WORLD HERITAGE SITE

THE DOLOMITES

OMS+TS

(v.07_22.12.2015)

DOLOMITI
DOLOMITEN
DOLOMITES
DOLOMITIS

OVERALL MANAGEMENT STRATEGY

[+ TOURISM STRATEGY]

CONTENTS

abbreviations & acronyms

c.s.	component site
FD4U	Dolomiti Dolomiten Dolomites Dolomitis UNESCO Foundation
IUCN	International Union for Conservation of Nature
MaB	Man and Biosphere (UNESCO programme)
OG	Operational Guidelines for the Implementation of the WHC
OUV	Outstanding Universal Value
ON	Operating Network
OMS	Overall Management Strategy
TS	Tourism Strategy
ToR	Terms of Reference
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational Scientific and Cultural Organization
WCPA	World Commission on Protected Areas
WHC	World Heritage Committee/Convention
WHL	World Heritage List
WHS	World Heritage Site
WTO	World Tourism Organization

A STRATEGY
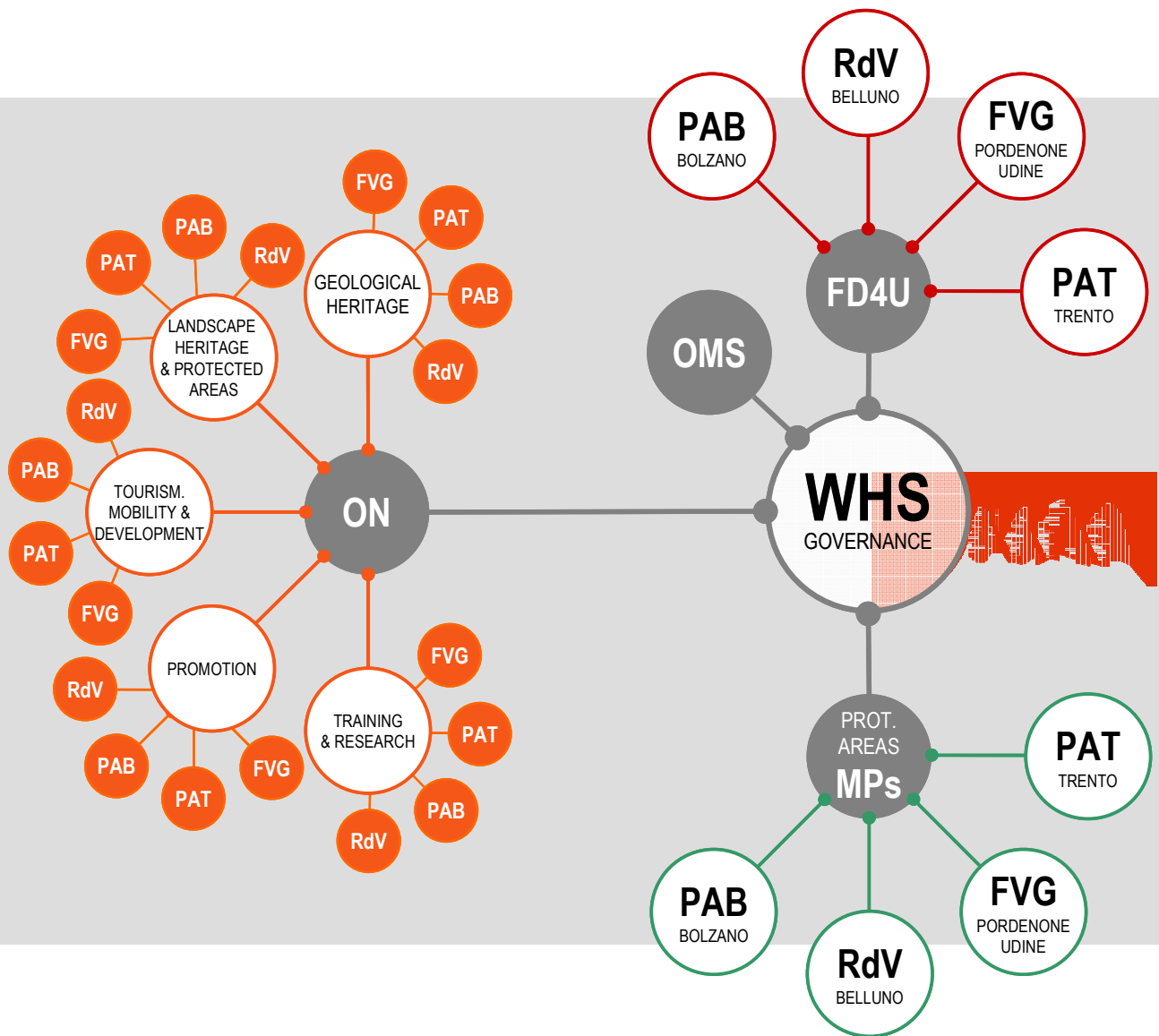
1 FRAMEWORK

The framework includes all the elements needed to understand the contents and structure of the OMS.

governance & OMS The governance system sets out and, in some cases, implements the principles of collective management of the common "wealth" that all Alpine cultures - and those of the Dolomites in particular - have traditionally developed: administrative and legislative autonomy, shared responsibilities, community and reciprocity. Governance of The Dolomites WHS is based on four elements:

- the **Foundation** (FD4U) is the point of contact and coordinator of the project. It consists of a number of institutional organisations which promote dialogue between the territorial authorities (Board of Directors), scientific objectives (Scientific Committee), socio-economic and environmental issues (Board of Supporters) and the interests of the local authorities (municipalities and communities).

- the **Overall Management Strategy** (OMS) has been drawn up to promote and implement networked management, applying both the human and financial resources available on the territory and integrating the actions aimed at the conservation, communication and enhancement of the Property. The OMS is implemented with the involvement of a vast array of stakeholders who operate both directly and indirectly throughout the Dolomites area.

- the themed **Operating Networks** (ON) put into practice the concept of networked management, the result of the interpretation of the serial structure of the Property. The guiding principles for networked management are harmonisation, participation and cooperation.

- the **management plans for the protected areas** (parks, SACs and SPAs, Reserve Networks, etc.) which guarantee the same level of protection and conservation of the habitats and species found in the Property. The OMS has a wide reach, implementing the conservation and protection measures which are planned locally.

The entities responsible for carrying out the OMS are primarily the **regional and provincial administrative authorities,** the **parks** (natural, regional and national) and the **local authorities** (communities, municipalities) who are directly responsible for the management of the WHS "The Dolomites" and who are in charge of organisation and territorial planning.
The role of the **Operating Networks**, which the regions, provinces and parks belong to, is to disseminate the objectives and implement the strategic actions regarding landscape heritage and protected areas, geological heritage, tourism and mobility, promotion, education and research equally throughout.
Just as important are the numerous **Supporters** (socio-economic and environmental stakeholders) who are members of the FD4U and who

share its aims, actively contributing when drawing up the activities and projects. The **participatory process** "#Dolomites 2040" was instrumental in underlining the enormous potential of a widespread and well-informed project.

The issues addressed by the OMS include topics pertaining directly to the OUV (landscape, geology, geomorphology), subjects indicated by the WHC (management of the infrastructures within the Property, tourism, conservation of the protected areas), and matters of local importance which came to light during the participatory process (#Dolomites2040) which involved all the various stakeholders in the various c.s. (public administration bodies, municipalities and mountain communities, collective ownership organisations, mountain sports clubs and associations, ski areas management groups and facilities companies, refuge owners and managers, farmers and animal breeders, cultural organisations and tourist industry operators).
The conservation, communication and promotion of the Property are the fundamental principles which run through all the key issues of the OMS.

The OMS is intended as an instrument for long-term sustainable development so the reference time frame is 25 years. This is why the participatory process, which was held before the strategies were drawn up, was entitled "#Dolomites2040". 2020 and 2030 have been established as intermediate reference years for the short- and medium-term actions respectively. Starting from today (2015), the time frame for prioritising actions is:

- **short-**term actions   5 years   [2015>2020]
- **medium-**term actions   15 years [2020>2030]
- **long-**term actions   25 years [2030>2040]

For a number of years now, the FD4U has been involved in a variety of activities, projects and initiatives connected with the issues included in the OMS and sponsored by public and private stakeholders and public administration bodies (of the municipalities, provinces and regions). Given that many of these actions are perfectly compatible with the vision and strategy established, the OMS intends to make the most of this "wealth" of knowledge and experience and put it to good use. This is why current activities and ongoing projects are also included in the action plan.
In the light of these premises, the expected results of the OMS, when applied over the entire Property, are:

a. **governance arrangements,** namely inter-regional / inter-provincial agreements aimed at conserving the integrity of the landscape and the geological and geomorphological heritage; enhancement of scientific research, raised awareness of the Property and enhanced specific economic and cultural aspects;
b. **operational management actions,** referring to the criteria and issues that are developed for each site and organised according to strategic actions;
c. **monitoring and reporting** on the state of conservation of the Property and methods for self-assessment of management performance;
d. **protocols for monitoring** the state of conservation of the Property and methods for self-assessment of management performance;
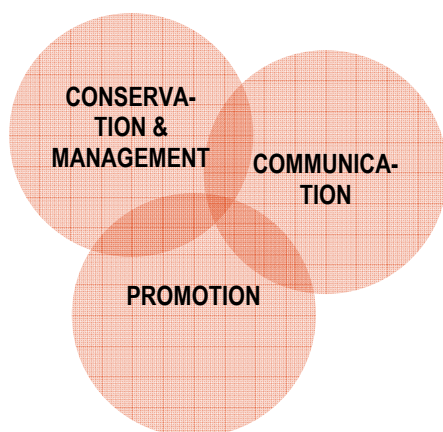
management principles

**ToR (terms of reference) UNESCO**

The contents of the Overall Management Strategy (OMS) and the Tourism Strategy (TS) are based on the inscription report of the Property in 2009 (WHC Decision: 33 COM 8B.6, 26 June 2009) and the _Reactive monitoring mission_ of 2011 (IUCN Mission Report, 2-8 October 2011).

requirements of the WHC
WHC Decision: 33 COM 8B.6
_**26.06.2009**_

http://whc.unesco.org/archive/2009/whc09-33com-20e.pdf

The **World Heritage Committe**:
_[….]_

4) _Notes that the decision to inscribe the property is made on the understanding that the State Party is in agreement with the following requests of the Committee, which should be implemented prior to the 35th session of the Committee in 2011 in order to address fully the requirements of the Operational Guidelines:_
    _[…]_
    b) _That an action-oriented **overall management strategy** for the whole of the serial property is developed, in consultation with the full range of relevant stakeholders, to establish:_
        (i) _governance arrangements for the effective management of the property;_
        (ii) _operational management actions, in relation to key themes specific to the nominated World Heritage property and the criteria for which it is inscribed;_
        (iii) _monitoring and reporting on the State of Conservation of the property as a whole and the management effectiveness of the property and,_
        (vi) _practical options to achieve the financial sustainability for conserving and managing the property;_
    _[…]_
    d) _That a **comprehensive strategy for tourism** and visitor use covering the property, its buffer zones and considering appropriate links to the wider region is developed, in order to fully consider the requirements for maintaining the Outstanding Universal Value and conditions of integrity of the property under the scenario of expected increase in visitation after the inscription. This strategy should aim to manage visitor levels in areas already at or over capacity, to prohibit intensification of infrastructure or inappropriate uses that could impact the values of the property, and to ensure effective presentation and tourism benefits compatible with the long-term conservation of the property;_
_[…]_

The IUCN technical evaluation, drawn up in 2009 following its field visit (in September 2008), stated that inscription of the Dolomites on the World Heritage List was dependent on the drawing up of an _overall management strategy_, in accordance with the OG of the WHC.
Furthermore, having established that tourism exerted the most anthropic pressure on the Property, it also requested that a specific _management instrument for tourism_ be prepared.
However, studies conducted between 2009 and 2011 revealed that a _strategy_ which was dedicated purely to managing tourism, an entirely separate entity from the _overall management strategy_, would in all likelihood have been ineffective, as tourism is a highly complex

phenomenon and is closely correlated to the management of the WHS as a whole.

The IUCN **Reactive monitoring mission report** recommends that:
[…]
*For the **Overall Management Strategy**:*
(ii) Recognition is provided for the positive progress of work on the Overall Management Strategy through the seven Networks and that it:
  (a) Is finalised no later than 2016 as an action oriented, single succinct strategic document with clear objectives, performance measures, monitoring and whole-of-property state of conservation reporting;
  (b) Is based on the completed seven Network planning inputs;
  (c) Includes "guiding principles of management" that identify World Heritage values and assist the Foundation Board during prioritisation decisions;
  (d) Includes the established policy that ski resort developments are not permitted within the World Heritage Property and Buffer Zone;
  (e) Includes a policy of ecologically sustainable visitor use and tourism;
  (f) Gives priority to the restoration of human-disturbed World Heritage natural landscape values within the Property;
  (g) Reviews the practice of hunting for management purposes within Dolomites World Heritage Property protected areas.

*For the **Tourism Strategy** for the Property:*
(iii) It is completed by 2015 as a basis for input for the completion of the Overall Management Strategy
[…]

The 2011 IUCN report maintained the distinction between the OMS (Overall Management Strategy) and the TS (Tourism Strategy of the Property), confirming the different time frames. However the mission report clearly stated that the TS was essential for the completion of the OMS, reiterating that the OMS had to include "*policies of ecologically sustainable visitor use and tourism*".

The FD4U therefore established that the two strategies should be combined [OMS +TS] to underline the overall vision of the Property and that the OMS should include an extended section dedicated to tourism (TS).

The relationship between the Overall Management Strategy [OMS] and the Tourism Strategy [TS] of the Property **[OMS + TS]** in 2009 and 2011.

concept 2009   *concept 2011*
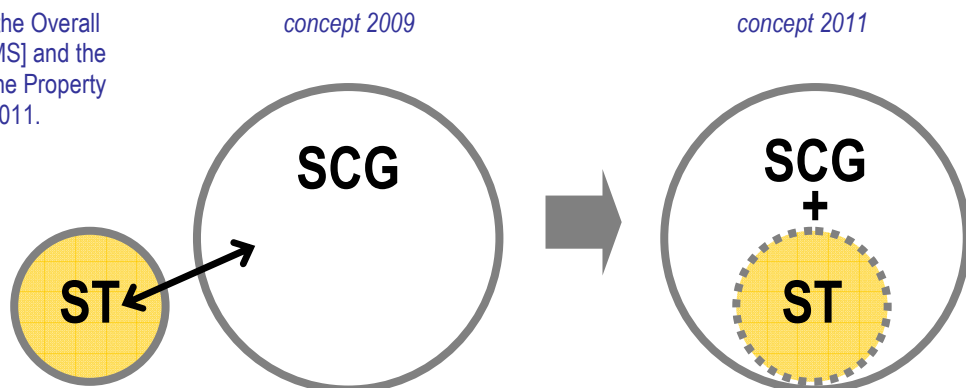
OMS architecture The OMS is organized into three parts which are structurally linked. The **first** part describes the strategy's framework and answers the questions "why?" (vision) and "who?" (mission). The **second** part illustrates the executive programme and answers the questions "what?" (action plan), "how, where and when?" (operating plans). The **third** part includes a set of reference studies, methodological elements (interpretive model) and the management principles adopted (tools), as set out below:

A. **strategy**

- governance and OMS, ToR UNESCO

WHY ➔
- vision
  long-term scenary of the OMS

WHO ➔
- mission,
  meaning of the OMS and the role of the FD4U (the 3Cs)

- SMART approach

B. **executive programme**

WHAT ➔
- strategic action plans
  synoptic tables defining the issues (including one dedicated to tourism), outcomes, bojectives and actions;

HOW, WHERE & WHEN ➔
- operating plans
  detailed plans for each of the strategic actions, with specific information on ongoing activities and projects, according to reference criteria, parameters, indicators and standards;

C. guidance and tools

- Reference studies and guidelines
  studies and guidelines drawn up to obtain a better understanding of the Property; they are the results of the work of the Operating Networks and other specific studies commissioned by the FD4U.

- Interpretive model of the WHS
  a schematic map of the serial Property and classification of the areas critical to the conservation of the OUV; it helps identify the reference areas of the strategic actions and the nature of the links between the c.s..

- Adaptive management tools
  procedures for the self-assessment of management and transformations, the monitoring schedule (themed areas, indicators and standards) and the establishment of a *WH peer evaluation* project.

Considering all the OMS strategic actions as a priority, the status of implementation as well as the temporal projection of the various existing and planned activities are reported in the operating plans.

The integrated structure of this document (OMS+TS) enhances the Property's vision as a whole, as the issues <u>heritage, community and system</u> *include the strategic areas of intervention regarding the values and the populations of the Dolomites, while the* <u>experience</u> *issue develops the actions aimed at the tourism and recreational use of the Property and represents the* **Tourism Strategy (TS).**
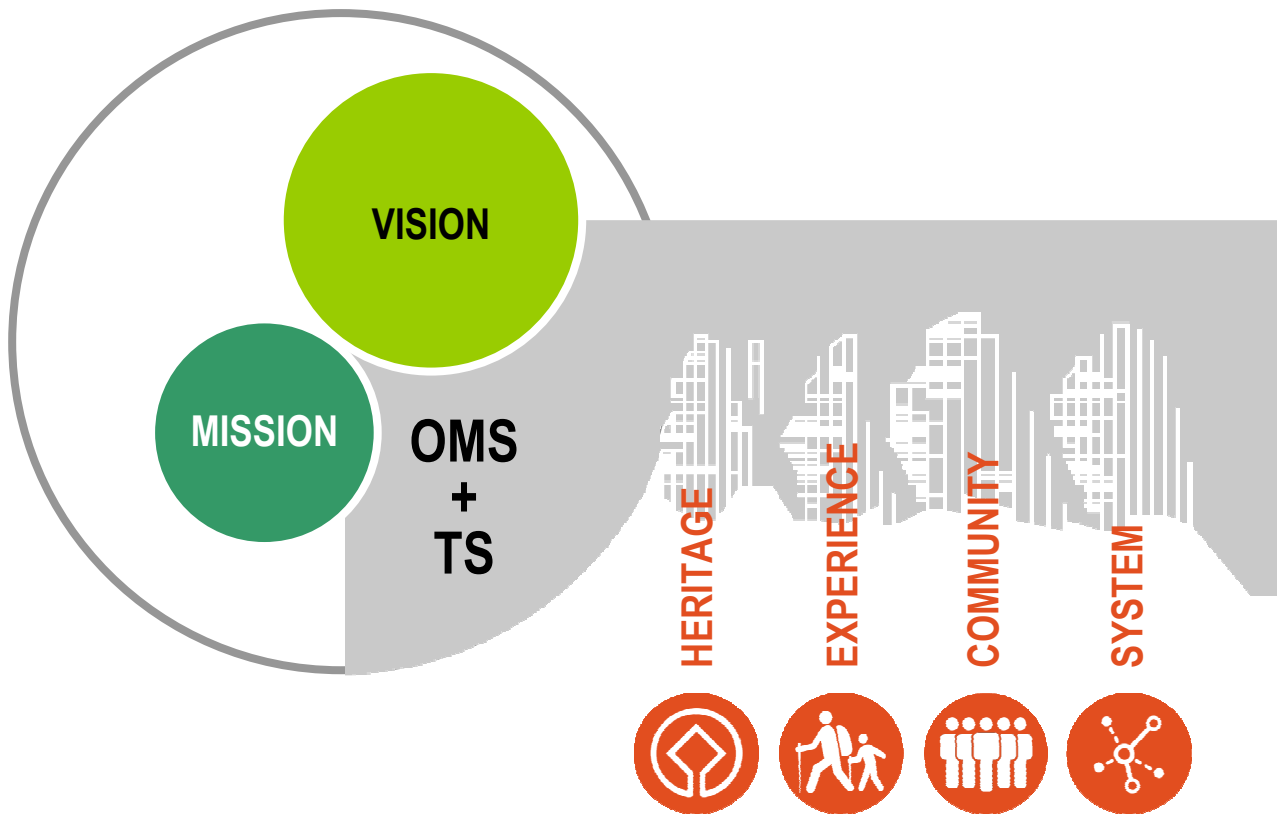
2 VISION

A community that is aware of the outstanding universal values of the Property and is committed to conveying them to future generations. A collective heritage for which everyone - residents and visitors alike - shares the responsibility for its conservation and sustainable development.

The Dolomites are one of the most densely populated mountainous regions in the Alps, as well as being one of the leading tourist destinations in the world. People have made the Dolomites their home for thousands of years (even settling at high altitude) and have developed environment integrated forms of economy and contemporary lifestyles. So, whilst inscription on the World Heritage List has endorsed the pristine and original outstanding values of the natural environment and landscape of the Dolomites, it is also an acknowledgment of the work of the local communities who live there and work to safeguard them.

The challenge that the people of the Dolomites now face - linked to World Heritage status - involves overcoming the juxtaposition of protecting the environment, with its overtones of prohibition, and driving economic development, which is seen as exploitation of natural and landscape resources. This shift entails a widespread cultural change that can only be achieved over time.

interpretations

The OMS marks a transition from a model of conflict to a model of cooperation, where the natural environment is central to social and economic issues. Inscription is a opportunity for the area to try out innovative policies for conscious growth which foster the concept of natural heritage as a living environment.

The OMS is a voluntary collective agreement, rather than a mandatory set of rules. It reflects the evolution of passive environmental conservation to the promotion of a set of local skills which make conservation a conscious act and a shared responsibility (Protected Landscape Approach).

The OMS is a flexible, dynamic programme. It is not a series of strict, inflexible regulations but a set of strategies and objectives that can be tailored to the different places and verified over time, based on a process that embraces mediation and compensation between those involved.

issues

This vision is based on four "pillars" which embody the key issues of the OMS of The Dolomites WHS:

heritage → to *conserve the outstanding universal values for a territory that meets World Heritage standards*

experience → to *enhance visitor experiences for sustainable tourism that meets World Heritage standards*

community → to *raise local awareness for a community working for the World Heritage*

system → *to coordinate management activities for governance that meets World Heritage standards*

3 | MISSION

The objective of the Overall Management Strategy is to use the resources and expertise found throughout the territory of the Property to help coordinate the work of the territorial and park authorities as regards the WHS "The Dolomites". The OMS also implements the system to assess management performance regarding the state of conservation of the whole Property.

The OMS provides operational actions to help focus those responsible for managing the Dolomites area on specific objectives promoting the conservation, communication and enhancement of the OUV. The contribution of the 5 Operating Networks, the opinion of the Board of Supporters and the participatory process #D2040 identified a number of **strategic areas of intervention**. These areas of intervention endorse the four *pillars* and are strategically important for the sustainable development of the Dolomites. The focus areas of the OMS are:

heritage

active conservation
Conserving nature means promoting shared, practical and sustainable actions which, while safeguarding the natural heritage of a site, are also able to support socio-economic development processes, as long as they are compatible with the OUV. To be successful, this approach calls for the involvement of local communities and coordinated and joint management of the Property, something that can only be achieved if the various already existing forms of government are adequately harmonised.

scientific research
Scientific research, with a strictly interdisciplinary approach, and interpretation of the results according to original codes, must be integrated in a holistic model. This model is based on analyses that are both systemic and evolutionary, considering the geology as the disciplinary framework, and the landscape as a complex set of interacting factors closely linked to socio-cultural development.

experience

tourism
To improve tourism standards at the Property, the work carried out to date on the recognition and dissemination of the values, on the management of tourist flows to minimise congestion during seasonal highs and redistribute tourist numbers throughout the year, and on correcting the improper use of the territory, must be entered into the system.

mobility
Access to the Property using the public transport system must be sustainable and available to all. This is achieved by improving public transport and integrating it with low-impact means of transport. The passes in the Dolomites are also worthy of attention, as regards infrastructures and the natural landscape, as they are the gateway to the Heritage Site and ecological and functional links.

community

knowledge and education
Education is the key to more in-depth and coherent knowledge which, in turn, will lead to the true enhancement of the Heritage Site. Carefully-structured education and innovative initiatives in the strategically

important sectors such as tourism and mobility, can lead to the sustainable development of the territory and help establish the right balance between tradition and modernity.

capacity building
Developing the professional skills and expertise needed following conferment of World Heritage status not only involves the traditional professions typical of the mountains, but also all vocations pertaining to the management and use of the highlands.

territory
Guaranteeing quality of life in the highlands is a top priority for successfully protecting the Heritage Site and planning the right services is the key to increasing the appeal of the mountains and giving them the competitive edge. Safeguarding the territory would be impossible without commitment and awareness, and these qualities must be cultivated throughout the community and the authorities, and in the land management and economic planning processes.

system

connections
Inscription is an invaluable opportunity to encourage collaboration between different areas and administrations and draw up a new territorial development model, whose objective is to transform the fragmentary nature of the territory from a weakness to a strength, encompassing various different aspects. The territorial development model must be of the highest quality and must promote a balance between man and nature, fostering synergy between the sectors which drive the mountain economy.

managing conflict
Inscription on the WHL offers an important economic opportunity and gives the area an remarkable competitive advantage, but preserving the unique features of the territory, which are what give the Dolomites their undeniable appeal, calls for constant mediation between diverse and potentially conflicting interests.
The OMS identifies the FD4U as a facilitator in this mediation process.

role of the FD4U   The regional and provincial authorities set up the FD4U to harmonise the protection, enhancement and promotion of the WHS "The Dolomites". The Foundation acts as a guarantor for the WHC and the local population in ensuring that the OMS is applied.

The role the Foundation plays on behalf of the local areas and communities is summed up in the motto, the "**3C**" (collaborate, coordinate, communicate).
The meaning of each C is associated with an **illustrative image** inspired by the unique characteristics of The Dolomites WHS.

3C → **C**OLLABORATE **C**OORDINATE **C**OMMUNICATE

DOLOMITI
DOLOMITEN
DOLOMITES
DOLOMITIS

The Dolomites are a fossil

archipelago

where each "island" features an outstanding aspect which only takes on universal value if combined with the others by a complex set of mutual relationships, creating a whole.

COLLABORATE
means working together to **reduce the fragmentation** found in both the local authorities and the population - and build relationships within the Property by applying the principle of seriality. "Horizontal" interpretation of this principle highlights the shared and recurring characteristics which give wholeness to the Property. When interpreted "vertically", it underlines the features and unique nature of each of the c.s., each an irreplaceable part of the whole and fundamental to achieving OUV. Both interpretations, which have precise references in space and time, can be applied to a number of other areas (management, development, tourism, mobility, etc.), illustrating the strengths and weaknesses of each c.s. in relation to the others.

The Dolomites are an internationally recognised

model,

testimony of the integration of aesthetic-landscape criteria with geological-geomorphological criteria, one of the key reasons for inscription on the WHL.

COORDINATE
means **providing models** (guidance and tools) to facilitate the different management operations throughout the Property and quality standards (environmental, scientific, accommodation, cultural, etc.) for those involved. The Foundation acts as a referent point for the network of experts, a network whose objective is to work on joint projects about specific themes and on different scales.

The Dolomites are a carbonate

platform

which has given generations of geologists food for thought and has been home to different cultures which have evolved from the merging of different peoples.

COMMUNICATE
means **providing a shared platform** where those involved can share points of view, opinions, experiences, expertise and knowledge. Two viewpoints are at play in the Property: on the one hand there is the outside vision, as seen by tourists and the outside world, and on the other is the inside vision, associated with daily usage, a living space, the expectations of those who live there. The Foundation can act as the "shared platform" (in both the physical and virtual sense), offering the opportunity for these different visions of the territory to come together, conveying the meaning of the UNESCO Property and the values it embodies for the local population and the world.

4   SMART APPROACH

The reference area where the OMS is to be applied is extensive and highly complex, characterised by phenomena which while being similar are not homogeneous, and it is governed by different authorities with different political autonomy. For this very reason, the OMS adopts a multi-level and multi-scale approach.

To ensure effective application in all the component sites, the OMS also adopts a **SMART** approach (*Strategic, Measurable, Action-oriented, Results-based, Time-bound*; adapted from *Alexandra et alii, 1998*), namely:

Strategic = based on action plans which bring together the objectives, strategic actions, priorities and degree of accomplishment.

Measurable = to ensure the OMS has as concrete a scope as possible, for each of the actions indicated it must be possible to quantify the entity and the quality of the effects produced according to predetermined criteria.

Action-oriented = the OMS intends to make good use of all existing initiatives and integrate them into the project, so each action must be based on existing instruments of implementation (land, rural, forestry, environmental, economic, tourist, financial, educational management etc.), identifying the sources of funding in line with the principle of financial sustainability.

Results-based = the OMS is the reference point for everyone who, in different roles and to different extents, works to promote the conservation, promotion and enhancement of the Property and who are responsible, either directly or indirectly, for managing the areas of the World Heritage Site. In concrete terms, relevance is the identification and description of "what" is being done or will be done, "who" is doing or will do it, and "how" it is being done or will be done.

Time-bound = it is up to the OMS to clearly establish the time frame for the accomplishment of the different activities; this is a fundamental tool for coordinating actions and controlling progress.

Each of the strategic actions outlined in the OMS Executive Programme is developed by means of an operating plan which includes details of other factors which form the basis of the executive and financial planning of the FD4U and its Operating Networks.

B EXECUTIVE PROGRAMME

heritage
ACTION PLAN

Promote the conservation and enhancement of the geological and landscape relationships of the Property and safeguard the landscape and the ecological connections in the areas near the c.s., in order to protect the OUV.

The Dolomites WH are an organic whole of unique geological and landscape peculiarities, interlinked by a network of genetic and aesthetic relationships of outstanding value. The relationship between the universal values is the key to understanding the extraordinary nature of the Property and it is the set of relationships that unites these values which represents the element of originality – which is also interpretive – of the Property.

The strategy focuses on conserving the universal values for future generations, starting with the indissoluble link between the two inscription criteria – importance for Earth Sciences and aesthetic importance (natural beauty) – developing a systemic vision which links the Property (scientific criterion), those who interpret it (aesthetic criterion) and those who live in it (integrity).

In this sense the actions fall within the scope of both active conservation of the core and buffer zones and planning and management of the transition and reference areas (cf. interpretive model).

outcomes	
> *promote the conservation and enhancement of the Property's geological and landscape features* > *strengthen the ecological and landscape links between the c.s.* > *take advantage of the benefits of World Heritage status to support the management of the areas of the Property and its surroundings*	

objectives		action	
A1	**Conservation of OUV**	1	Conservation of the geological and geomorphological integrity of the WHS
		2	Conservation of the aesthetic and landscape integrity of the WHS
		3	Identification and enhancement of the system of ecological and landscape corridors between the 9 c.s. of the WHS
		4	Application of the Guidelines drawn up by the Landscape and Protected Areas Network
A2	**UNESCO plus**	1	Use of WHS plus to help conserve and manage collective properties
		2	Drawing up and/or taking part in national and international research projects and instruments of international planning
A3	**UNESCO expertise**	1	FD4U joining scientific networks and collaborating with international mountain study centres
		2	Training for the qualification of existing and new professional skills linked to UNESCO inscription
A4	**Management and planning**	1	No establishment of new ski resorts in the areas of The Dolomites WHS
		2	Promotion and aware management of farming, pasturing and woodland activities to help protect the hydrogeology of the land and care of the landscape
		3	Establishment of an inventory of good practices for active conservation within the Dolomites reference area
		4	Inclusion of specific criteria pertaining to the OUV of the WHS in environmental impact assessment procedures (EIA, SEA, VINCA)
		5	Promotion of the sustainable use of natural, energy resources etc. within the WHS
		6	Aware and sustainable management of traditional hunting activities within the WHS

experience
ACTION PLAN

Increase visitor experiences in the Property and underline the importance of the UNESCO Dolomites as a whole destination; transform the structural limits of the WHS into new visitor opportunities.

[TOURISM STRATEGY]

According with the recommendations of the WHC , the main TS objective is to orient in shared way the tourism in the Dolomites WHS to develop ecologically sustainable uses of the Property. The strategy outlines the stages in the development of sustainable tourism in the Dolomites WHS from today to the near future and guarantees coherence and unity for the actions undertaken: mission, vision and attainable values are the cornerstones and the ideology.

In this regard, the TS can be considered an evolving process, aimed at bringing together and involving the whole Dolomite community. The long-term vision gives the necessary flexibility to the single actions and objectives and allows for even more contingent needs.

The TS focuses on improving tourism standards in the Property, investing in the recognition and making good use of the work carried out to date on the recognition and dissemination of values, on the management of flows and on correcting the improper use of the territory, drawing up new plans for external and internal mobility and at the same time guaranteeing better management of the passes.

outcomes	
> Recognition of the Dolomites as a "unicum" by residents and visitors *> Raising awareness of tourists and tourist operators* *>Tourism operators actively contributing to the achievement of the strategic objectives* *> Increasing the quality of the overall tourist offer, focusing on the protected areas* *> Improved management of tourism flows, mobility and the Dolomites passes* *> More regulated use of tourism, bringing it more into line with the values of the Property*	
objectives	*actions*
B1 **Joint promotion**	1 Coordinated presentation and joint promotion of The Dolomites WH
	2 Development of experience-based and value based tourism products
	3 Coordination and enhancement of the WHS refuges
	4 Network of Museums and Parks
	5 Implementation of the Guidelines drawn up by the Promotion Network
B2 **Culture of hospitality**	1 Strengthening systemic capacity for the tourist hospitality
	2 Sustainable tourism in the Parks – ECST (European Charter for Sustainable Tourism)
	3 Drawing up of a code of conduct for tourist structures
	4 Promotion of the network of "park quality charters" and environmental certifications for tourist accomodations
B3 **Sustainable mobility**	1 Promotion of sustainable mobility and integrated mobility management
	2 Coordinated management of tourist flows and main accesses
	3 Restoring of the infrastructures and landscape of the Dolomite passes
	4 Harmonisation of the regulations on the use of motorised vehicles (e.g. helicopters, snowmobiles, quad bikes, etc.) for public service activities in the WHS
B4 **Facilities and Outdoor recreation**	1 Management of the existing ski resorts within the WHS
	2 Management and containment of the existing tourist facilities and infrastructures in the WHS
	3 Management of recreational and sporting activities which are compatible with the characteristics of the WHS, and drawing up good practices
	4 Drawing up of a code of conduct when practising outdoor sports in the WHS
	5 Regulation of extreme sports

community
ACTION PLAN

Raise the awareness of local communities and develop professional skills and expertise based on the OUV benefits (capacity building).

The Dolomites are an historically inhabitated mountain region with a precise cultural unity, high level of socio-economic development and with potential to reach high quality standards and extensive capabilities to implement the measures, especially regarding the ecological and landscape eco-services and the green economy.

In this context, the awareness of the local populations is a key issue. Putting the community at the centre of the development programme means adopting a sustainable development approach in line with the following priorities: identity and cultural autonomy, responsible use of the resources of the local eco-systems.

outcomes
> communities and local authorities more aware of local values and the importance of World Heritage *> development of professional skills and expertise based on the issues of recognition (capacity building)* *> support to promote the sustainable development of the Dolomites area* *> use of natural and landscape resources that is compatible with the Property* *> shared and coordinated planning of the Dolomites reference area*

objectives		*actions*	
C1	**Education and awareness**	1	Promotion and experience of the values of the WHS through local community projects
		2	Promotion and direct experience of the values of the WHS through school projects (all ages)
		3	Promotion and experience of the values of the WHS through projects organised for the national and international community
		4	Creation of "maps of the communities" about the importance of the identity of the places to raise awareness
C2	**WHS events**	1	WHS Dolomites Day
		2	Support the WHS culture by promoting environmentally sustainable serial and travelling events
		3	WHS Dolomites festival (LabFEST 2.0)
C3	**Dedicated training**	1	Coordination of periodical meetings between local authorities in the dolomite reference area
		2	Organisation of training sessions on important topics (environment, landscape, geology, sustainable development, hospitality, accommodation, quality of life, culture of limits, sustainable tourism, etc.)
		3	Fostering relations between schools and the business world to promote the peculiarities of the dolomite reference area
C4	**Promotion of sustainable economies**	1	Restoring high altitude grazing, and strengthening forestry and livestock farming
		2	Promotion of local products in the dolomite reference area
		3	Supporting and taking part in MaB initiatives

system
ACTION PLAN

Support participation and inclusivity, key issues for active conservation, and promote dialogue and collaboration to ensure OUV-compatible uses of the Property.

From an administrative point of view, the Dolomites are the natural outcome of the geopolitical evolution of a long tradition of local government. They are based on an extremely diverse set of cultural models and also diverse are the strategies for regulating the use of natural resources: collective management systems for pastures and woodlands, strategies aimed at maintaining the hereditary nature of land ownership and historic forms of governmental autonomy.

The strategy embraces this complexity and integrates it into the system, considering it the reflection of the wealth of natural and cultural resources, which make the Dolomites such a good example of a paradigm within the Alps and Europe in general.

The basic concept is to create a network combining the different local governments, making the most of their specific management frameworks and facilitating interaction and synergy between the territories in a dynamic system, considering that every local government is the specific response to the needs of that territory.

outcomes		
> *participation and involvement of stakeholders in Property managing* > *encourage the dialogue and collaboration between social and territorial stakeholders to manage conflicts* > *partnership projects between the different valleys to set up proximity networks and support well-balanced development of the dolomite valleys* > *improved relations and reciprocal knowledge between the people of the Dolomites* > *facilitate the circulation of specific awareness in the dolomite reference area*		

objectives		actions
D1	**UNESCO care**	1 Recovery and enhancement of the single symbolic places
		2 Promotion of widespread participation by the local communities in the conscious management of the WHS
D2	**UNESCO partnership**	1 Promotion of different kinds of cooperation between authorities, associations, and collaboration with other WHL sites
		2 Fostering exchanges between schools in the dolomite reference area ("Dolomite Erasmus")
		3 Opening a "WHS virtual information desk" in every municipality in the dolomite reference area
D3	**Proximity knowledge**	1 Promotion of informal networks between the residents in the dolomite reference area
		2 Promotion of social networks between the younger generations
D4	**Dissemination of WHS awareness**	1 Sharing professional and management experiences between mountain and tourist operators regarding key issues of the WHS
		2 Raising awareness of WHS values and promotion of interprofessional networks (professional associations: geologists, agronomists and forestry officers, planners, project managers, etc.)
D5	**Open Dolomites**	1 Promotion of projects aimed at helping the disabled to experience the WHS

2 **OPERATING PLANS**

Action		A3.2	Training for the qualification of existing and new professional skills linked to UNESCO inscription										
description			activities involving the training of operators in various different public and private sectors, strictly linked to the new skills and new needs generated by the inscription of the Dolomites on the WHL										
current and planned activities		implementers	reference area	level of application	instruments for implemen-tation	resources	implementation priority	implementation status	interaction with other actions	performance indicators	quality standards	monitoring
Masters degree in World Natural Heritage Management	Masters degree in the knowledge and management of natural properties inscribed on the UNESCO WHL	Autonomous Province of Trento, TSM-STEP	all					cyclical				
Course for Supporters of the Fondazione Dolomiti UNESCO	Course for Supporters of the Fondazione Dolomiti UNESCO on the use and management of the UNESCO Dolomites brand	Fondazione Dolomiti UNESCO	all					concluded (2013)				
Course for medium altitude guides	Training course for guides, 150 hrs of lessons and 2 field trips, for bilingual workers	AutonomousProvince of Bolzano - natural parks office	c.s. 5, 6, 7, 8					ongoing				
Course for local guides The Dolomites UNESCO	Course for local guides The Dolomites UNESCO	Fondazione Dolomiti UNESCO and Collegio delle Guide Friulane	all					concluded (2015)				
Training course for local guides	Training course for local guides	Dolomites Geological Museum - Predazzo	all					concluded (2014)				
Geography course about the Dolomites, World Heritage Site	Geography course about the Dolomites, World Heritage Site - Civetta/Moiazza Group	G.Angelini Foundation	c.s. 3					concluded (2014)				
Course for hospitality staff and promotion of the Dolomites UNESCO	Training course with practical experience to prepare professional figures in the hospitality business who are able to deal with various	Circolo Cultura e Stampa Bellunese club	all					concluded (2013)				

	professional tasks to obtain satisfactory customer management.											
Course 'Territorial marketing strategies to use and sell hotels in the UNESCO The Dolomites Property'	Course for hotel managers of the five provinces in the UNESCO The Dolomites Property to teach them how to convey the value of the Dolomites to their guests. The aims include: training hotel managers to become "Ambassadors of the UNESCO The Dolomites territory" and supporting and facilitating the promotion of aspects linked to the UNESCO The Dolomites Property to their guests during their stay.	Hotel Managers Association of the Province of Trento	all					concluded (2013)				
Course for Skiing/Snowboard instructors in the World Heritage Belluno Dolomites	Experimental informative course for skiing/snowboard instructors in Cortina d'Ampezzo	Fondazione Dolomiti UNESCO	c.s. 3,5					concluded (2011)				
Geography course about the Dolomites, UNESCO World Heritage Site	Geography course about the Dolomites, UNESCO World Heritage Site for System 5 - Northern Dolomites	G.Angelini Foundation	c.s. 5					concluded (2011)				
Geography course about the Dolomites, UNESCO World Heritage Site	Geography course about the Dolomites, UNESCO World Heritage Site for System 3 - Alpi Feltrine	G.Angelini Foundation	c.s. 3					concluded (2013)				
Geography course about the Dolomites, UNESCO World Heritage Site	Geography course about the Dolomites, UNESCO World Heritage Site for System 1 - Pelmo Croda da Lago	G.Angelini Foundation	c.s. 1					concluded (2010)				

27

Action		**B1.1**	Coordinated presentation and joint promotion of The Dolomites WH											
description			activities to promote coordinated and/or joint presentation of the Dolomites area without being limited to the single provinces of the WHS, using different channels or means of communication, for a wide public											
current and planned activities			implementers	reference area	level of application	instruments for implemen-tation	resources	implementation priority	implementation status	interaction with other actions	performance indicators	quality standards	monitoring
Mountains-People-Stories, the Dolomites in six documentaries	Documentary about the Dolomites in 6 episodes by P. Badaloni		Fondazione Dolomiti UNESCO	Mountains-People-Stori-es, the Dolo-mites in 6 do-cumentaries					concluded (2014)				
Dolomites Passport	App created to discover the natural beauty, trails, hospitality and services available in the territory of The Dolomites WHS		Fondazione Dolomiti UNESCO	Dolomites Passport					concluded (2015)				
Guida Verde Touring Dolomiti	Publication of guidebook: Guida Verde Touring Dolomiti		Fondazione Dolomiti UNESCO, T.C.I. Ed.	Guida Verde Touring Dolomiti					concluded (2014)				
Dolomiti Première magazine	Tourism magazine - aimed at quality international tourism		Dolomiti Première publisher	Dolomiti Première magazine					ongoing				
Road signs	development of panels presenting the Dolomites UNESCO placed in various key points along the road system		Fondazione Dolomiti UNESCO + prov. auth.	Road signs					ongoing				
Production of special Dolomites stamp	Release of stamp featuring the Dolomites		Poste Italiane	Production of special Dolomites stamp					concluded (2015)				
The Dolomites, World Heritage Site exhibition	Fair to promote the characteristics, purposes and social and economic consequences of inscription of the Dolomites as a UNESCO World Heritage Site		Fondazione Dolomiti UNESCO, Longarone Fiere	The Dolomites, World Heritage Site exhibition					cyclical 2011, 2012, 2013, 2014 editions				
Media partnership, Fondazione Dolomiti UNESCO - AIT Dolomiti	A media partnership between Fondazione Dolomiti UNESCO and AIT Dolomiti Belluno to promote all the initiatives scheduled for EXPO Milan, from 01.05 to 31.10.2015		Fondazione Dolomiti UNESCO, AIT Dolomiti Belluno	Media partnership, FD4U - AIR Dolomiti					ongoing				
The Dolomites UNESCO at EXPO Milan 2015	Series of initiatives, including conferences, information desks and		Various entities	the Dolomites UNESCO at					concluded (2015)				

	cultural events, to present the Dolomites UNESCO in EXPO 2015		EXPO Milan 2015												
WTE - World Tourism Expo	Exhibitor with stand at the World Tourism Expo of UNESCO World Heritage cities and sites	MC Mkt Cons.-Ass. of UNESCO Italian Sites	WTE - World Tourism Expo					cyclical							
MITT	Moscow International Travel and Tourism Exhibition	Progetto Srl	MITT					cyclical							
BIT Milan 2012	Attendance of trade fair, distributing material from the Foundation on the stands of the individual provinces	Fondazione DU	BIT Milan 2012					cyclical							
The Dolomites UNESCO T3 portal	Development of a communication tool to help guide and inform the general public, residents and most importantly tourists about the intrinsic values of The Dolomites WHS	Municipality of Sagron Mis	The Dolomites UNESCO T3 portal					concluded (2014)							
The Dolomites UNESCO A22 video	Video to be shown on the A22 motorway network - Autostrada del Brennero	Asteria Multimedia Srl	The Dolomites UNESCO A22 video					ongoing							
Motorway signs on the Brennero A22 motorway	Motorway signs on the Brennero A22 motorway	Autonomous Province of Trento	Motorway signs on the Brennero A22 motorway					concluded (2013)							
Meridiani Montagne - booklet about the Dolomites	Publication of booklet about the Dolomites - Meridiani Montagne	Editoriale Domus	Meridiani Montagne - booklet about the Dolomites					concluded (2013)							
The Dolomites - the heart of stone in the world	Photography exhibition organised by National Geographic Germany of photographs of the Dolomites	National Geographic Germany	the Dolomites - the heart of stone in the world					concluded (2011)							
TCI meeting in the Cadore Dolomites	Meeting to celebrate 120 years of the Touring Club Italiano association	Touring Club Italiano	TCI meeting in the Cadore Dolomites					concluded (2013)							
Documentary 'Dawn in the Dolomites'	Documentary	RAI	Documentary 'Dawn in the Dolomites'					concluded (2013)							
Publication of 'Italian UNESCO World Heritage sites'	Publication of 'Italian UNESCO World Heritage sites'	Association of Italian UNESCO WH Sites	Publication of 'Italian UNESCO WH Sites					concluded (2012)							

legend The terms of reference used in the tables of the Executive Programme and the Operating Plans are:

objectives
defined according to the requests of the WHC, the guidelines drawn up by the Networks, the research carried out by the FD4U and the themed proposals arising from #D2040.

actions
based on the principle of feasibility, in other words the possibility of achieving concrete results within the short-term time frame (2020), and on relevance, the possibility of implementing activities either ongoing or scheduled for the near future, which are coherent or compatible with the OMS.

current and planned activities
summary of the activities which are currently ongoing or have already been scheduled, and the projects that need developing to accomplish the project's strategic actions

implementers
identifying those responsible for each of the activities and projects is one of the strengths of the OMS as it allows objectives to be disseminated and involves all the stakeholders (institutional, public and private)

reference area
specifies if the activities and projects are organised or have an effect within the core zones, buffer zones, transition areas or reference area

application level
establishes if the activities or projects are carried out locally / precisely, and if they involve a single component site or the whole Property

implementation instruments
lists the instruments that are already available to execute the activities and projects, relating to both economic planning and forestry, rural and land management;

resources
the availability of resources is the main hurdle when organising activities and projects; resources are not only of a financial nature but can also refer to skills and expertise, and all existing sources must be used

implementation priority
defines how the strategic actions are prioritised (short term = 5 years, medium term = 15 years, long term = 25 years); priorities are established according to criteria of effectiveness, efficiency and financial feasibility.

implementation status
evaluates the overall degree of accomplishment of the strategic actions, on the basis of the activities and projects as a whole listed directly in the operating plans

interaction of actions
potential interactions with other activities are signalled. This helps identify possible synergies and optimise both the financial and human resources

performance indicators
indicators must be predictive, available, measurable and sustainable, meaning that gathering them must not be a drain on financial resources; the indicators are established taking the characteristics of the Dolomites area into account and can differ from component site to site, according to the management and conservation objectives

reference standards | *the ideal condition to reach or maintain, based on the environmental, economic and social sustainability requirements of each action*

monitoring the implementation status | *indicates the method and frequency of the monitoring activities; it is the instrument used to control and periodically measure the phenomena and the management actions, an essential aspect of the adaptive strategy process*

C GUIDANCE & TOOLS

1 REFERENCE STUDIES AND GUIDELINES

The reference studies and guidelines are a series of investigative tools used to build up the knowledge base (they are taken from a variety of studies, further investigations, elaborations) which the FD4U and the Networks have carried out to date. They are a means of reflecting the substance of The Dolomites WHS and defining the interpretive model of the Property (cf. adaptive management).

cartogrphic data set
Creation of a single cartographic database for the whole Dolomites, WHS with an unequivocal georeferencing system and standardised representation of the different themes.
http://www.dolomitiunesco.info (reserved entry)
→ *Geological Heritage ON + Landscape Heritage ON*

geological excellences
Guidelines to identify the representative features of the geological and geomorphological heritage of the Property; dataset of geosites relating to potential geotourism. *[scheduled for 2016]*
→ *Geological Heritage ON*

Dolomites UNESCO invariant
Guidelines for the harmonisation of the spatial planning instruments used to control infrastructures, settlements and buildings.
Guidelines Landscape and landscapes in the Dolomites - Research report
http://www.dolomitiunesco.info/?pubblicazioni=pubblicazione-di-prova
→ *Landscape Heritage and Protected Areas ON*

features o dolomite landscape
Guidelines to identify the main landscape units and indications on how to represent the Landscape Units in the Property in spatially explicit and cartographic terms. The Landscape Units are also characterised according to the dynamic processes of the landscape, focusing particularly on the processes linked to the water cycle and the structures which support anthropic activities related to production systems.
Guidelines Landscape and landscapes in the Dolomites - Research report
http://www.dolomitiunesco.info/?pubblicazioni=pubblicazione-di-prova
→ *Landscape Heritage and Protected Areas ON*

obsolete infrastructures
Guidelines for compiling a list of structures of little or no interest which should be eliminated in order to restore the natural landscape (restoration of human-disturbed World Heritage natural landscape). Elimination criteria are defined according to: negative impact on the environment and landscape; low social, historical, cultural and emotional value; absence of any kind of possible use in the present or future.
Guidelines Landscape and landscapes in the Dolomites - Research report
http://www.dolomitiunesco.info/?pubblicazioni=pubblicazione-di-prova
→ *Landscape Heritage and Protected Areas ON*

carrying capacity
Research on the limits of acceptable change (LAC), on the impact and positive or negative effects of the human activities in the Propertys areas, identification of performance indicators and methods of assessing / evaluating management effectiveness.
Assessment models for the coordination of territorial policies
http://www.dolomitiunesco.info/wp-content/uploads/2016/01/DEF_FD4U_rapporto-finale-CC-2015.04.30.pdf

→ *Tourism, Mobility and Development ON + Training and Research ON*

management effectiveness	Study of a procedure for assessing management effectiveness based on the assessment models recommended by international organisations (WHC, IUCN/WCPA, WTO, UNEP) and specifically adapted to the Property, aimed at evaluating sustainable development in densely populated mountain areas which are traditionally managed by the local communities. *Assessment models for the coordination of territorial policies* *http://www.dolomitiunesco.info/wp-content/uploads/2016/01/DEF_FD4U_rapporto-finale-CC-2015.04.30.pdf* → *Tourism, Mobility and Development ON + Training and Research ON*
indicators and standards	Study to compile a set of performance indicators taken from different sources (literature, experience of management and professional organisations) and define the methodologies to identify qualitative standards that could be applied to the Property. *Assessment models for the coordination of territorial policies* *http://www.dolomitiunesco.info/wp-content/uploads/2016/01/DEF_FD4U_rapporto-finale-CC-2015.04.30.pdf* → *Tourism, Mobility and Development ON + Training and Research ON*
interpretive model of the Property	Development of an analytical and operational tool, representing the structure of the serial Property, the existing links and the potential connectivity among the c.s.. The model identifies the different situations throughout the territory, the kinds of connections or corridors, and determines the most appropriate indicators for the different situations. *Assessment models for the coordination of territorial policies* *http://www.dolomitiunesco.info/wp-content/uploads/2016/01/DEF_FD4U_rapporto-finale-CC-2015.04.30.pdf* → *Tourism, Mobility and Development ON + Training and Research ON*
visitor profile	Visitor survey on provenance, expectations, awareness of the Property being inscribed on the WHL, behaviour and satisfaction with certain specific aspects of their visit in the territory of the Property. *Sustainable tourism in the Dolomites. In-depth analysis.* *http://www.dolomitiunesco.info/?pubblicazioni=linee-guida-del-turismo* → *Tourism, Mobility and Development ON*
tourist operator profile	Survey of the expectations of local tourist operators, their awareness of the Property being inscribed on the WHL and of the UNESCO Dolomites Foundation, their behaviour and their perceptions of certain specific aspects of the visitor experience. *Sustainable tourism in the Dolomites. In-depth analysis.* *http://www.dolomitiunesco.info/?pubblicazioni=linee-guida-del-turismo* → *Tourism, Mobility and Development ON*
conservation measures	List of the conservation measures for the environment and natural landscape, completion of the management plans of the protected areas, creation of a network to improve common measures, identification of appropriate measures for the non-protected areas. *Analysis by Dolomiti UNESCO Natura 2000 Network: Hypothesis of*

Regulatory Harmonisation and Management of The Dolomites UNESCO "5% areas"
http://www.dolomitiunesco.info/wp-content/uploads/2015/11/Documento_Armonizzazione_finale_rev.pd
→ *Landscape Heritage and Protected Areas ON*

parks networking — Survey and mapping of the projects involving the parks in the World Heritage Site; sharing of the "network" projects to be implemented in the short-, medium- and long-term.
Analysis by Dolomiti UNESCO Natura 2000 Network: Parks Network
http://www.dolomitiunesco.info/wp-content/uploads/2015/11/Documento_Armonizzazione_finale_rev.pd
→ *Landscape Heritage and Protected Areas ON*

promotion of sustainable tourism — Definition of the guidelines (indications and tools) to promote and communicate the special values of the Property to tourists, identification of the segments/products to focus on to develop sustainable tourism, establishing potential sources of funding.
Guidelines for the promotion of sustainable tourism in the Dolomites UNESCO
http://www.dolomitiunesco.info/wp-content/uploads/2016/01/DEF_290515_Linee-guida-promozione-Dolomiti-Unesco.pdf
→ *Promotion of Sustainable Tourism ON -*

accessibility to the Property and mobility — Survey to establish how easy it is to reach the main access points of the Property using public transport, comparison with the behaviour of visitors as regards movement towards and between the areas of the WHS, monitoring and analysis of traffic flows within the Property.
Analysis of accessibility using public transport -
http://www.dolomitiunesco.info/?pubblicazioni=linee-guida-del-turismo
→ *Tourism, Mobility and Development ON -*

mobility in the passes — Surveys on traffic flows and noise and environmental emissions in the main Dolomite passes, the different means of transport and the behaviour/preference of the different types of visitors, the opinions of the local stakeholders and gathering of information suggesting possible management solutions.
The Dolomite passes. Analysis of traffic and its impact with proposals on how to manage it
http://www.dolomitiunesco.info/attivita/i-passi-dolomitici-pubblicato-lo-studio-eurac-commissionato-dalla-fondazione
→ *Tourism, Mobility and Development ON -*

expectations of the local population — Participatory process #Dolomites 2040 aimed at examining the expectations of the stakeholders and the local population regarding UNESCO inscription, and at involving them in the definition of the objectives and management plans, sharing ideas and practical suggestions.
Processo Partecipativo "#Dolomiti2040", Report Finale
http://www.dolomitiunesco.info/dolomiti2040-il-report-conclusivo
http://www.dolomitiunesco.info/wp-content/uploads/2015/11/FD4U-D2040_PP_report-finale1.pdf
→ *FD4U*

2 WHS INTERPRETIVE MODEL

The **interpretive model of The Dolomites WHS** shows the relationship between the structure of the serial Property and the existing links, and the potential connectivity between the individual c.s. and the Dolomites area as a whole [1].

The aim of the model is to simplify this complex Property and help identify the reference areas and levels of application which are key to assessing the strategic guidelines and are contained in the operational plans.

The main focus of the OMS of the Dolomites UNESCO Property is the conservation of its OUV and the sustainable development of the reference area of this World Heritage Site.

To achieve this, the interpretive model provides a breakdown of the c.s. of The Dolomites WH and its surrounding areas, classifying the areas which are important for conservation of the OUV (**core zones and buffer zones**).

It also defines the reference area (which corresponds to the so-called "Dolomites territory" defined as the "cultural and geographical context" of the WHS) [2], in other words the larger region comprising the territories surrounding the Property itself.

The model is particularly useful because it provides a more simplified and controllable presentation of the processes and relationships which would otherwise merely appear as numbers or data in tables (e.g. flows at altitude or between the various c.s., the effects of traffic on the passes, organisation of access points and hot spots, spatial and functional relationships between landscape units, etc.).

It is also an invaluable tool for assessing transformation scenarios and for guiding development towards sustainable goals in the Dolomites area. The World Heritage is actually located in a highly dynamic socio-economic context and, as a result, any activities or transformations involving the areas downstream of the Property have an inevitable effect on the upstream areas, causing pressure and potential conflicts of interest.

Representing the interactions between the areas within and outside the Property and their causes only goes to highlight how important the links are for conservation purposes and how they can contribute to the sustainability of the development.

functional linkages   Inscription criteria VII and VIII of The Dolomites WHS define aspects that are not limited exclusively to the core zones but to the buffer zones

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[1]   See Ponticelli, L. and Micheletti, C. (2014). Modelli valutativi per i processi di coordinamento delle politiche territoriali , FD4U and MATTM, Cortina I.

[2]   Referring to the decision of the Board of Directors of the FD4U on 21 June 2011 which approved the operational manual of the Property brand and the attached list of the municipalities belonging to the so-called "Dolomites territory", which the brand can be granted to. The "Dolomites territory" includes the areas which are in various ways linked to and/or associated with the WHS and defines the reference area of the Property in the strict sense of the word.

or outside areas. The notion of "**integrity**", referred to in the OG [3], suggests widening assessment to include the areas surrounding the World Heritage Site [4].

The operational model helps clarify the role and importance of the functional links in OUV conservation and sustainable development. The IUCN paradigm of *connectivity conservation* [5] and the UNESCO *biosphere reserve* paradigm [6] were both referred to when defining **functional linkages**.

These references, however, cannot be applied to The Dolomites WHS without carefully considering the morphological features of the World Heritage territory, with its deep and more or less densely populated valleys. Generally speaking, the core zones correspond to high altitude areas (> 1900 m/asl), untouched by human activities (with the exception of hiking and mountaineering), while the buffer zones are located immediately below the core zones and are home to "traditional" and extensive agricultural-forestry-pastoral activities, as well as a variety of touristic and leisure activities.

connectivity conservation The following guidelines have been drawn up, based on IUCN recommendations, to identify the functional linkages in the areas which are important to OUV conservation:

- functional linkages must be identified wherever they are necessary to effectively protect the serial Property;
- functional linkages between c.s. of a serial Property are defined as links which provide connectivity as regards the landscape, ecology, biology-evolution or habitats;
- it is important to point out and explain how the c.s. are connected; if they are not, reasons must be given for why no links are necessary;
- functional linkages are not part of the World Heritage;
- functional linkages must be governed by appropriate legislation or specific management models;
- any actions involving functional linkages which threaten the integrity of the OUV must be approved by the WHC.

To promote OUV conservation and consolidate the wholeness of the Property, the comparative analysis matrix between the c.s. which was elaborated during the nomination process can be further developed as regards connections.
From an operational point of view, it would be advantageous to:
a) divide the connections according to the OUV and the surrounding conditions (e.g. landscape, geological and geomorphological, ecological, biological and habitat, administrative and institutional);
b) classify the level of functionality required by each kind of connection according to management objectives.

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[3] WHC.15/01 (8 July 2015) *Operational Guidelines for the Implementation of the World Heritage Convention*. UNESCO see. chapter II.E paragraph 87-95.

[4] *ibidem*: "[…] is worth raising if World Heritage properties are actually going to be managed as part of the wider landscape rather than as isolated islands".

[5] Buffer Zones as an operational model, par. 4.2.5 , (B.Engels edt., (nov. 2009), *Serial Natural World Heritage Properties – Challenges for Nomination and Management*. IUCN, Gland,CH, and German Federal Agency for Nature Conservation (BfN)

[6] UNESCO, (jan. 2013), *Man and the Biosphere (MAB) Programme - Biosphere reserve nomination form.* UNESCO Division of Ecological and Earth Sciences, Paris, F.

biosphere reserve   Following UNESCO indications, the guidelines below have been drawn up to identify the functional linkages in the areas which are <u>crucial for promoting the sustainable development of the Dolomites system</u>:

- functional linkages also include immaterial links (cultural, historical, linguistic, etc.);
- functional linkages are central to the concept of sustainable development;
- eco-system services in the landscape are a useful tool for identifying transition bands;
- the ownership of the land is important when addressing issues such as planning and legal protection.

To promote sustainable development and improve the connectivity capability of each c.s. (both core zones and buffer zones) with its surroundings, energies should be focused on the "interface line" which normally lies between 1600 and 1900 m/asl and often coincides with the tree line.

Similarly, it is important to boost the long-range connectivity capabilities between the different c.s., identifying the transition bands and promoting activities which are both compatible and desirable in the site.

Connectivity actions
transition bands and contact points

To reduce fragmentation, it is necessary to identify **continuous functional linkages (a)** and **discontinuous functional linkages (b)**.
To strengthen **contact points (c)** and **transition bands,** it is important to focus on ecotones, habitats and infrastructures (e.g. at the tree line).

[originally drawn up by © A²studio]

From a practical viewpoint, consolidating connectivity involves:

a) <u>identifying compatible activities,</u> looking beyond the traditional rural activities to include modern-day uses (e.g. outdoor recreation, slow tourism, slow trekking);
b) <u>involving the land owners</u> when implementing the management objectives.
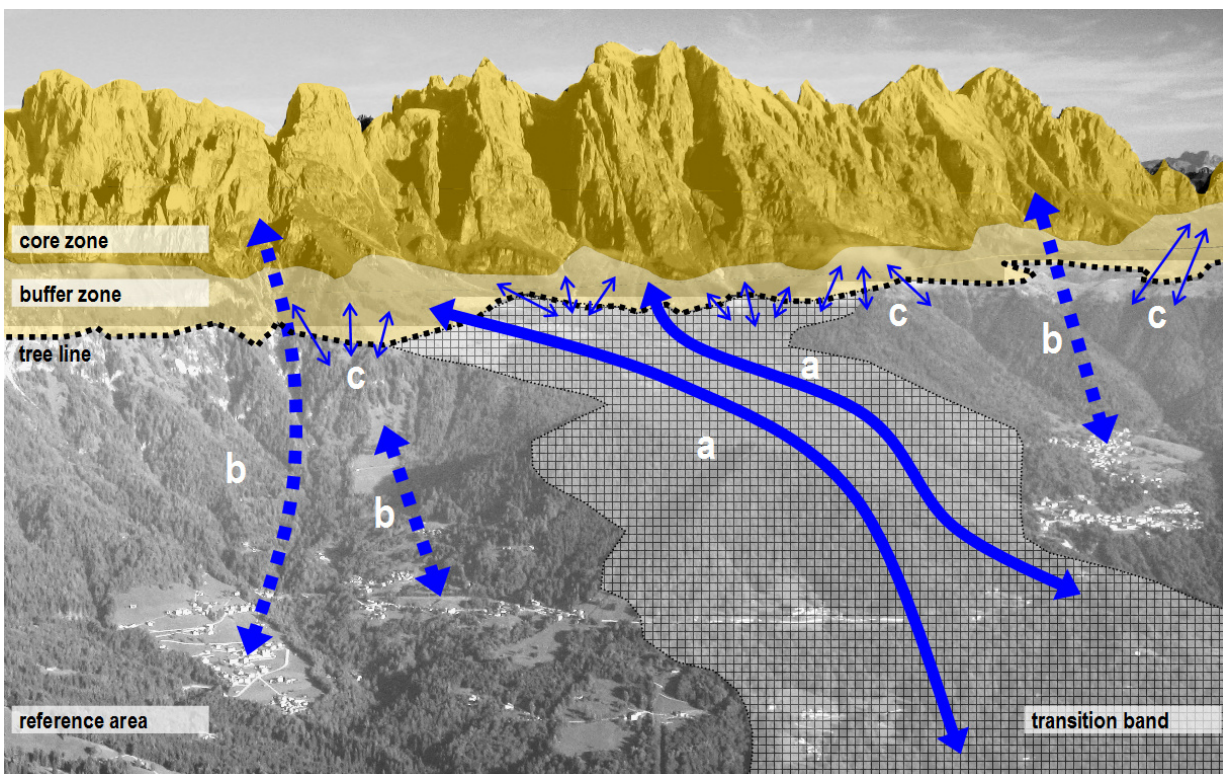
Interpretive model of the serial Property
in relation to existing planning and/or
management tools.

[originally drawn up by © A²studio]

CORE ZONE
type A tools

BUFFER ZONE
type B tools

REFERENCE AREA
type C tools

CORE ZONE
type A tools

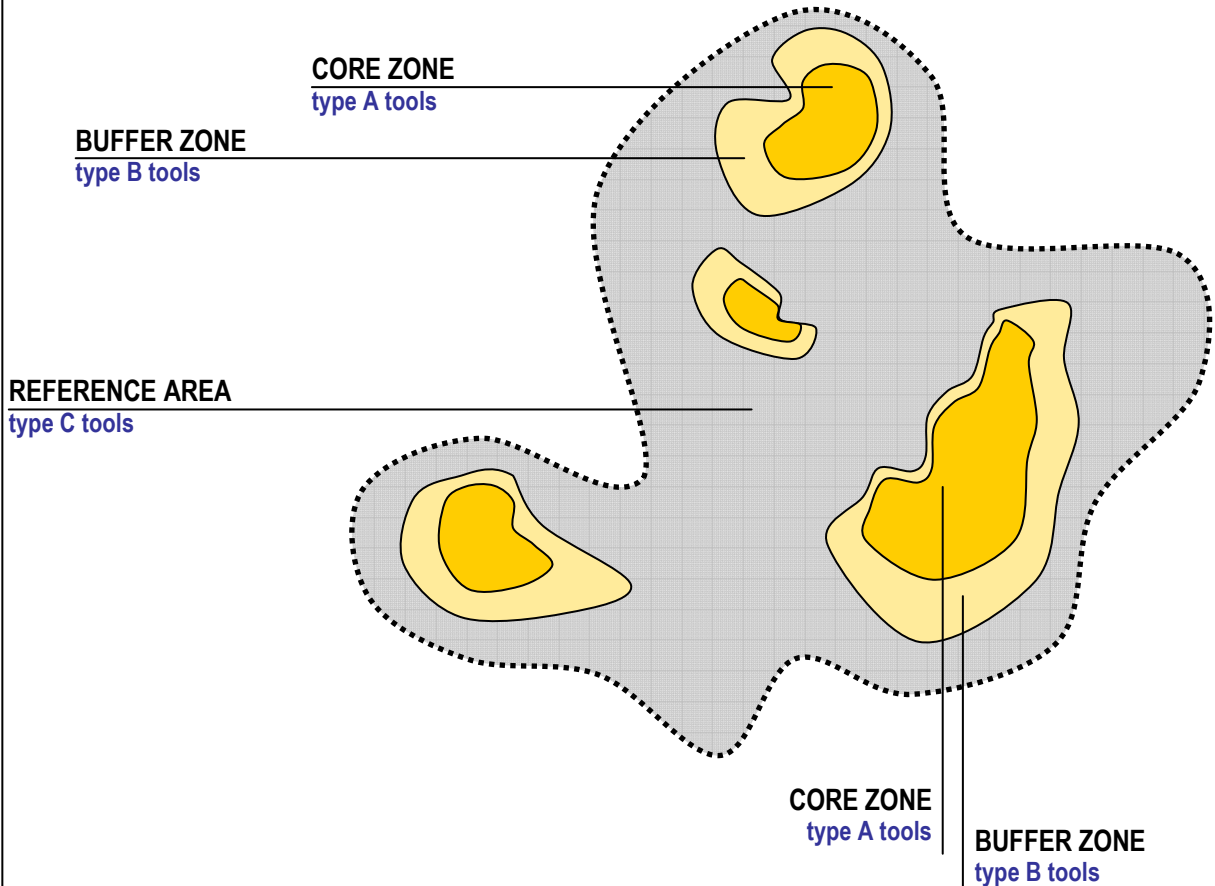**BUFFER ZONE**
type B tools

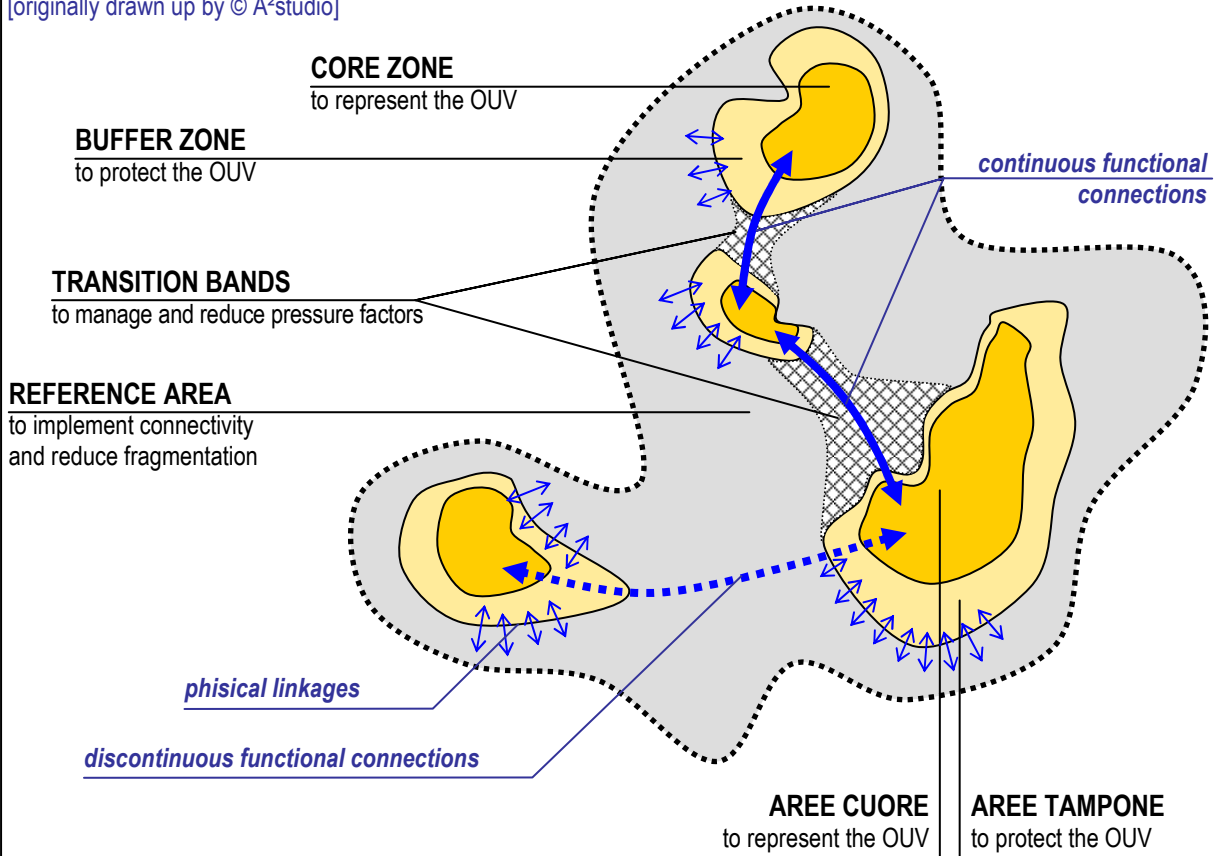|	
type A tools	existing planning and management tools, for example **park plans**, **management plans for SACs and SPAs**, **programme agreements,** etc.;
type B tools	primarily **park plans**, **management plans for SACs and SPAs,** combined with **spatial planning** tools, **sector planning** (forestry, rural, infrastructure, etc.) and local **land planning**.
type C tools	exclusively **spatial planning** tools (regional territorial plans, provincial ~~town~~ urban planning, territorial coordination plans, etc.) which work in harmony with tools used in the **planning of the wider area** (inter-municipal town-planning schemes, community territorial plans, etc.).

*The Dolomites WH is a complex site, not just because of its landscape and geology, but because of the way it is administrated (different set-ups: historical and cultural, land management, legislative and administrative, touristic, protection of nature, transport, etc.). For a better understanding of the model, it is important to note that **planning tools** include all forms of economic planning (rural development plans, mobility plans, tourism plans, "snow plans", forest management plans, etc.) and planning of the use of the land for settlement and anthropic purposes (regional territorial plans, provincial town planning, municipal and/or inter-municipal town-planning schemes, etc.), whereas **management tools** refer to the control of environmental transformation within the territory (e.g. SCI management plans, park plans, etc.).*

Interpretive model of the serial Property
in relation to existing and potential
connectivity and based on a number of
macro functions.

[originally drawn up by © A²studio]

CORE ZONE
to represent the OUV

BUFFER ZONE
to protect the OUV

TRANSITION BANDS
to manage and reduce pressure factors

REFERENCE AREA
to implement connectivity
and reduce fragmentation

continuous functional connections

phisical linkages

discontinuous functional connections

AREE CUORE
to represent the OUV

AREE TAMPONE
to protect the OUV

physical linkages	the **contact points** between the c.s. and the surrounding territory; this **interface** is important to strengthen the landscape structure and the habitats network locally;
continuous functional connections	**direct functional linkages** between the different c.s.; they can be divided into **existing** (landscape, geology and geomorphology, eco-system) and **potential** (socio-economic synergies, institutional and administrative agreements etc.), in accordance with the OMS strategic actions;
discontinuous functional connections	**conceptual connections** (scientific, aesthetic-perceptive and touristic-experience) which should be structured or constructed in accordance with the objectives of the OMS.

The interpretive model can help identify – and thus control – situations where potentially conflicting interests come into play. Generally speaking they are the transition bands between the different c.s. and the points of contact between the World Heritage and the areas around the Property subject to human intervention (reference area). The main entrances to the Property are concentrated in these interfacing areas (e.g.: Dolomite passes, cable car access, car parks at high altitude, etc.) which also play host to tourist and recreational activities and other initiatives involving the exploitation of the natural resources. All these activities exert pressure on the landscape, albeit in different ways, and so should be carefully assessed. In some cases extraordinary mediation and compensation procedures (e.g. to increase efficiency of the services in the areas where tourist flow is intense) or actual rehabilitation of the landscape and the environment are necessary.

classification of the areas

The operational model of the Dolomites serial site classifies the areas according to macro functions, namely:
- **core zones**, whose role is to represent the OUV;
- **buffer zones**, whose role is to protect the OUV;
- **transition bands**, whose role is to manage and reduce pressure factors;
- **reference areas**, whose role is to implement connectivity and reduce fragmentation between the c.s..

The distinguishing features of the core and buffer zones, which should be taken into account when drawing up the strategic guidelines, are:
- the presence and representative importance of the OUV;
- the conditions of the environment and nature;
- the degree and intensity of human intervention;
- the accessibility degree.

type of connections

The proposed model defines connectivity, classified according to the methods of connection, as a structural element of seriality and a tool to help strengthen and/or protect the OUV.
The topic linkages are:
- **physical linkages**, contact points between the c.s. and their immediate surroundings, where the connection is direct; interfacing with the surrounding territory is important to strengthen the landscape structure and the habitats network locally;
- **continuous functional connections**, direct functional linkages between the different c.s.; they are determined by the physical characteristics of the context and identified according to their type (e.g. landscape, geological and geomorphological, ecological, biological and habitat, socio-economic synergies, institutional and administrative agreements, etc.). The linkages may be existing and/or potential;
- **discontinuous functional connections**, indirect, "conceptual" linkages (scientific, aesthetic-perceptive and touristic-experience), which should be structured or constructed according to the objectives of the OMS.

Adopting an adaptive and dynamic **integrated model** can therefore help meet the coordination and adaptive management objectives of the OMS of the Dolomites Property.
A model of this kind requires coherent contextualisation of the assessment methods applied to date and, consequently, indicators and standards must be chosen with the assessment of the effectiveness and efficiency of the management strategy in mind.
What follows is a dynamic, and not a deterministic, interpretation of the variable indicators and standards. As a result, the **indicators → standards** relationship process goes from being iterative to interactive because as the "weight" of the indicators changes, so the thresholds have to "adapt", a feature of a dynamic system. This is why it is important to select indicators which are also significant for the cultural, environmental, economic and social aspects, assessing the way in which these indicators can interrelate and represent alternative - or in some cases parallel - factors which can either boost or hamper development.

3 ADAPTIVE MANAGEMENT TOOLS

The Overall Management Strategy drawn up for the Dolomites UNESCO WHS is an example of an <u>adaptive management</u> model recommended by international assessment bodies (IUCN/WCPA) and is based on a specific procedure for evaluating management effectiveness [7].

It requires long-term commitment as it involves periodical monitoring of the indicators, implementing management actions to maintain quality standards and correcting management practices in the light of the monitored data.

The management process is inclusive and participatory and conceived to control sustainable development in densely populated mountain areas which are traditionally managed by the local communities. This is why it requires carefully planned and shared.

assessment procedure

The procedure to assess the management effectiveness of the Property is carried out using the best information available, collected through an iterative monitoring programme. Its objective is to check that the management practices are in line with the latest information and interpret the management objectives, indicators and quality standards as quantitative expressions of the limits of acceptable change (LAC).

The assessment process is divided into the following stages:
- application of the <u>interpretive model,</u> which represents the serial structure of the Property based on the characteristics of each c.s. and the quality of the connections between the various sites;
- confirmation of the <u>classification of the areas</u> based on the kind of activities and the planned intensity of use;
- assessment of the <u>management and planning objectives</u> referring to the classification of the areas;
- definition of some easily measurable <u>performance indicators</u> which are selected according to the management and planning objectives (the indicators for each area and use are determined with the involvement of the stakeholders);
- confirmation of the <u>quality standards</u> (desirable conditions and objectives to reach and/or maintain);
- application of the periodical <u>monitoring schedule</u> to measure the effects of the actions and the management measures;
- assessment and possible <u>replanning of the management actions</u> depending on the results.

peer evaluation

To ensure the periodical assessment is objective and meets the standards required by inscription on the WHL, a continuous collaboration project with another World Heritage Site will be set up (**WH peer evaluation**). The *peer WHS* will be chosen after careful consideration of its organisation, structure and management to ensure comparison with the Dolomites WH is significant. The project involves periodical mutual assessment (on a 3-year basis), sharing experiences and field visits.

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[7]   The model to assess management effectiveness studied for the OMS was presented at the III international conference on the management of mountain areas "Mountains of Our Future Earth", held in Perth (UK) from 4-8 October 2015, in the session Current assessment of Sustainable Mountain Development, organised by MRI Bern, chair: Greg Greenwood.

indicators and standards
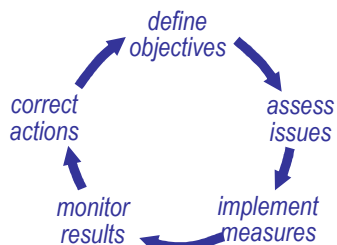
Indicators measure the resources and phenomena at work in a system. Their aim is to provide information to help assess the context and guide the management of the system. The indicators for assessing the Dolomites context were determined using the Framework for assessing management effectiveness developed by IUCN WCPA [8] (Hockings et al. 2000).

If the OMS is considered a **cyclical and adaptive process**, the themed issues focus on the natural, cultural and social values of the territory. The indicators, in turn, are to be considered taking into account the context of the Property as a whole or the individual c.s..

Generally speaking, indicators are selected according to whether they are:
- predictive: able to provide the information needed to assess the different stages in the management process;
- available: already entered in databases throughout the territory which are as uniform as possible;
- monitorable: periodically measurable according to homogeneous monitoring protocols;
- sustainable: obtainable from economically sustainable surveys.

The indicators selected are divided into quality indicators - describing the context before and after the scheduled actions - and performance indicators, monitoring the management processes.

The **Quality indicators** assess:
- the conservation status of the important values (mainly the OUV but not only);
- potential threats, pressures or risks;
- important, complex or controversial management problems.

The **Performance indicators** assess:
- policies and management priorities (in other words information which can be particularly useful in the decision-making process);
- results regarding development programmes and/or investments in collective management (area certifications, territorial agreements, MaB, reserve networks, etc.);

The sets of indicators vary according to the zoning of the interpretive model and the management macro-objectives.

CORE ZONE	*indicators assess pressure factors*
BUFFER ZONE	*indicators assess protection factors*
TRANSITION BAND	*indicators assess compatible uses, cultural values and identity*
REFERENCE AREA	*indicators assess structural and infrastructure set-ups and the ability to increase resources*

[8]   The aim of this framework is to help develop a system - and the related indicators - to assess the management effectiveness of the protected areas. This reference is based on a cyclical management approach where assessment focuses on both the processes and the effects, addressing issues connected with the context and planning, management systems and ongoing processes, accomplishment of the objectives (products and results). Each indicator selected is referred to the IUCN WCPA assessment matrix in order to build a comprehensive adaptive management framework.

themes The indicators for each theme are selected according to the management objectives, the project situations (taking into account the experience of the area managers), experience in similar areas and following consultation with chosen stakeholders.

themes	key contents
landscape and environment	geomorphodiversity biodiversity integrity of the natural resources readability of the landscape units permanence and recognisability of the cultural matrices readability of the historical settlement presence of traditional activities
management and planning	control methods of the inhabited territory management methods of the uninhabited territory service and infrastructure planning methods (facilities and standards) mobility and transport
society and economy	prevalent economic sector "weight" of the prevalent sector compared to the other economic sectors definition of the economic "weight" of the individual activities in relation to the GDP of the valleys average income per capita degree of social wellbeing level of safety activities to enhance the local cultural heritage (material and immaterial) public and private investment in goods and services appeal of tourism and accommodation facilities running costs of protected areas running costs of connecting natural areas (not protected)

Given the importance of tourism in the Dolomite area, a set of indicators has been drawn up which focuses exclusively on outdoor recreation and visitor experience and includes indicators which are transversal to the environmental, landscape, socio-economic, cultural and planning areas. This set of indicators conforms to the latest scientific findings on the subject [9].

themes	key contents
outdoor recreation and visitor experience	quantity and quality of accommodation quantity and quality of services quantity and quality of typical products (agricultural/food) quantity and type of infrastructures type and efficiency of public transport system (trains, buses) presence of infrastructures and sustainable mobility systems (cycle tracks, car sharing)

[9]   See. Siegrist D., Gessner S., 2013. *Quality Standards for nature-based tourism in Protected Areas in the Alps*. In: Nationalpark Hohe Tauern - Conference Volume 5: (2013): 5th Symposium Conference Volume for Research in Protected Areas, Mittersill, Salzburg, Austria,10-12 June.

number and quality of cultural events
guided tour schedules
specialised professional services offered
advanced training for tourist operators
professionalism of tourist operators
organisation of promotional activities (no. of promotion agencies, promotion networks, cooperation between partners, etc.)
environmental quality certifications
CSR (Corporate Social Responsibility) and SCSRS (Sustainability and Corporate Social Responsibility Skills Certification) certifications
monitoring programmes

indicators set Below are lists of indicators taken from different sources: specialist literature, management authorities apps (parks, regions, provinces, municipalities), specific knowledge and experience (stakeholders).
As far as The Dolomites WHS and its reference Alpine context are concerned, the set of indicators drawn up by the Alpine Convention was taken into consideration [10].
These lists, although not complete, provide a useful tool when selecting the indicators for the assessment processes outlined in the individual operating plans. The contents pertaining to the key themes "heritage, community, system" are labelled in orange; the contents referring to the "experience" theme are in yellow.

key contents	indicator	type of data	u.m.
natural habitat	structure and organisation of eco-systems	*map*	*m²*
	level of biodiversity	*description*	*%*
	organisation of the geological structures and geomorphological processes	*description / map*	*--*
	hydrography of streams and rivers and surface and below water system	*map*	*ml/m²*
	air and water quality	*description*	*%*
	climate change (behaviour of glaciers and snowfields, change in the tree line, etc.)	*description*	*--*
cultural habitat	structuring of open spaces (meadows, lawns, regulation of woodland, etc.)	*map*	*m²*
	land ownership (collective, private, public ownership)	*map*	*m²*
	type of settlement (nucleus, scattered buildings, isolated buildings)	*description map*	*no.*
	level of permanence and recognisability of the historical and cultural settlement matrices	*description*	*--*
	perception of cultural values and identity (questionnaires, interviews)	*description*	*--*
socio-economic aspects	provenance (local, provincial, outside province, abroad) and type (single, family businesses,	*description*	*%*

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[10] See. Alpine Convention, *Obiettivi ambientali nell'arco alpino e proposte di monitoraggio tramite indicatori.* Rapporto conclusivo del Gruppo di Lavoro "Obiettivi di qualità ambientale specificamente alpini" della Convenzione delle Alpi (II mandato): http://www.umweltbundesamt.de/sites/default/files/medien/publikation/long/3143.pdf

key contents	indicator	type of data	u.m.
	cooperatives, consortia, etc.) of economic players		
	provenance and type of economic resources and capital invested (public, private, mixed, banks, finance companies)	*description*	*%*
	economic weight of the activities and the sectors (transport, accommodation, professions typical of the mountains, restaurants, etc.)	*description*	*%*
	willingness of the economic players to accept management protocols and share management responsibilities	*description*	*--*
land-use planning	environmental protection (biotopes, SCIs, protected areas, etc.)	*map*	*m²*
	restrictions in town planning and use in the areas	*map*	*m²*
	real use of the areas and relative surfaces (CORINE data)	*map*	*m²*
building heritage	number of existing properties (type, morphology, use, etc.)	*description* *map*	*no.*
	use of existing properties (degree of use, state of conservation, congruity, etc.)	*description*	*%*
	degree of technological facilities (electricity, drinking water, drainage system, municipal solid waste, etc.)	*description*	*--*
networks	extension and efficiency of physical technological networks (electricity, drinking water, sewage, disposal of municipal solid waste, etc.)	*description map*	*%*
	presence/absence of virtual networks (LAN, WI-FI, etc.)	*description*	*no.*
	extension of the footpath network (official and spontaneous)	*description*	*lm*
	state of conservation of the footpath network (development into erosion - creeping channels)	*description*	*%*
	extension of forest roads	*map*	*lm*
	use of forest roads (how accessed, frequency, etc.)	*description*	*%*
	mobility and rest systems (facilitated access services: cable systems, bus-shuttles; car parks: valley floor, at high altitude)	*map* *description*	*--*
accommodation	accommodation facilities and quantification of performance (opening period, number of beds, seats/hour, meals/day, overnight accommodation,etc.)	*description*	*no.*
	other facilities and classification (how used, frequency of use, etc.)	*description*	*no./%*
	permanent/seasonal employees working in the different activities	*description*	*no.*
flow management	mobility of access and transport systems	*description*	*--*
	interaction with systems on valley floor	*description*	*--*
	no. people using facilitated systems for reaching high altitude (shuttles, taxibuses and ski lifts)	*description*	*no.*

key contents	indicator	type of data	u.m.
	first entrances (daily, monthly, seasonally)	*description*	*no.*
	average wait for public transport	*description*	*no.*
	number of WCs/visitor	*description*	*ratio*
	people at one time	*description*	*ratio*
	tourist flow at high altitude	*description*	*ratio*
	no. of people using footpaths	*description*	*ratio*
	signage for roads / trails for visitors (Besucherlenkung)	*description*	*no.*
	efficiency of footpaths	*description*	--
	damage to vegetation along the edges of the paths	*description*	--
	subsidence of soil due to walking	*description*	--
	creep damage (animals and people)	*description*	--
visitor experience	quantification and assessment of the socio-economic characteristics of visitors	*description*	--
	quantification and assessment of the behaviour of visitors	*description*	--
	perception of the quality of the visitor experience (crowding, quality of the services, perception of silence,..)	*description*	--
	perception of the landscape and aesthetic values (quality of the environment, possibility of spotting wild animals, ….)	*description*	--
	waiting time in accommodation (for meals)	*description*	*no.*

When assessing the carrying capacity of a "closed" or static system, all the indicators are one-directional (they are neutral compared to the objectives) and express the capacity of the system to withstand perturbation (resilience). In a dynamic and "open" system like the Dolomites, on the other hand, some indicators are two-directional, in other words they can be gauged to certain project objectives, becoming factors and expressing the capability of the system to be reorganised in order to deal with induced perturbation.

standard assessment
The process for assessing standards is closely linked to the management objectives set out in the OMS. It involves the various stakeholders in the area - and in particular the management authorities - and is the result of mediation between the project expectations and objectives.

Each **standard**, namely the optimal reference value to associate with each indicator, is obtained through a process of assessment of the limits of acceptable change.
It is important to bear in mind that in a process of this kind, standards are not absolute values and that different standards will correspond to different situations. This is why an interpretive model of the Property has been used which is based on the functional classification of the areas.

transformation assessment

The **transformations** within The Dolomites WHS are assessed by "weights" which grade acceptability (5 degrees of assessment), according to the example of some experiences (*Norwegian Fjords*) [11].

The conceptual shift from *carrying capacity* to *carrying capability* means that positive results have been introduced into the assessment scale, corresponding to situations where the transformation is not only acceptable but is actually preferable and desirable.

transformation situation	weight attributed
preferable	+2
acceptable	+1
neutral	0
avoidable	-1
unacceptable	-2

[11] Booth, K., Espiner, S. 2006. Managing Human Activity in Fiordland: A Carrying Capacity Method. Lincoln University, Canterbury, New Zealand.