Urban & Intercity Roads Landscape
IUST
1/03/2018

What to expect?

Organisational Complexities of
Linking Roads,
 Landscape
&
Heritage

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Routes, Heritage & Landscape

an implicit **DISIRE**

Examples of what to link?

- **Roads**
  - Effective transport solutions
  - Engineering technicalities
  - Standards
  - Cost & benefits

- **Landscape**
  - Ecology
  - Environment
  - User experience
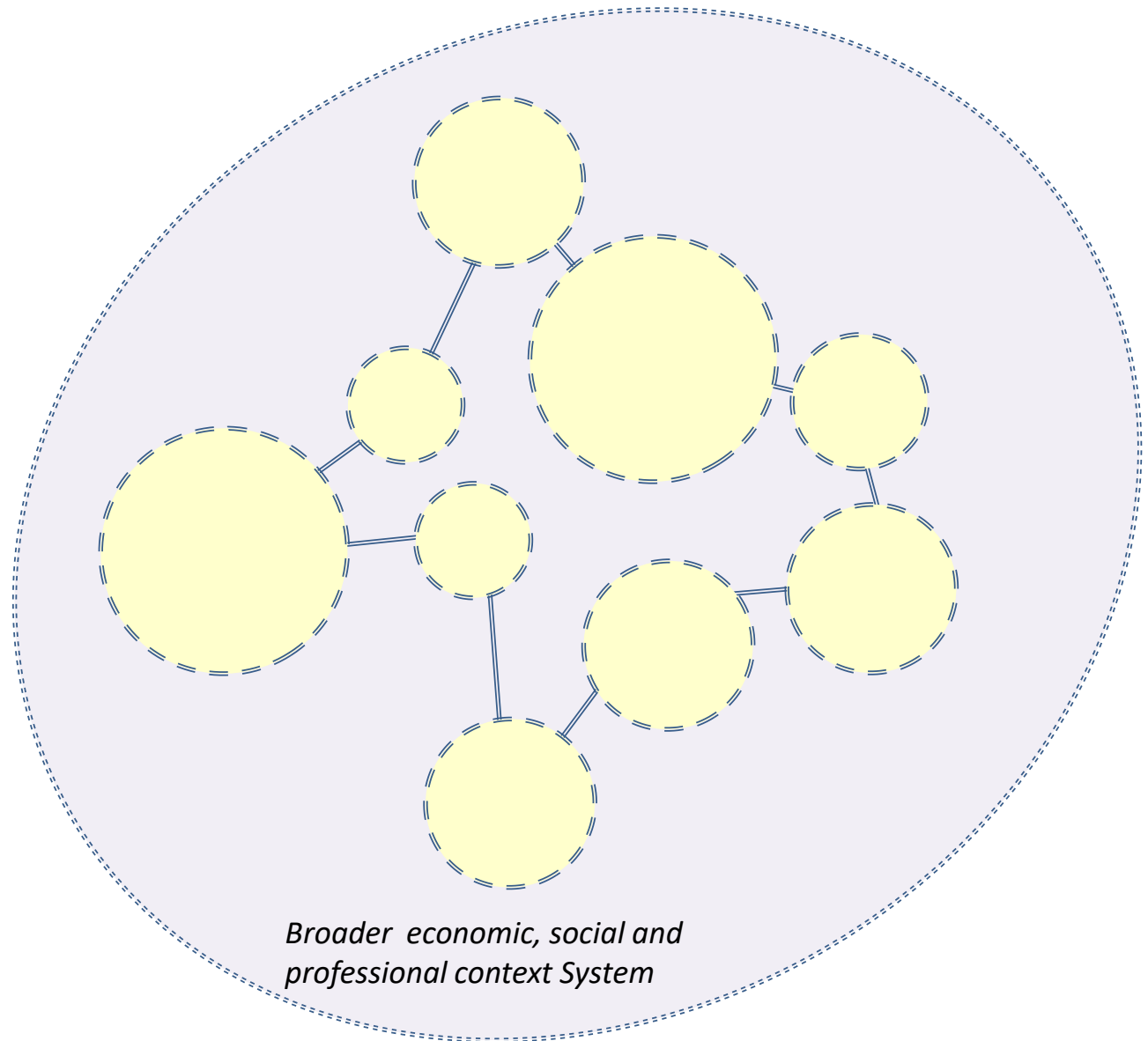 - Design

- **Cultural heritage**
  - Tangible   /   Intangible   /   Collective memory
  - Built   /   Natural
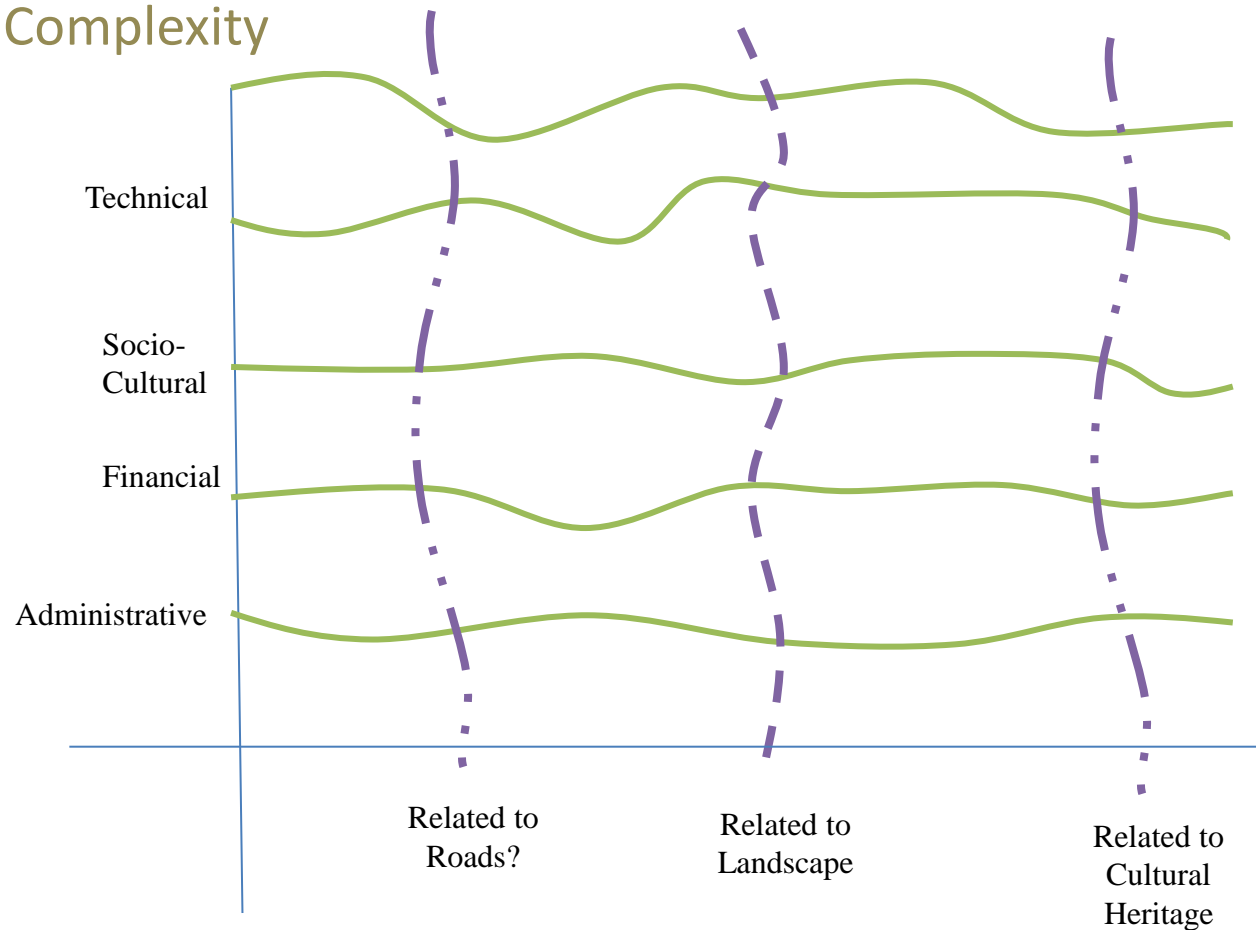 - Historical   /   Future identity

the question of

in practice

Increasing complexities

Broader economic, social and professional context System

Multi-layer complexity related to strategies in mega systems

Layers of Complexity

Technical

Socio-Cultural

Financial

Administrative

Related to Roads?

Related to Landscape

Related to Cultural Heritage

Expectations or Objectives

from vision to implementation

Organisational lens

in practice

Vision & objective

Strategic management
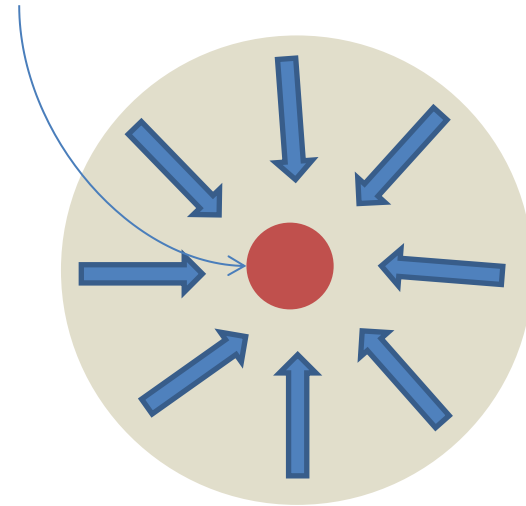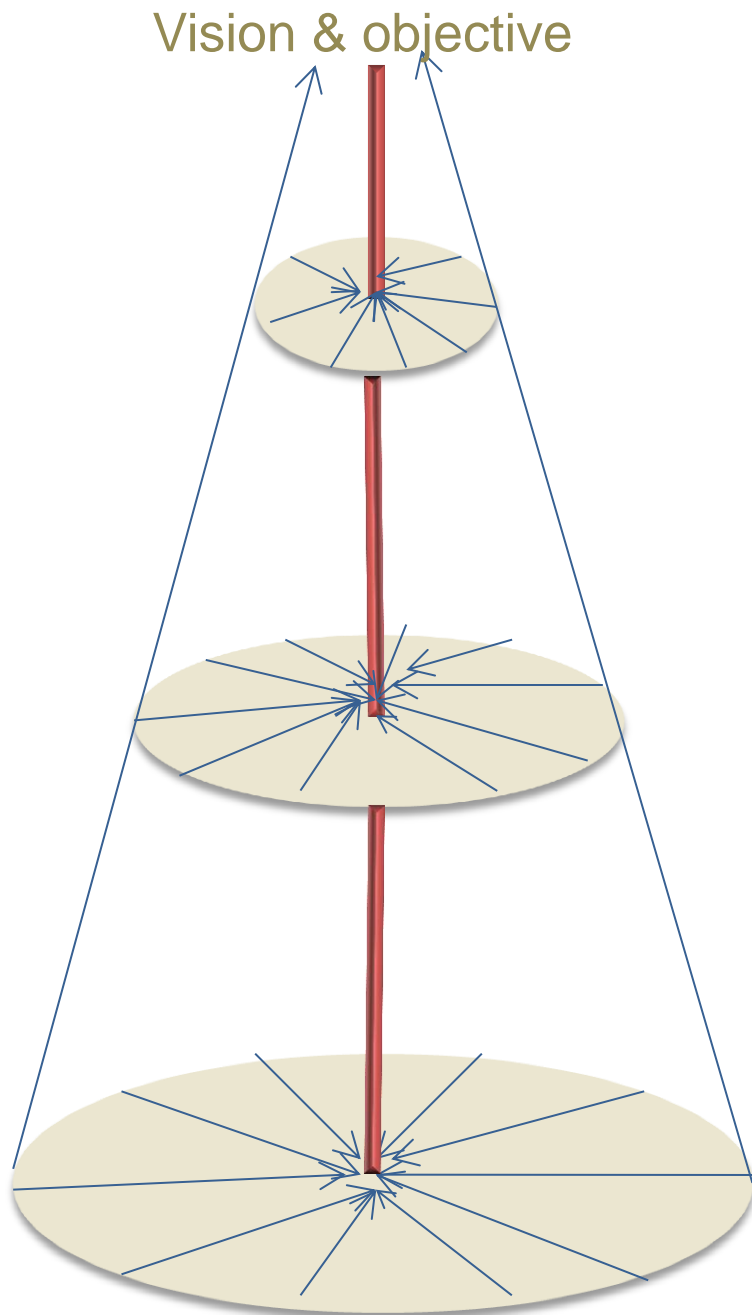
Strategic level & Strategic direction

Levels of Implementation

STRATEGIC & DIRECTION
(Objectives/Targets)

Strategic Benefits

Portfolio

Programme 1   **Programme 2,3,...**

Programmes

Project A   Project B   Project D   Project E   Project F
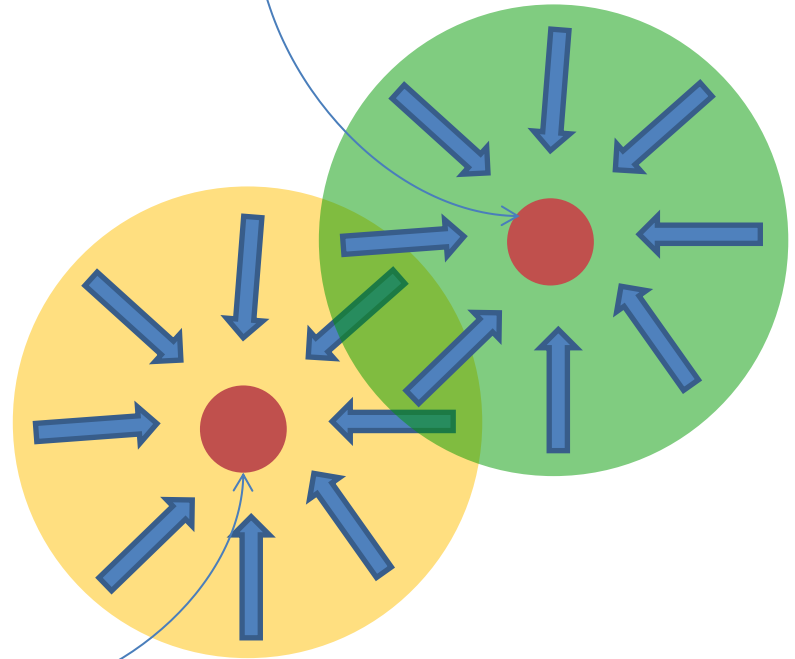
Projects
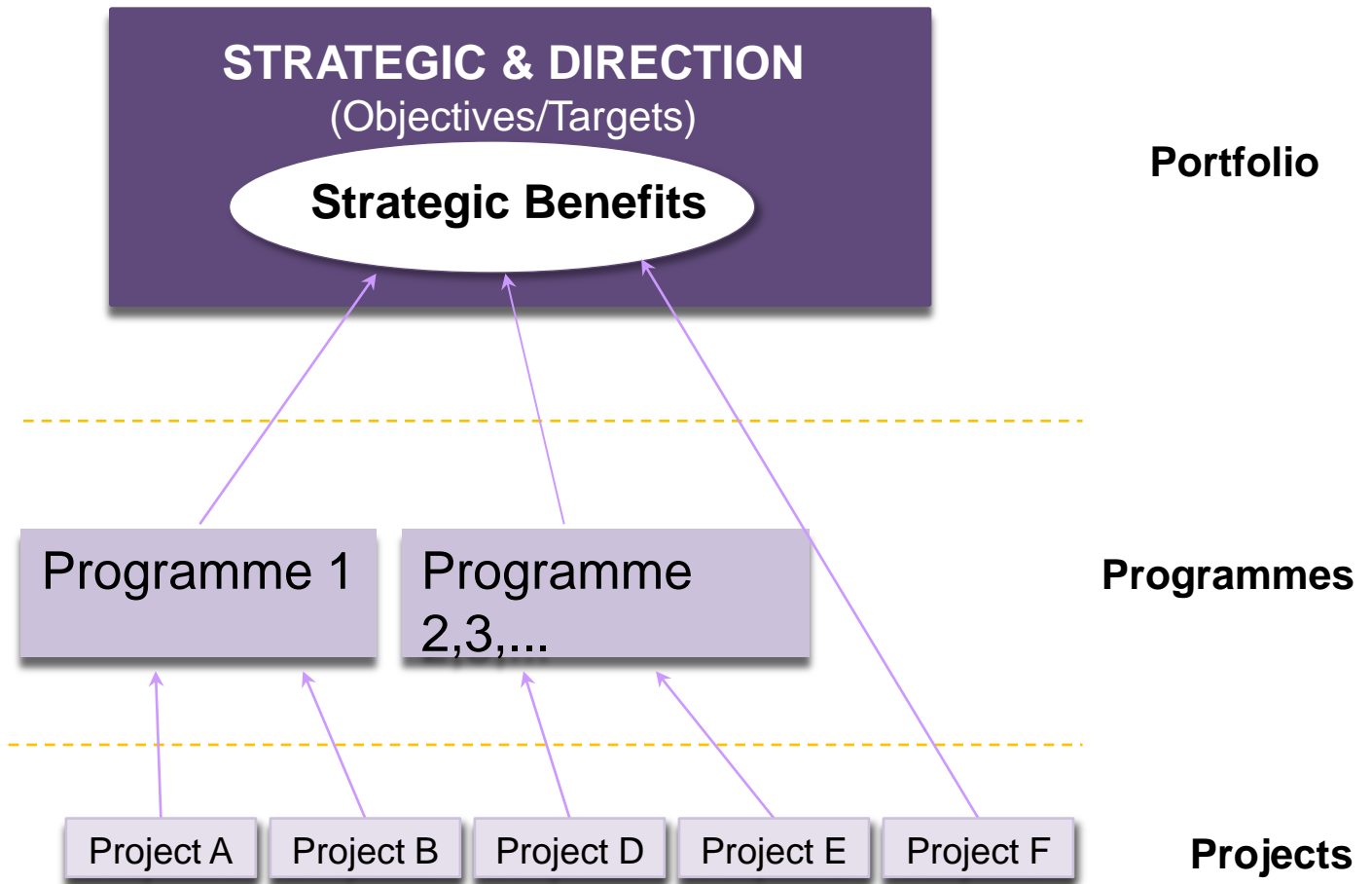
Mid-level programmes in their context
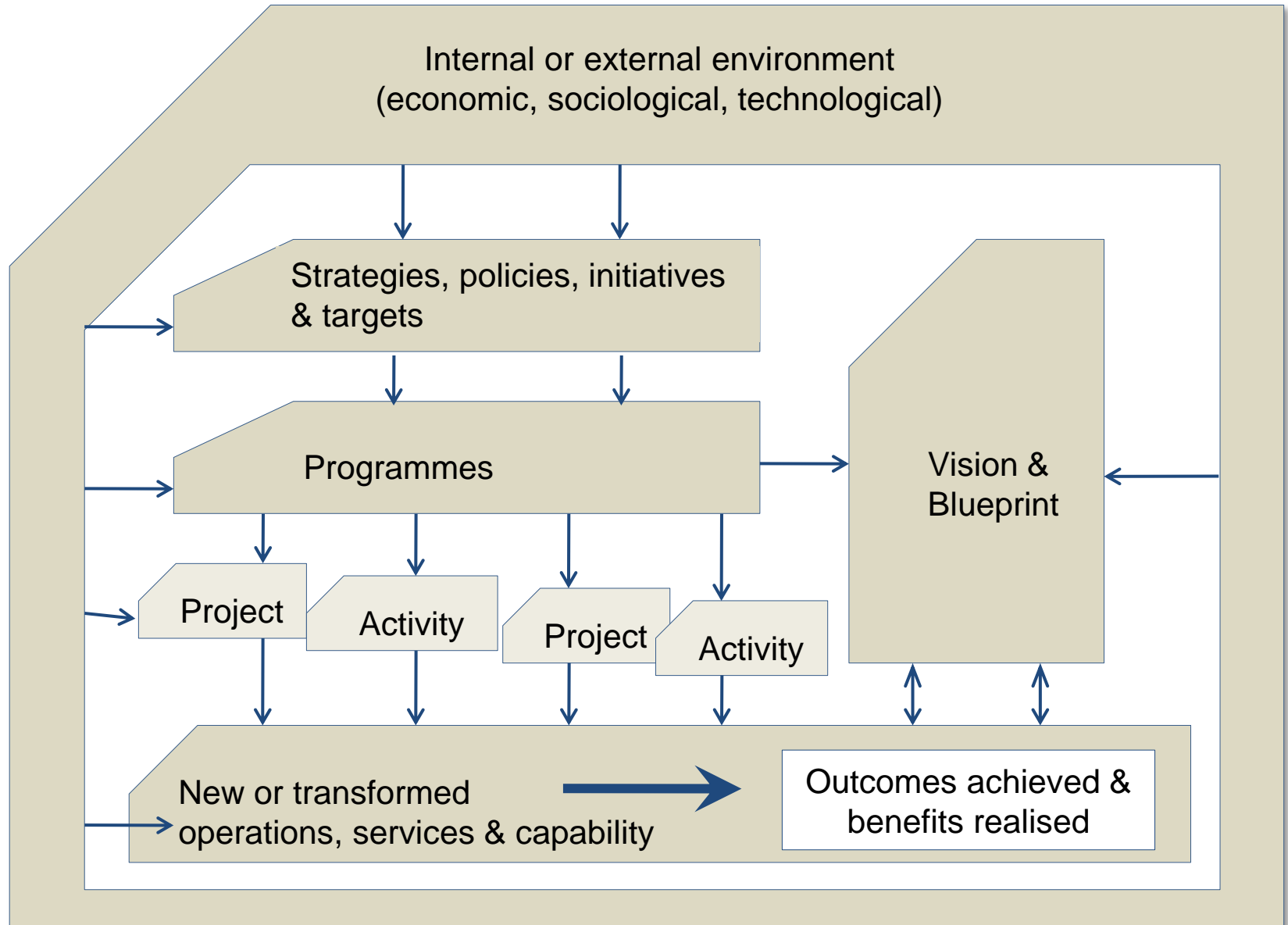
Vision & objectives

Multiple objectives & expectations

Transport oriented

Landscape oriented

Examples
Strategic Roads Network (SRN), UK

- Strategic vision….

By 2040

Our strategic roads will underpin future wellbeing and prosperity. The network of the future will be smoother, smarter and more sustainable.

Vision and top-level strategy

"We have bold aspirations for the network. By 2040, our aim is for it to be...

SMOOTHER

- The number of people killed or seriously injured on the SRN approaching zero
- More users, more happy with more journeys, leading to road user satisfaction levels of 95%
- A free-flow core network, with mile a minute speeds increasingly typical

SMARTER

- A network that enhances the UK's global competitiveness, and is recognised as one of the top 10 global road networks by business
- A step-change in efficiency, with road projects and maintenance delivered 30% – 50% cheaper than today

SUSTAINABLE

- A better neighbour to communities, with over 90% fewer people impacted by noise from the SRN
- Zero breaches of air quality regulations and major reductions in carbon emissions across the network
- Improved environmental outcomes,

Targeting specific areas

- ……
- ……
- ……
- **Landscape, heritage and biodiversity**

"To enhance the network's landscape, address areas where there are negative impacts on sites of historic or cultural heritage, and improve the impact on local biodiversity."

Still…

Vision and top-level strategy

➢ **The Performance Specification**

- Making the network safer for our customers

- Ensuring user satisfaction

- Supporting the smooth flow of traffic

- Encouraging economic growth

- Delivering better environmental outcomes

- Helping cyclists, walkers, and vulnerable network users

- Achieving real efficiency

- Keeping the network in good condition

Example: Operational level

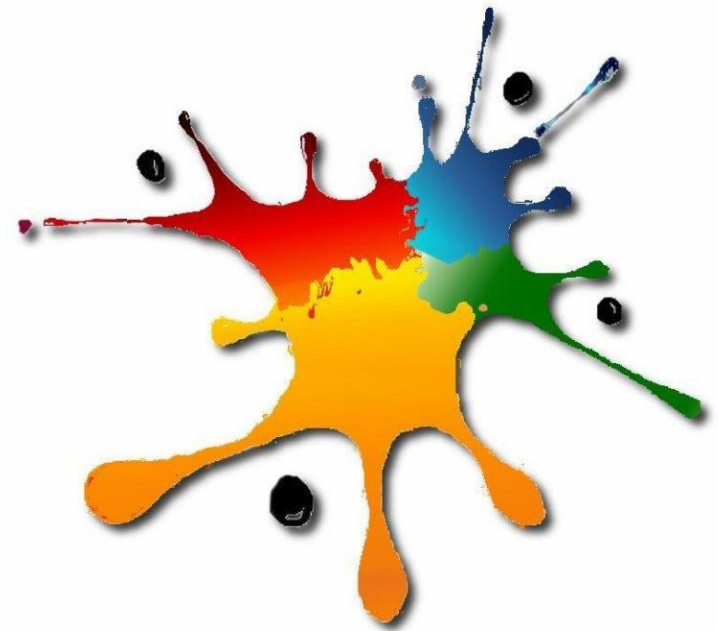The manual on the road landscape policy, Queensland

- ➢ Integration

- ➢ Sustainability

Integration

➢ **Context Sensitive Design**

"equally addresses safety, mobility and the preservation of scenic, aesthetic, historic, environmental and other community values" (FHWA, 1995)

Integration

➢ **Collaboration**

❑ Planners – e.g. strategic, town and land use, environmental and transport planning

❑ Engineers – e.g. civil, structural, electrical, traffic, hydraulic and environmental

❑ Architects – e.g. building, landscape and urban design

❑ Geologists – e.g. geotechnical, soil pedologists and scientists

❑ Cultural heritage specialists

❑ Environmental scientists and ecologists

❑ Acoustic consultants and air quality specialists

❑ Property consultants and developers

❑ Artists

❑ Other specialist consultants

Integration

➢**Coordinated Design Approach**

❑ How the road and transport system will be used

❑ The impact it will have on the local community

❑ The manner in which materials and details will need to relate to each other, the surrounding context and landscape setting types

❑ The detail which can be applied to design components to provide a better design outcome.

Integration

➤ **Design Technology**

❑ 3D wire frame images

❑ Generated simulations overlaid on photographs

❑ Video imaging and drive through animation

Sustainability

➢ **principles for ecologically sustainable development:**

a) *"decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;*

b) *if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;*

Sustainability

➢ **principles for ecologically sustainable development:**

c) *the principle of inter-generational equity - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;*

d) *the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making; and*

e) e) *improved valuation, pricing and incentive mechanisms should be promoted."* (Australian Government, 1999: Section 3A).

Sustainability

➢ **Value of the Landscape**

- Environmental value

- Community value

- Aesthetic value

Sustainability

➢**Liveability**

Liveability relates to the quality of life and wellbeing of the community and is the human focus of sustainability.

Some reflections on our case

- The overall vision: development plan
- The existing detailed scope of works for designing new roads, improving existing ones, …

# Some challenges from organisational perspective

❑ A vision or a desire?

❑ Are our objectives SMART and relevant to the future?

❑ The exiting organisational gap between desire and projects

❑ From a biased disciplinary approach toward a true multidisciplinary approach

❑ Do we have a reference point for facilitating mutual understanding about the vision and priorities?
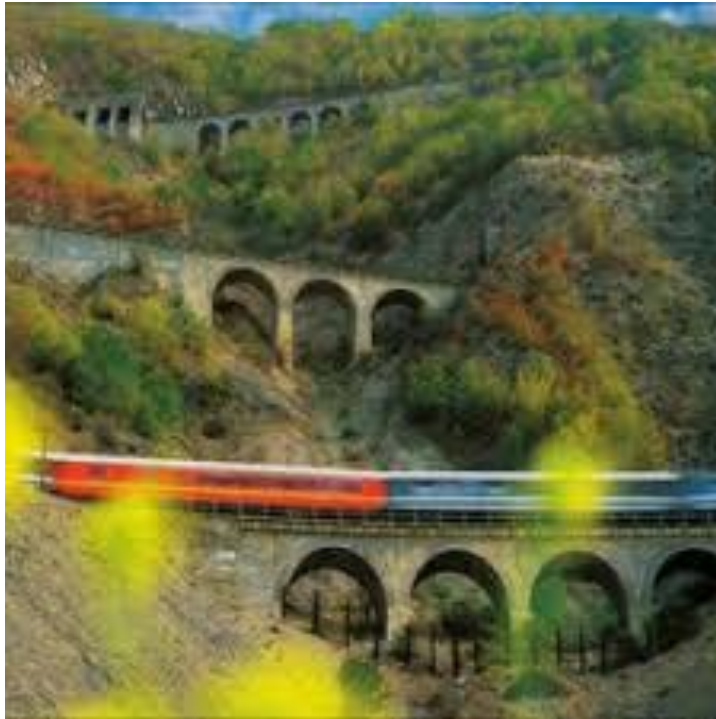
❑ ……

Some ideas: Dealing with organisational complexities

❑ Both vertical and horizontal cascading from the high-level vision to mid-level, to operational level of projects and codes

❑ Programme level/mid-level policies strategically directed towards our vision/objectives on roads, heritage and landscape and their related disciplines

❑ Multidisciplinary examination of policies and the system configuration

❑ Careful organisational examinations of the overlapping areas of related disciplines

Finally:
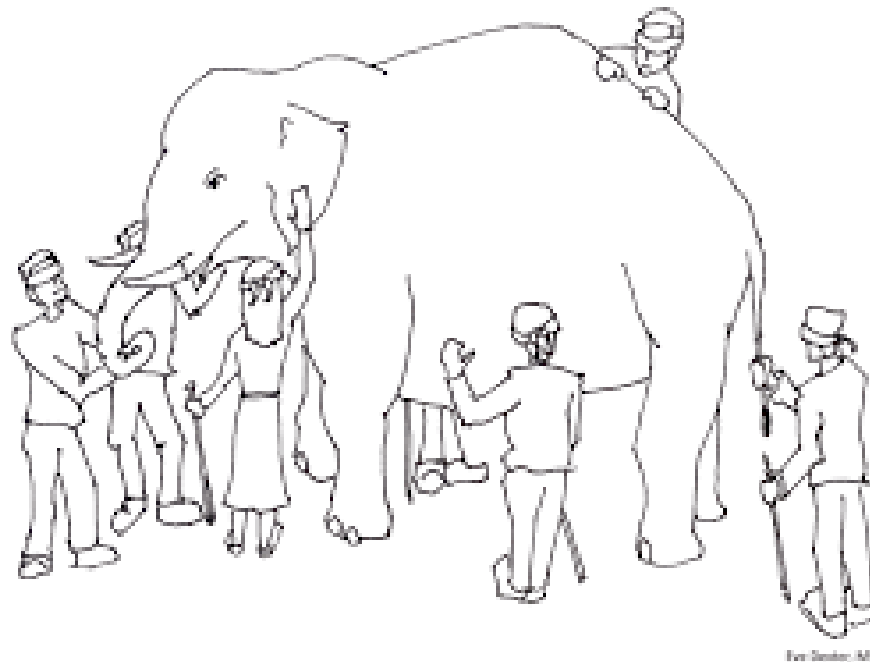
❑ Reminding ourselves: Elephant in the Dark!

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