourists. Evidence has shown that an ever-increasing number of tourists is not necessarily a healthy tourism goal. In fact, if a community's physical and social limits or "carrying capacity" are exceeded, the resulting conditions can cause a severe drop in economic and other benefits to the community. Interpretation can be a way of increasing tourist spending while discouraging many of the problems associated with mass tourism. Many tourists are looking for more than a city trip or a few days on the beach. They are seeking to understand a sense of place in communities which have unique personalities. They are interested in seeing other people's ways of life and interpretation can help heighten this experience. However, these tourists are on holiday and want to have fun, not be in a classroom. They do not need to become experts but they want to have a good time as they learn something.

Interpretation opportunities exist as soon as heritage assets are signified is signified. Interpretation is a meaning making multidisciplinary process especially designed to interpret a place's assets not only in an entertaining, relevant and structured way, but to convey a message that has personal relevance and meaning to the audience. Interpretation is strategic communication that seeks to create bonds between the audience and the resources, the visitors and the places they. It requires research, planning, higher professional skills and consideration of best use of possible best media forms and the principal messages to be conveyed to targeted audiences. Interpretive products and services must present to visitors *the meaning* behind any type of resources, which creates value and significance. Attempting full-scale interpretation e.g. a heritage strategy at local level requires multidisciplinary planning and implementation, on a basis a structured information contacts and experiences and research. Establishing the background information and context should be the basis of pre-visit communication. On-site interpretation should assist and encourage observation, self-interpretation and stimulate further enquiry.

6.2 Community Participation

According to the DIVERTIMENTO Sealed Proposal, local project teams working on the ground with Pilot Project need to find out what the community expects from tourism. If community members driven by key actors think tourism will solve all their problems, they will be disappointed. Tourism is not a single economic cure for every community and is putting the economy into a great risk if it becomes monoculture. The DIVERTIMENTO Quali-Survey with key stakeholders and actors has investigated how people feel about tourism in the Project Area.

Both the Visitor- and Stakeholder Surve places the discussions about tourism in a public process that brings everyone into the discussions and decision making process. The results of the surveys and the 9 stakeholder events and meetings as well as the 4 cross border study visits explore whether local communities desire or would rather avoid tourism development. The results of this information have saved much wasted time and effort across the Transnational Partnership benefiting greatly the choices for the DIVERTIMENTO Pilot Projects guiding the Partners to select the Pilot Project Area. Each response is information to build on.

Each community is different and will have different goals. Now is the time to think about ***why*** your community has decided to bring in tourism. It is a vital step in the process. The answer to the question, "why does your community want tourism?" is not as easy as you might think. Often communities simply answer, "We want tourism because it supplies jobs." There is more to it than that - you need to look at the question more deeply. While tourism may supply jobs, you must face the fact that these jobs are often available only in the summer season. And because of this the jobs may need to be offered to people from outside the community. The two most apparent reasons for tourism being seasonal, the weather and daylight hours, are the same reasons that you and your neighbors may be gone fishing, hazelnut picking, city strolling or other life-style activities. Here are some subjects to usually refer to from community members in the DIVERTIMENTO Project Area:

ECONOMY AND GROWTH:

Tourism should create jobs and income for local residents. Tourism can bring growth into the community. How much money would need to be made each year for tourism to be considered a success in your community and how EUROTHENTICA can contribute to this growth was a frequent question to Pilot Project planners. From the planner side questions like:

- Do you want tourism to bring jobs to the community?
- What if these jobs only exist in the summer?
- Will local people be available to fill the jobs, or will they be too busy with other sectors?
- What if the jobs are offered to people from outside the community?"

were frequently asked to community members

SUSTAINABILITY:

Tourism should not conflict with residents' use of subsistence resources, not jeopardize the future of monuments, the pillar for collective identities and drivers for development.
Tourism should be controlled to minimize impact in the Cross Border Area of the EUROTHENTICA.

CULTURAL:

Tourism should emphasize respect for and knowledge of the different cultures to be met in the EUROTHENTICA territory.

ENVIRONMENTAL:

Tourism should maintain the existing level of environmental quality, by adopting the 'responsible tourism direction".

While some local communities often fear that tourism will disrupt their daily life others underestimate the risks of spontaneous tourism development. The Tourism Accessibility Handbook will help insure full support of the tourism effort in the DIVERTIMENTO Project Area. They also define what types of tourism the community will support. For example, a community may support bird watching but not car racing. The importance of having full community support cannot be over emphasized. The EUROTHENTICA EUROTHENTICA depend on community acceptance and the true desire to become part of the effort. Once it has been determined that a community wants to participate the EUROTHENTICA, the next step is to bring together a group of willing and interested people to work on the local Pilot Project. Project Partners may want to involve people with some

experience, interest or knowledge of tourism. Local hotel/lodge owners, cultural and natural guides or other business representatives would be good choices. However, any group of reliable, interested people will work fine. Often, one person in the community will take on the entire tourism project as the project leader. This is fine as long as the rest of the community supports EUROTHENTICA and, when the time comes, the community is willing to do the work necessary to make tourism a success. Make a list of those individuals and organizations who should be involved in the tourism project—this will be your tourism team. These individuals and groups become the stakeholders in the total tourism project. Understanding how these groups will connect in the formal tourism organization is important. Each Pilot Project has called organized events and stakeholder and working group meetings to decide the goals and objectives of tourism for
Each community as follows:

GLOBAL EVENTS (2)

Presentation of the EUROTHENTICA Game version at the Gamification World Congress 2017 (HOTELOFI)
Presentation of the EUROTHENTICA at the ITB Berlin 2017 (POSEIDON)

INTERNATIONAL EVENTS (1)

The DIVERTIMENTO INTERNATIONAL CONFERENCE in Trabzon, Turkey (DOKA)

TRANSNATIONAL EVENTS (12)

4 Study Visits (Lagopesole, Race-Fram, Berlin, Trabzon)
4 onsite lectures (Lagopesole, Race-Fram, Berlin, Trabzon)
4 evaluation workshops ((Lagopesole, Race-Fram, Berlin, Trabzon)

LOCAL EVENTS (7)

7 Project Info Days organized at local level (with 7 Press Conferences)

In regards to cultural preservation a frequently asked question is "Is preserving your culture a primary reason for bringing in tourism? Will tourism harm our culture?" and the statement "We suffer from uncontrolled tourism flows"; "we want to change the tourism market and the segments" were also brought up to the discussion. Another important aspect discussed by stakeholders was
the desire that SCRIPTIRAMA should be supportive towards the creation of community pride. Under the sustainability point of view aspects like: "Will bringing visitors to the area encourage local people to clean and fix up the community" Will it motivate them to repair and maintain buildings, boat ramps, docks and roads, etc.? were put with emphasis on the table.

Tourism is a people industry. A community can have great scenery and a new convention center, but if visitors do not feel welcome, they will not have a good time, they will not come back, and they certainly will not recommend your community to anyone else. There is a saying that if a customer is pleased with the service they receive, he or she will tell three friends about the experience. But, if they are unhappy with their experience, they will spread infinitely negative word of mouth. The attitude of the community is the number one factor for insuring success in the tourism business.

Every community in the DIVERTIMENTO Project AREA has stories to tell about its history, people, and cultural heritage. Developing EUROTHENTICA puts any community in control of how these stories are presented to others and will encourage tourists to value and appreciate local heritage in the same way community residents do. That bond can lead to a successful, healthy and sustainable tourism industry. In the same way that translators interpret across languages, communities can interpret their heritage in order that it is meaningful across different cultures. Interpretation (explaining a community's story in an engaging, vibrant way) is a useful tool for tourism destination management and conservation. It can be used to encourage respect and appropriate behavior from tourists as well as to promote feelings of pride and awareness within a community. Thoughtful interpretive programs offer the visitor a more meaningful experience than simply a holiday at the beach or a nice view and will reinforce and celebrate local heritage. A good stakeholder map to provide an environment of trust and common understanding is missing. A set of factors have been identified to be decisive for the differentiated innovative behavior of tourism actors. Such vary from one tourism firm to the other and consist of e.g. experience, dogmas, tourism demands and/or the characteristics of the tourism experience.

6.3 Cultural Communication

EUROTHENTICA is the Project's "Museum on the go", and as such it constitutes a new cultural service per se with the audience and by the audience, enabling the co-creation of content and exchanges of views for the widest possible audiences across the EU and overseas. EUROTHENTICA will thus become the Project Ambassador creating a recreational learning environment and the opportunity to interact at a human scale and promote cross cultural consumption in everyday life. According to Unesco, "heritage" refers to built, natural and living culture. It includes architectural styles and building practices, temples, mosques and churches, archeological sites, festivals, myths, food preparation techniques, musical traditions, and unique ways of thinking and acting (Unesco, 2012). Although the natural environment is an important part of every community, and its connections with both built and living culture should be acknowledged, this manual focuses on cultural heritage. The same interpretive principles apply to natural resources (e.g. parks, rivers, farms, mountains, etc.). EUROTHENTICA introduces ways to present an entire community as a living archive where local history can be discovered, identified, and interpreted in a personal and captivating way. It is designed for heritage and tourism managers, both public and private, or individuals who wish to establish interpretive programs in their communities. A familiar site may need to be reinterpreted to interest a local population. School children touring a temple complex, for example, may be inspired and interested in hearing about the lives of warriors throughout the ages. A site can be endlessly reinterpreted because there are many stories and perspectives from which to view it. However, each story should be phrased in terms of a general theme that is consistent with the sense of place unique to the community.

EUROTHENTICA is by definition an integrated network of attractions beyond one ancient palace, historic site, or event and thus it will encourage tourists to extend their stays or return in the future to see more. The longer they stay in a community, the more connected and engaged they will be and the more economic benefits the community will gain. They will also tell their friends (word of mouth) which is a very effective promotion strategy. Interpretation not only makes tourists' visits richer but it gives communities a tool to manage and control tourism and tourists in their area. By interpreting a community and providing reasons behind, for example, clothing restrictions, tourists will be less likely to offend residents and more likely to adhere to local customs. A complete interpretive plan can also help to regulate tourists. If there are places or ceremonies, for example, that are considered private and inappropriate for tourists, the locals have a right to decide which sites and activities are open to the public. Tourists may be more sympathetic, however, if the reasons why tourists are not allowed to participate are clearly explained.

Design and delivery of information with tourism value in a visitor centric manner enables effortless acquisition of novel items and concepts at heritage places by providing access to the unknown through cognitively structured messages. Cognitive structures support the development of verbal and non-verbal narrative tools in order to facilitate content acquisition. Translating an expert's technical account into an easy to access, cognitively structured communication message that the audience can relate to, means, to put contents into a format that attracts, interests and inspires visitors. Cognitive maps bridge the discrepancy between novelty and familiarity allowing the Heritage Environment – the *novel entity* within the travel experience- to be realized by visitors. Provocative, attractive and coherent collocations make visit-worthy and significant heritage resources accessible to a wider. Acknowledging the fact that story skeletons with plots provoke conceptual associations, interpretive planners use the power of connections to create sense by linking two or more, formerly separate entities into a meaningful way with one another. By reducing drastically accumulation of facts, technical accounts and endless chronologies and by presenting facts and reasons in *one format*, novel content becomes the new narrative form, enhancing visitor participation in given settings, as well as the ability to explore and move back and forth in this setting. A visit to a heritage place becomes then a pleasure generating procedure.

Heritage education enhances civic pride and support for a site's preservation. It can foster community acceptance of tourism and the visitors it brings. Interpretation can be used to explain heritage to the general population as well as to local schoolchildren. From the tree example, it is clear how interpretation facilitates the learning process. It is important to consider how best to present a community and each site so that the public will understand its value. Awareness can help residents make better-informed decisions regarding their cultural environment. This is especially important for heritage at risk, where increased support and awareness could improve chances for

preservation. Community support can also encourage public and private sectors to financially support heritage preservation.

The interpretive message is the intentional, coordinated message that the Local Interpretive Project conveys to the audience about the heritage assets and qualities that it promotes. The message has to be closely related to the statement of significance, The message shall communicate an appropriate depth and amount of relevant information as follows:

- communicate an understanding of resources/park story/national significance
- provide a balanced treatment and acknowledges multiple points of view
- is presented in an engaging style appropriate to the audience and medium
- demonstrates creativity
- encourage or move the audience toward higher-level concepts, such as resource protection, stewardship, and global issues as appropriate
- incorporates thematic structure and organization
- avoids spelling, grammatical, typographical, and stylistic errors which impede understanding and interpretive effectiveness.

EUROTHENTICA intends to provide meaning and understanding for its visitors. It is the major part of the experience for heritage experience seekers at heritage attractions. Heritage experience seekers wish to learn about culture and heritage in a recreational and restoring environment. Meaning and understanding frequently comes from the interaction between heritage experience seekers and the interpretation offered. Acknowledging the fact that cultural heritage is often contested and dissonant, we need to be aware of the co-creation of meanings based on existing values and beliefs. Conflicts are intrinsic to the nature of heritage, therefore interpretation within the EUROTHENTICA is provocative and may present multiple historical perspectives. Key issues include:

HERITAGE OBJECTIVES

EUROTHENTICA aims to offer heritage experience seekers to have a enjoyable and beneficial experience. The program can also accomplish other things. The "tangible" elements of the heritage narratives help illustrate broader and deeper "intangibles" that can affect how the international audience thinks and acts in the future. The biggest operational decision taken by the Partnership is to use a multivision and an iBook based on cultural heritage communication and interpretation. This decision has major implications for cost, liability, and the broadening of the audience who can exploit at local level the commercialization potential of the Pilot Projects.

HERITAGE ASSETS

Heritage assets are evaluated and identified is a range of topics that the local community supports to tell the best story There are many topics for interpretation – artists, performances, history, geology, wildlife, etc. that have been employed to offer a fascinating heritage narrative.

ACCESSIBILITY

Interpretation is based on sound understanding of existing and potential audiences as well as the social, historic and archaeological validation of contents. Accessibility is ensured by and iBook for iOS/Android operating systems. Communication methods employed are appropriate to the experience and the market needs. Interpretation has been used as a means to guide tourist behaviour at the site, e.g. directional signs, site design (pathways, barriers), media listing options for activities (e.g. timetables, location maps).

CONNECTIONS

Interpretation contents that link the past with the present have been extensively utilized. Theme statements organize the opportunities into a sequence that cohesively develops the relevant idea or ideas stated in the theme. Effective transitions shall move from one opportunity to another. Presentations shall be developed into meaningful ideas and narratives. A meaningful idea captures, organizes, and sustains the attention of the audience. A meaningful idea provides opportunities for audiences to make their own connections to the meanings of the resource. Without the cohesive development of a relevant idea or ideas, presentations of assets are merely collections of related information or haphazard arrays of tangible/intangible links—they are not interpretive. Opportunities for emotional and intellectual connections to the meanings of the resource sequenced with effective transitions and arranged to support a well-crafted interpretive theme statement provide the architecture for a cohesively developed idea or ideas.

VALUE AND CREDIBILITY

The value and credibility of the EUROTHENTICA largely determines the value and credibility of the 70 heritage assets presented in it. Follow up programs and activities do not have to be high-tech or expensive; however, they must be credible, well designed, and executed with value.

UNIVERSAL CONCEPTS

Universal concepts are intangible meanings that are relevant to almost everybody. They are powerful vehicles that reach many people in significant ways. Like all intangible meanings, universal concepts can be linked to a tangible resource. However, if presented by themselves, universal concepts can be abstract and too abrupt to assist the audience makes personal connections to the meanings of the resource. Links that include a universal concept tend to work best when presented with other. Universal concepts, joined with other tangible and /or intangible links can provoke a desire to understand and appreciate intangible meanings that might otherwise seem uninteresting. Many heritage assets are not labeled, explained interpreted or even managed. Visitors and users miss in this way the opportunities for connections. Assets shall be interpreted in such a way that visitors directly understand what is s/he visually confronted with. Interpretive themes are single sentences that express meaning; they link a tangible resource to its intangible meanings and they organize interpretive products. Interpretive themes are most powerful when they link a tangible resource to a universal concept.

THEME STATEMENTS

Presentations shall develop tangible and intangible links that illustrate the idea or ideas expressed in the theme statement into opportunities for connecting the audience to the meanings of the asset. Develop those links with information and interpretive methods such as stories, descriptive language, activities, and illustrations. To be broadly relevant, an interpretive product must provide opportunities for both emotional and intellectual connections to the meanings of the resource. Pictures shall connect directly to each asset unit and shall not stand a as simply array of elements. Pictures shall be eloquent, but in the case, where the use has altered (like in the case of a historic building, or in an non-visible natural phenomenon) shall explained with the adequate text sequence. Pictures shall not be put on other pictures.

EVALUATION

Interpretation is a combination of art and science. Both of these perspectives require constant monitoring and modification. We learn as we go. Audiences change. Sometimes even the "facts" change. Interpretive programs must be flexible and easily modified to meet new conditions. DIVERTIMENTO has devoted to the evaluation an entire Activity within WP5 with to be evaluated by the Project's Quality Control Committee.

6.4 The iBook

DIVERTIMENTO tells the asset stories through the Trilogy: iBook for iOS/Android operating systems, the Transnational Cultural Route and the Games. The Trilogy exploits written materials, signs, QR Codes, guided visits, videos, and other media to direct experiences that the visitor encounters along each Pilot Project. The QRC is a specific matrix bar code (or two-dimensional code) readable by smart devices. QRCs do not require typing URL addresses of tiring web searches. They came onto the scene as a way to bridge mobile and traditional media across various mediums including print publications, product packaging, outdoor kiosks and more. They result in client offers, event information and location-based mobile check-in services to name but a few examples.

Any iBook can be purchased, borrowed, downloaded and used immediately, whereas when one buys or borrows a tangible, hardcopy book, one must go to a bookshop, a home library, or public library during limited hours, or wait for a delivery. Unlike the paper book, iBook can be backed up and recovered in the case of loss or damage to the device on which they are stored, and it may be possible to recover a new copy without incurring an additional cost from the distributor. Also, the dispersal of a free iBook copy can stimulate the sales of the individual travel to the Project Area. Summarizing the main technical aspects of the DIVERTIMENTO iBook we may focus on four significant characteristics:

- the distribution potential
- the unlimited capacity for updates
- the real time synchronization with all the devices independently of place and time
- the Apple Inc. dissemination points

The i-Book is the registered name of the Apple software to produce electronic books for the ipad. The DIVERTIMENTO iBook will be uploaded at the Apple platform, that is called i-book store. Apple allows producing it again for the competitor, who is Android, if it is made for free, e.g. it has not been destined to be sold for profit. Also Apple provides the creator with an ISDN and so you have an official publication, which is an extra added value for us all. The DIVERTIMENTO iBook will be produced in both versions to gain visibility of the Project and promote the efforts of the Partnership, by addressing the connected consumer market, e.g. both iPhone – iPad and Android users. It will be a digital publication, consisting of text, images, interactive images, videos and multimedia. It will be readable on computers or other electronic devices. Mobile availability or may be provided for users with a mobile data connection, so that it will not need to be stored on the device. In the space that a comparably sized print book takes up, the e-readers can potentially contain thousands of iBooks, limited only by its memory capacity. It shall incorporate the advanced version of EUROTHENTICA, the Project's Transnational Cultural Route, both technologically and in terms of contents. It will be offered to iOs and Android users and will be downloadable directly at the Appstore.

6.5 Heritage Narratives

Interpretive themes have been developed for the heritage narratives. Selected were broad topics and brainstorm meeting have been performed in WP3. Topics have been narrowed to allow the selection of best ideas from the brainstorming session. Themes shall be written as complete sentences. Themes tell important story about the heritage places selected in WP5 that is relevant to the visitor. Themes are made appropriate for the audience. The theme is of personal interest to the presenter. Authors and interpreters have sufficient knowledge about the theme. Partners shall match heritage narrative contents to intended audiences as the EUROTHENTICA intends to meet the needs, interests, age, gender, and ethnicity of the international audience. A series of good practices and malpractices have been collected, documented, classified and evaluated and a set of rules has been adopted to produce quality communication. Careful proofing is very important. When you receive the proof, consider the following:

- Does it grab attention?
- Is the layout logical and easy to follow?
- Is the text accurate and the spelling, grammar and syntax correct? (the text
- you gave the designer may have been correct, but mistakes do arise when the text is laid out)
- Show the proof to someone who doesn't know the subject to see whether your message is coming across loud and clear

The EUROTHENTICA narratives strive to attract visitor attention by producing connections to meanings and phenomena and are strongly related to persuasive communication theories and the Cognitive Load Theory (CTL). The task here it to explore the specific conditions required to creating quality experiences for non-captive audiences in leisure settings. By exploring the dynamics of the human cognitive architecture and the relationships between working and long term memory we define the implications for managing cognitive loads in recreational learning environments. The heritage narratives generated by EUROTHENTICA describe the sensitivity and significance of each heritage asset. They are educational, accurate and foster critical thinking. They coordinate communication with the public by presenting the mission and the values of tangible and intangible heritage assets selected. They assist visitors to develop awareness and understanding of local cultural heritage, to recognize ecosystem and cultural values, to encourage actions taken in relation to protection of natural and cultural heritage.

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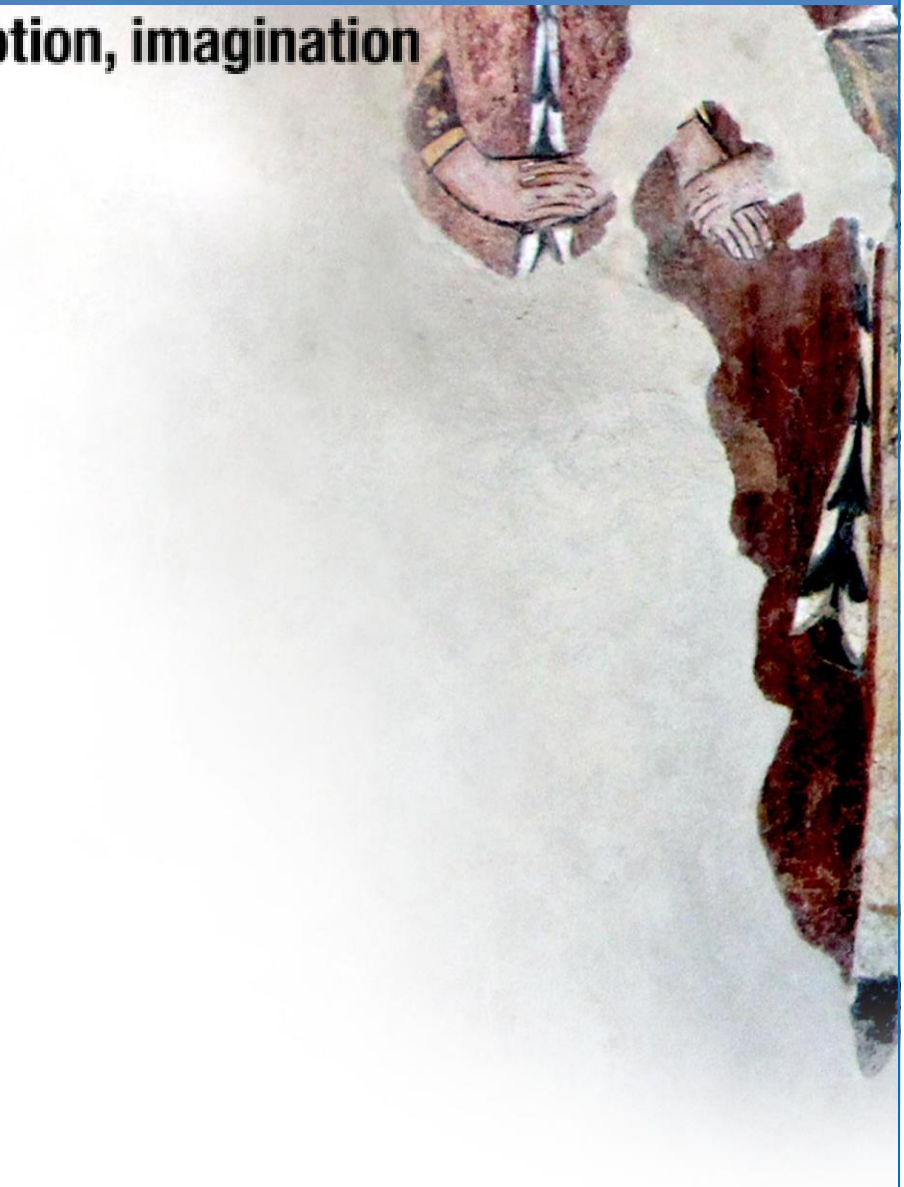
DIVERTIMENTO

Europe: motion, emotion, imagination