

**NETLIPSE**  
(**NET**work of **L**arge **I**nfrastructure  
**P**roject**S** in **E**urope)

**Presentation to STOA Workshop**

**Assessing the Health and Deliverability  
of Projects**

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Department for Transport, UK

Brussels, 26 September 2013

*Department for*  
**Transport**



**AT OSBORNE**



# 1. NETLIPSE Development: How did we get here? (1)

## 1. NETLIPSE “1” (2006-2008):

- Creation knowledge network
- Research of 15 projects (consortium 8 organisations)
- EC 6<sup>th</sup> Framework Programme financing (100%)

## 2. NETLIPSE “2” (2008-2010):

- Development of the knowledge network
- Infrastructure Project Assessment Tool (IPAT) development and calibration
- 49% TEN-T EA funding; 51% RWS, DfT, BAV, AT Osborne

# 1. NETLIPSE Development: How did we get here? (2)



## 3. NETLIPSE “3” (2011-12):

- Maintain knowledge network
- Financing: RWS, DfT, STA, Interporto Regionale Della Puglia, AT Osborne

## 4. NETLIPSE 2013+:

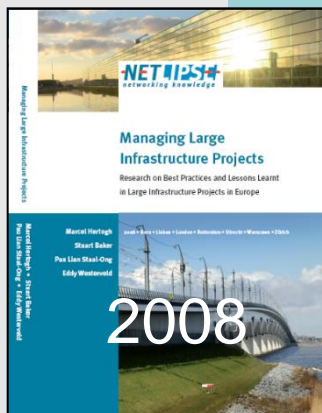
- Maintain knowledge network
- Financial and in kind support: RWS, DfT, STA, ARUP, Sea Milan Airports, Next Generation Infrastructures, Danish Road Directorate, AT Osborne
- Use the Infrastructure Project Assessment Tool
- ... you?

# 1. How we got here (3): NETLIPSE research 2006-2008

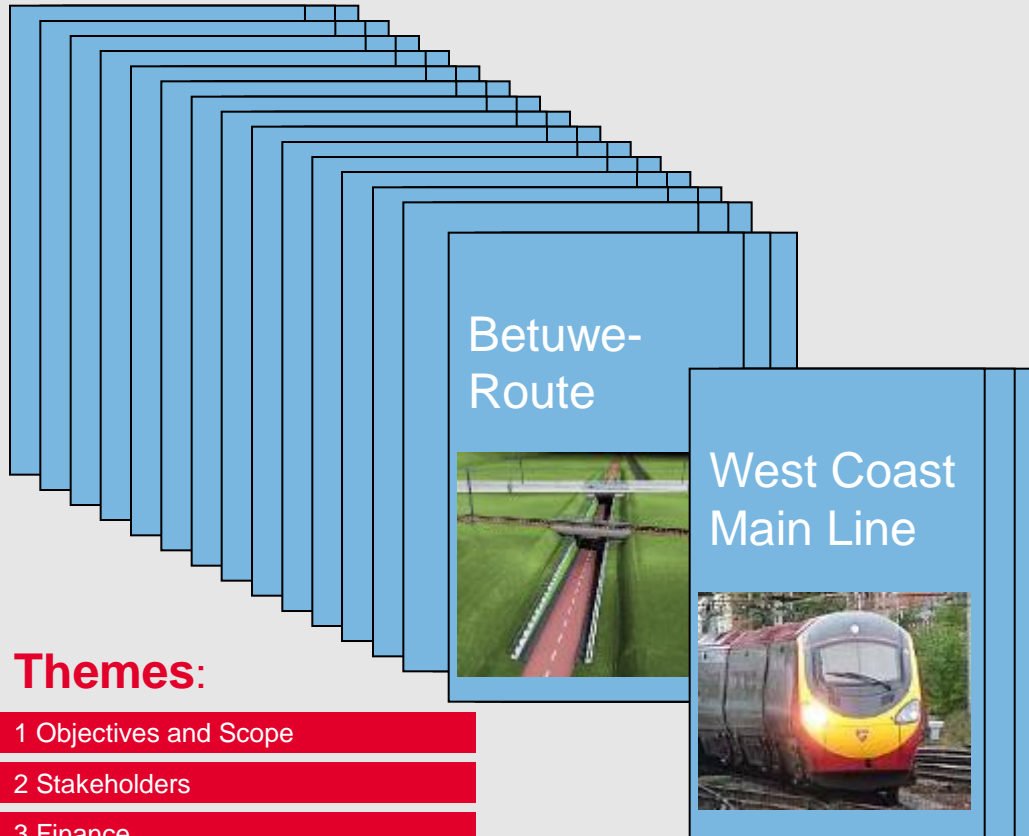


## Projects (road, rail, water):

1. Betuweroute
2. Ring road Bratislava
3. Gotthard Base Tunnel
4. HSL-South
5. Lezíria Bridge
6. Lisbon – Porto HS Line
7. Lötschberg Base Tunnel
8. Maaswerken
9. Motorway A2
10. Motorway A4
11. Motorway E18
12. Nuremberg - Ingolstadt HST
13. Øresund bridge
14. Unterinntalbahnhof
15. West Coast Main Line



# 1. How we got here (4): 15 projects researched with reports



## Themes:

- 1 Objectives and Scope
- 2 Stakeholders
- 3 Finance
- 4 Organisation and Management
- 5 Risks (Threats & Opportunities)
- 6 Contracting
- 7 Legal Consents
- 8 Knowledge & Technology

## Case Study Report Format:

### Contents:

1. Preface
2. Project Facts & Figures
3. Stakeholder network
4. Project History
5. Historical Analyses
6. Best practises and lessons learnt (8 themes)
7. Summary and Conclusions

Appendix: Checklists

## 2. Infrastructure Project Assessment Tool (IPAT)



### Objective:

- The IPAT assesses the quality of the management and processes of the whole wider project including the plan to reach the objectives and to implement the outputs (not just the physical construction)

### Predictive value:

- The IPAT highlights weaknesses and strengths in management and the realism of the project delivery plan for the whole project and specifically for the next project phase

### Saves Money:

- If a project is not ready or not ready to move to next stage, get it right before spending money!

## 2. Relevance and Accuracy

### Relevance:

- To projects and a series of projects forming a programme
- To corridors
- To any infrastructure project
- To small, large and huge projects

### Accuracy:

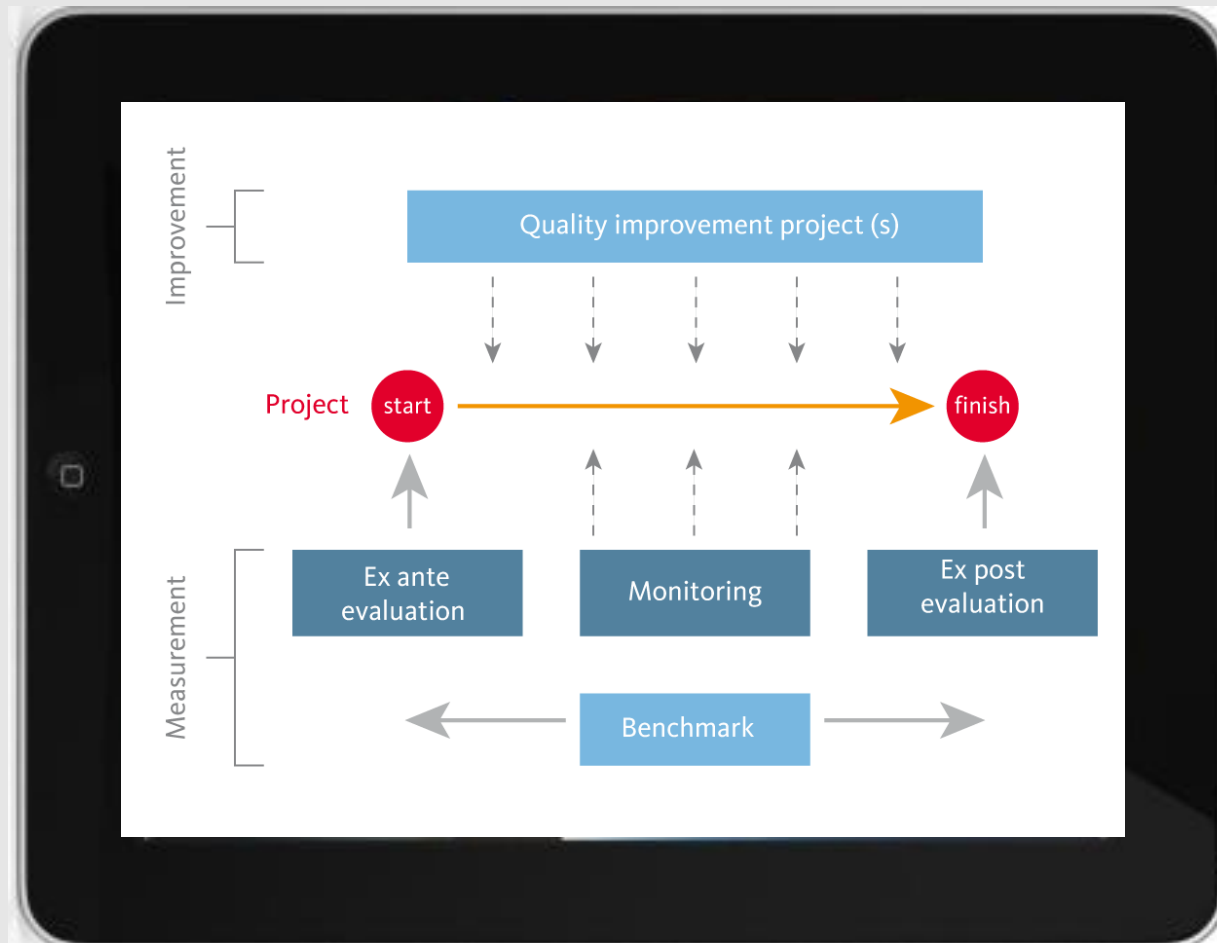
- Built on the detailed knowledge from NETLIPSE 1
- Calibrated by pilot studies

## 2. Purpose of the IPAT

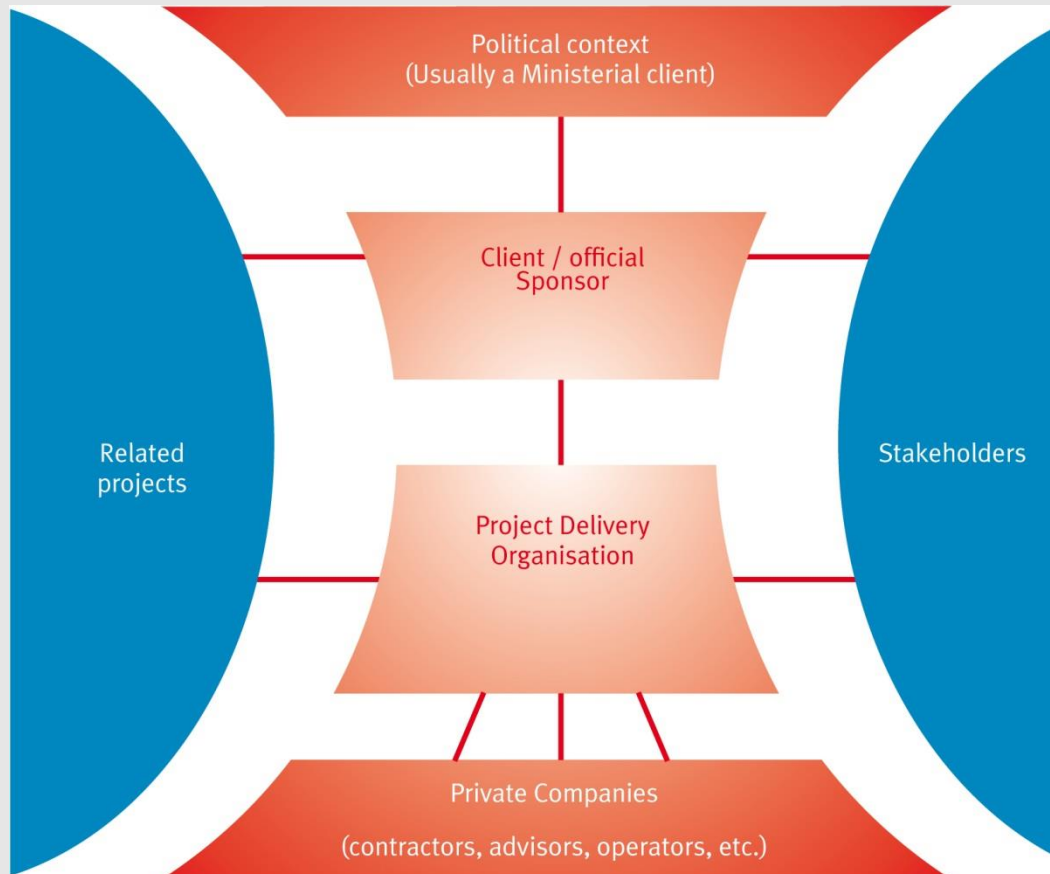
- The core purpose of the IPAT is to assess the fitness of the project organisation and processes: this will inform the delivery plan and help determine the timing of funding
- The IPAT does not help to decide on the feasibility of a project or programme, neither on the need for funding but does confirm sound business case work is done and whether a project is ready to proceed and be funded or not
- An IPAT assessment can indicate early warning signals of a project running over schedule and/or budget



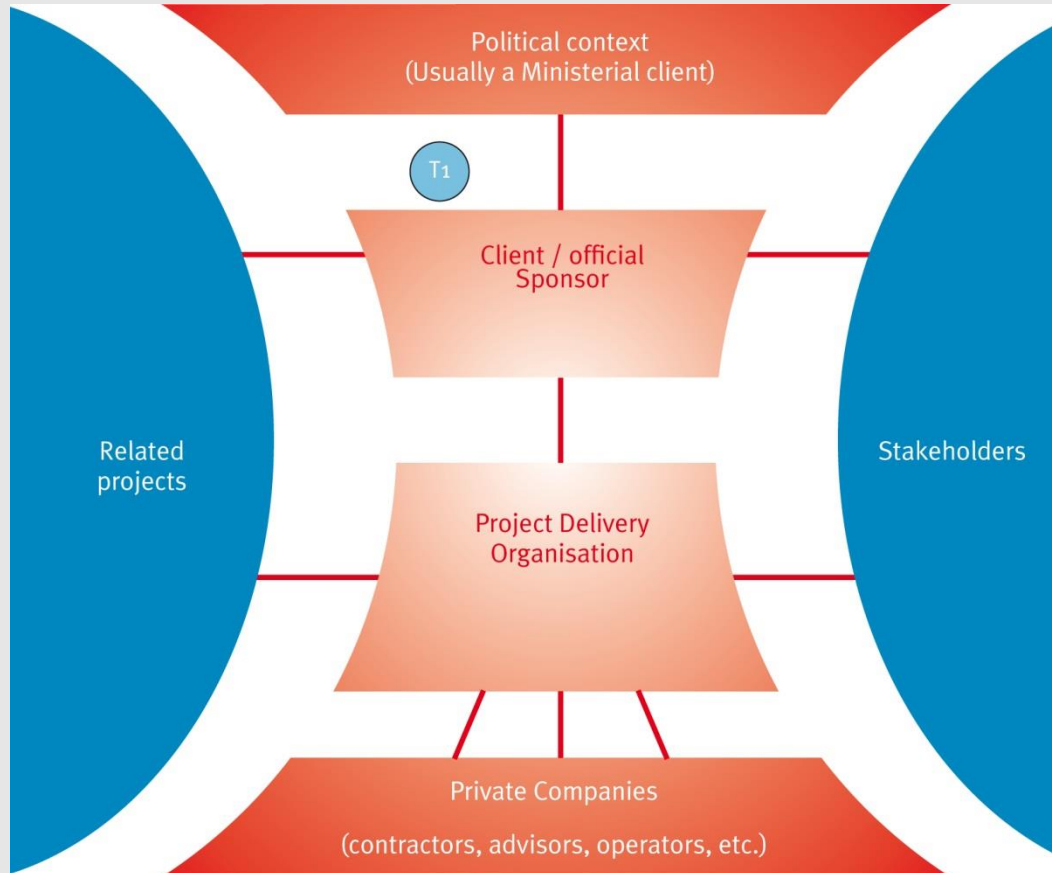
## 2. The IPAT: relevant throughout the lifecycle of a project



## 2. IPAT – Model and Themes

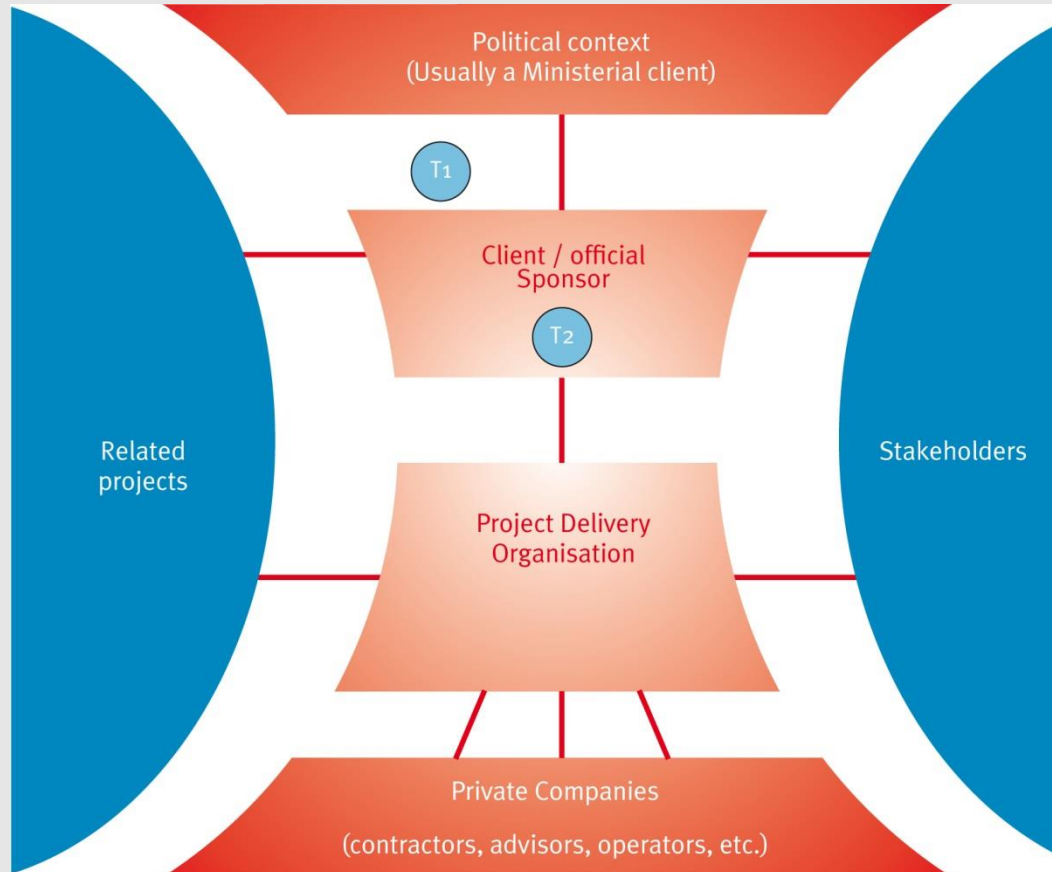


## 2. IPAT – Model and Themes



### T1 Political Context

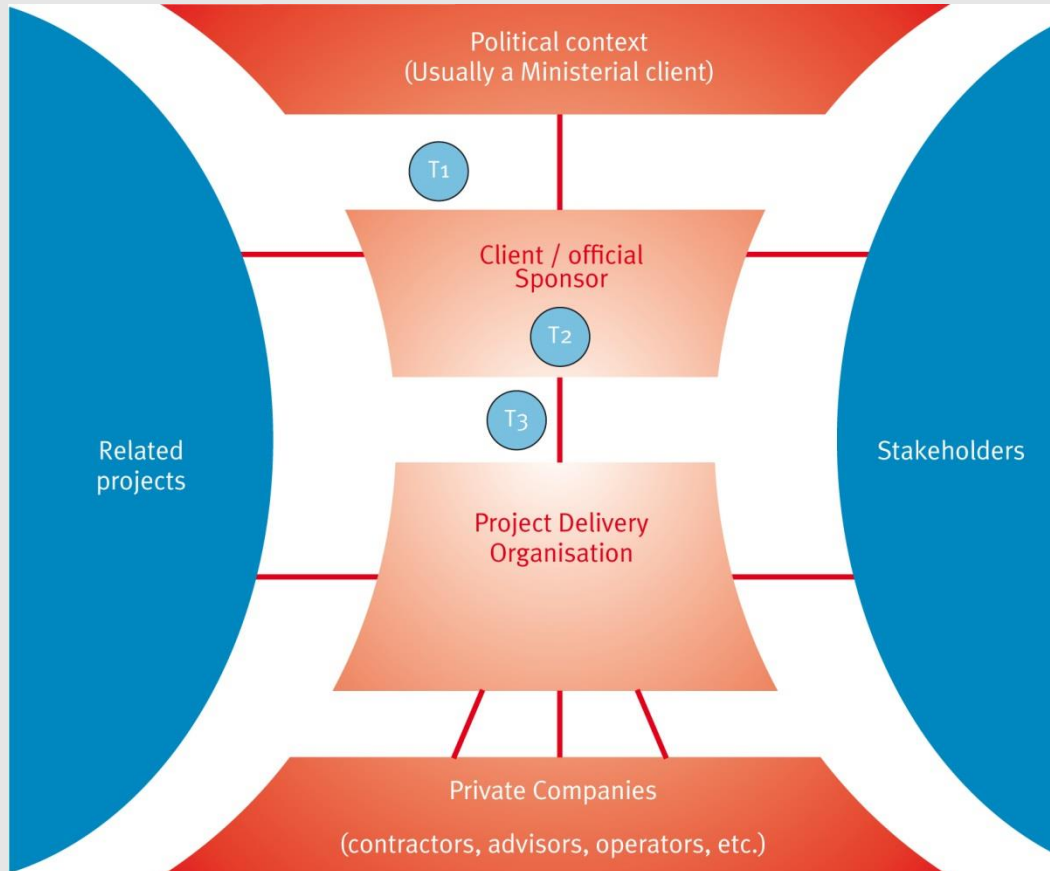
## 2. IPAT – Model and Themes



**T1** Political Context

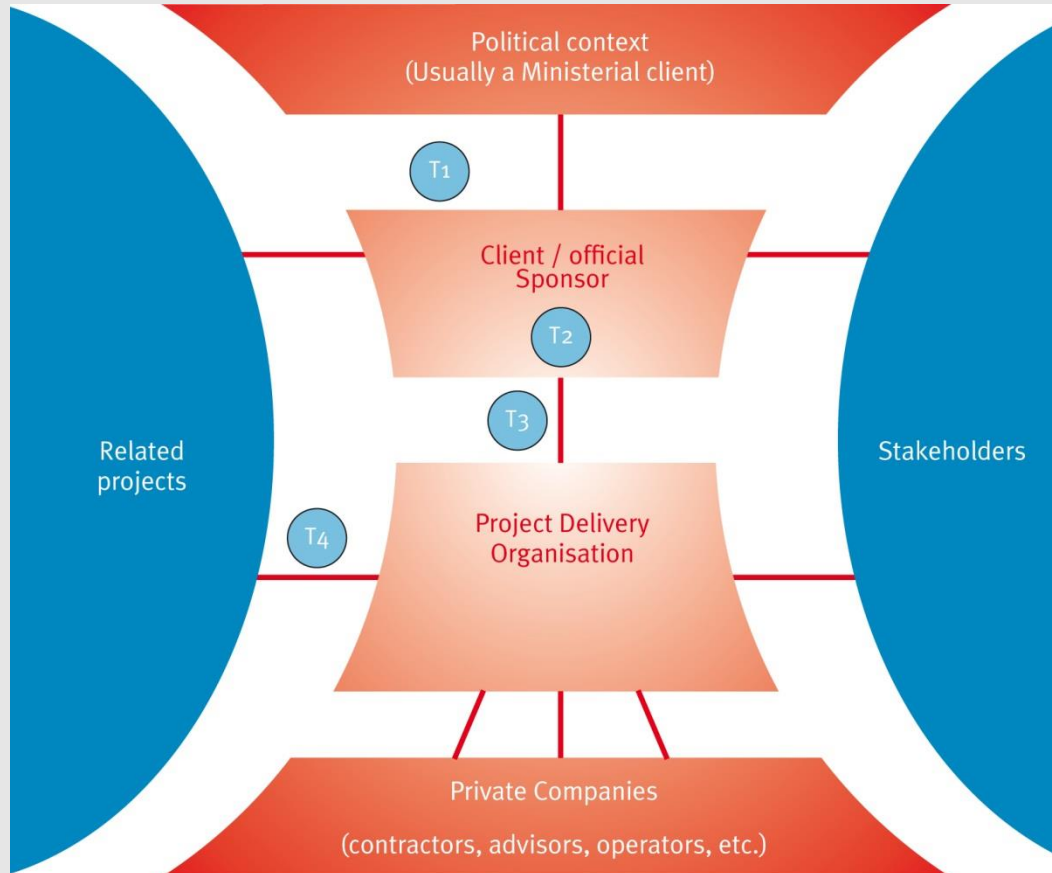
**T2** Objectives,  
Purpose and  
Business Case

## 2. IPAT – Model and Themes



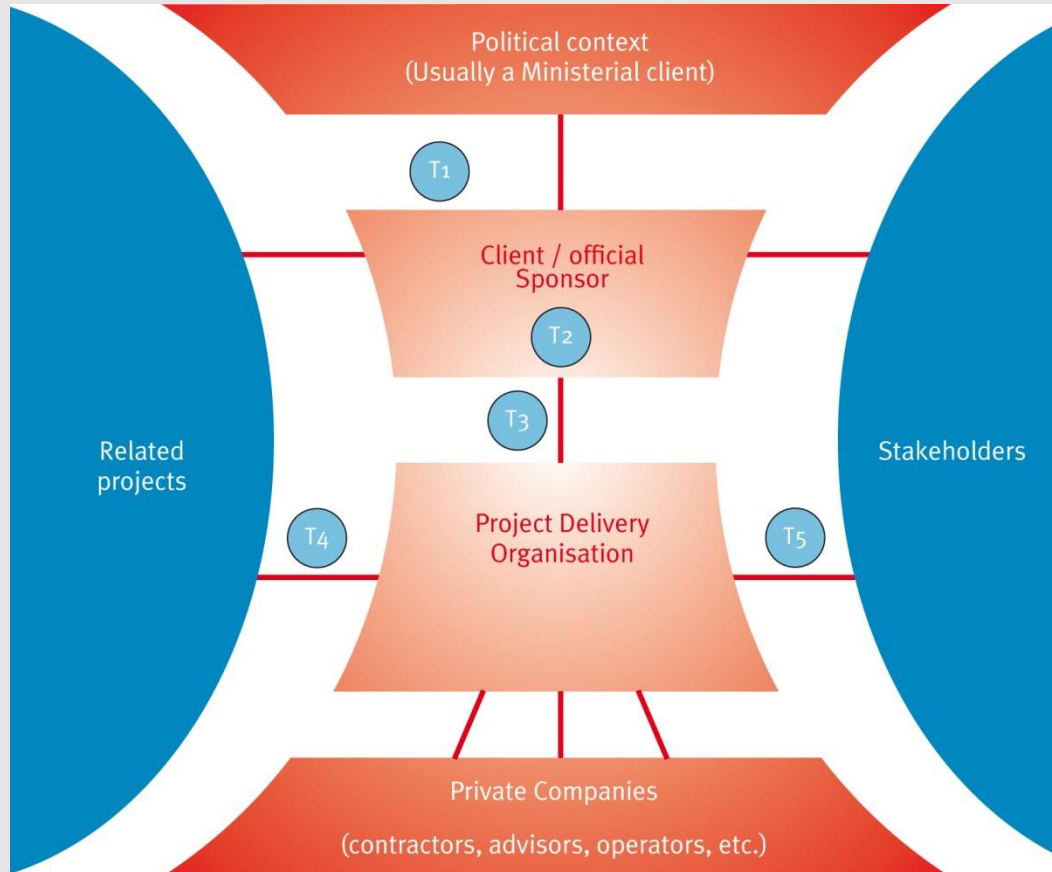
- T1** Political Context
- T2** Objectives, Purpose and Business Case
- T3** Functional Specifications

## 2. IPAT – Model and Themes



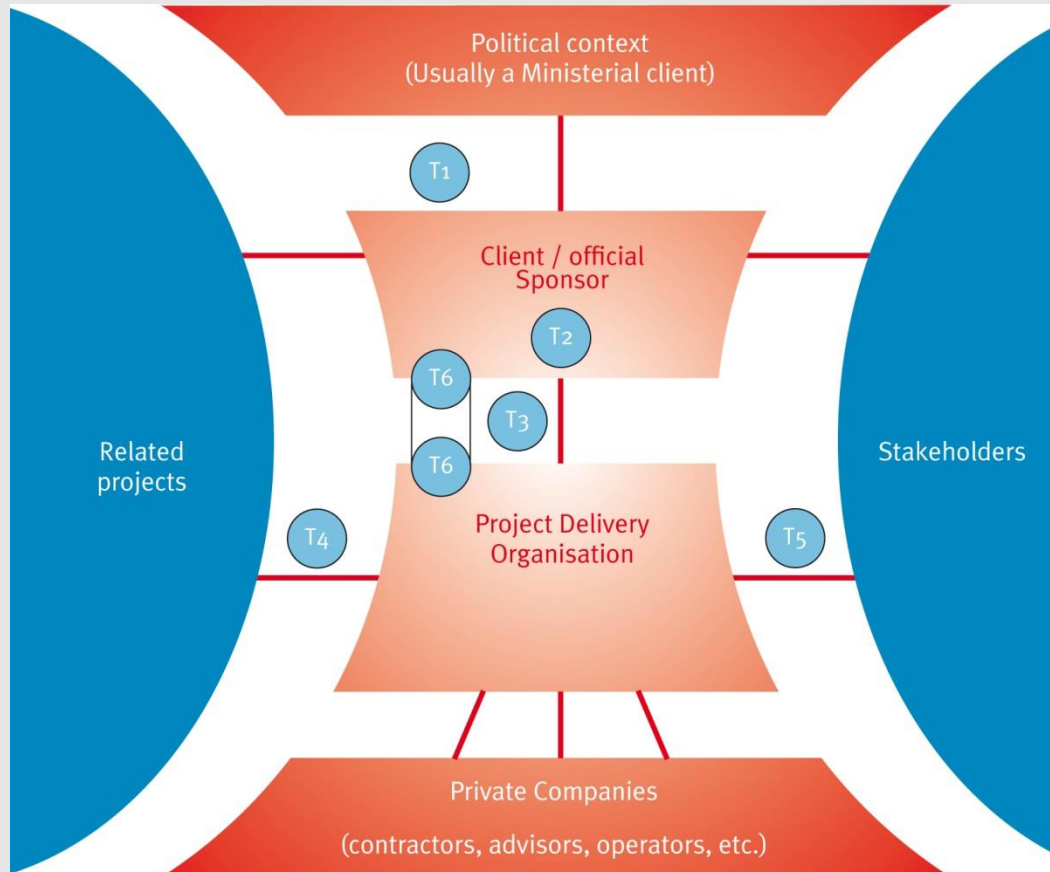
- T1** Political Context
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- T4** Interfaces

## 2. IPAT – Model and Themes



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- T3** Functional Specifications
- T4** Interfaces
- T5** Stakeholder Management

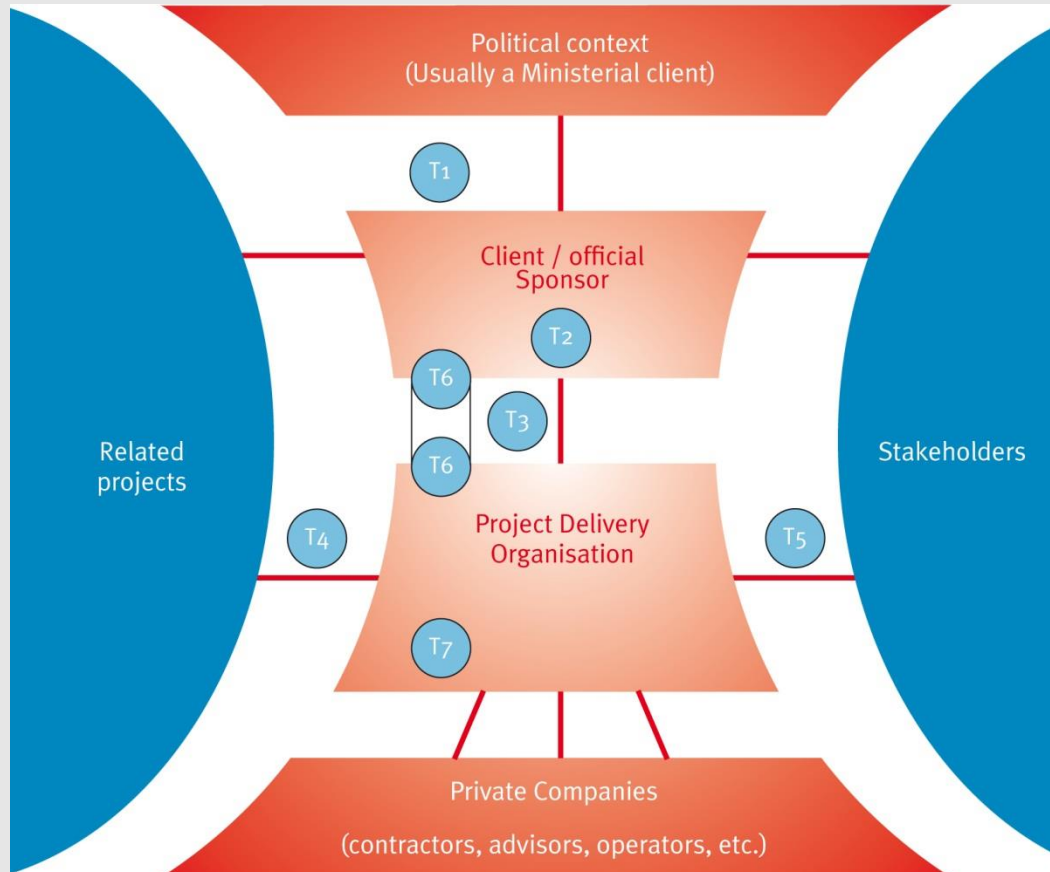
## 2. IPAT – Model and Themes



- T1** Political Context
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- T3** Functional Specifications
- T4** Interfaces
- T5** Stakeholder Management
- T6** Finance

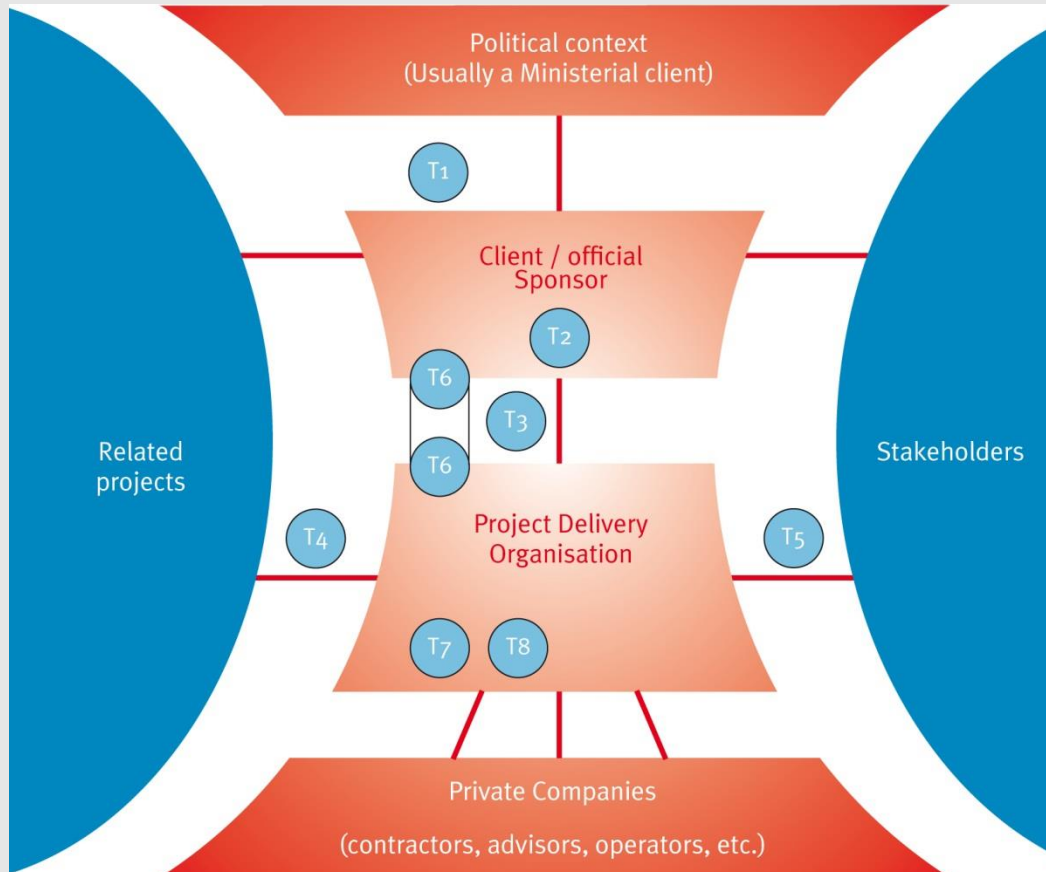


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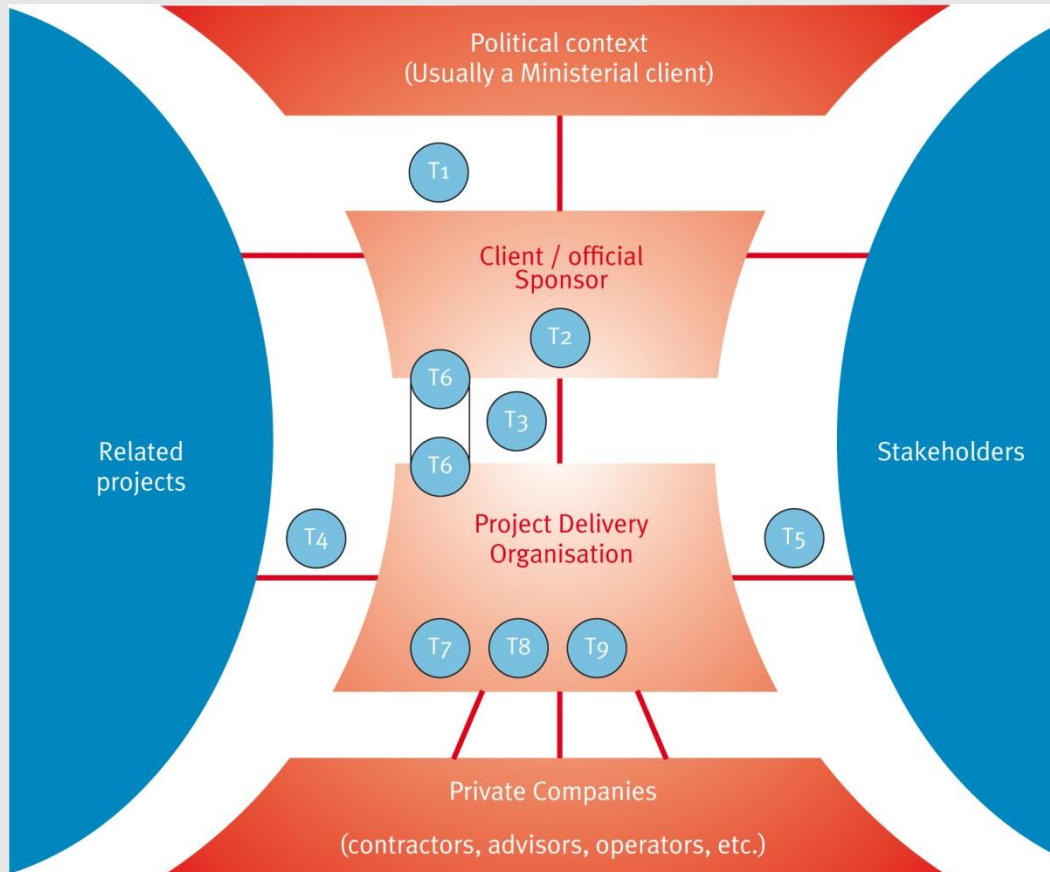
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- T5** Stakeholder Management
- T6** Finance
- T7** Legal procedures

## 2. IPAT – Model and Themes



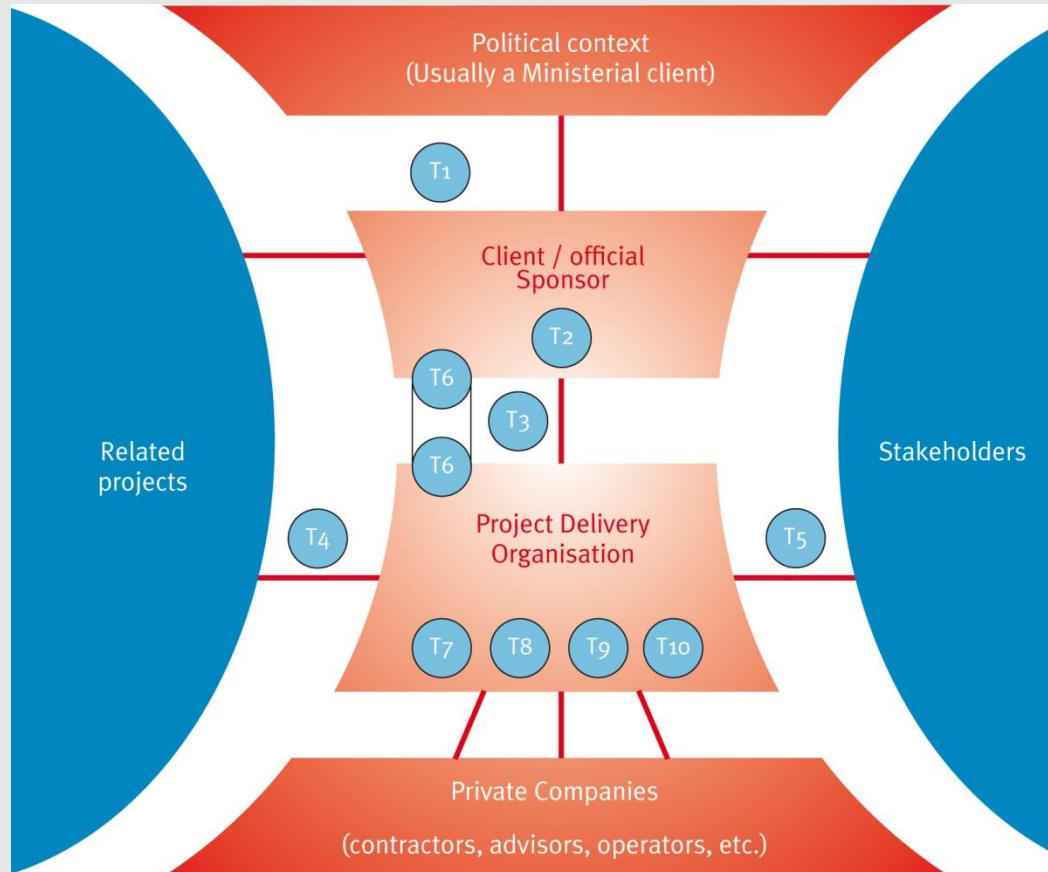
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- T8** Technology

## 2. IPAT – Model and Themes



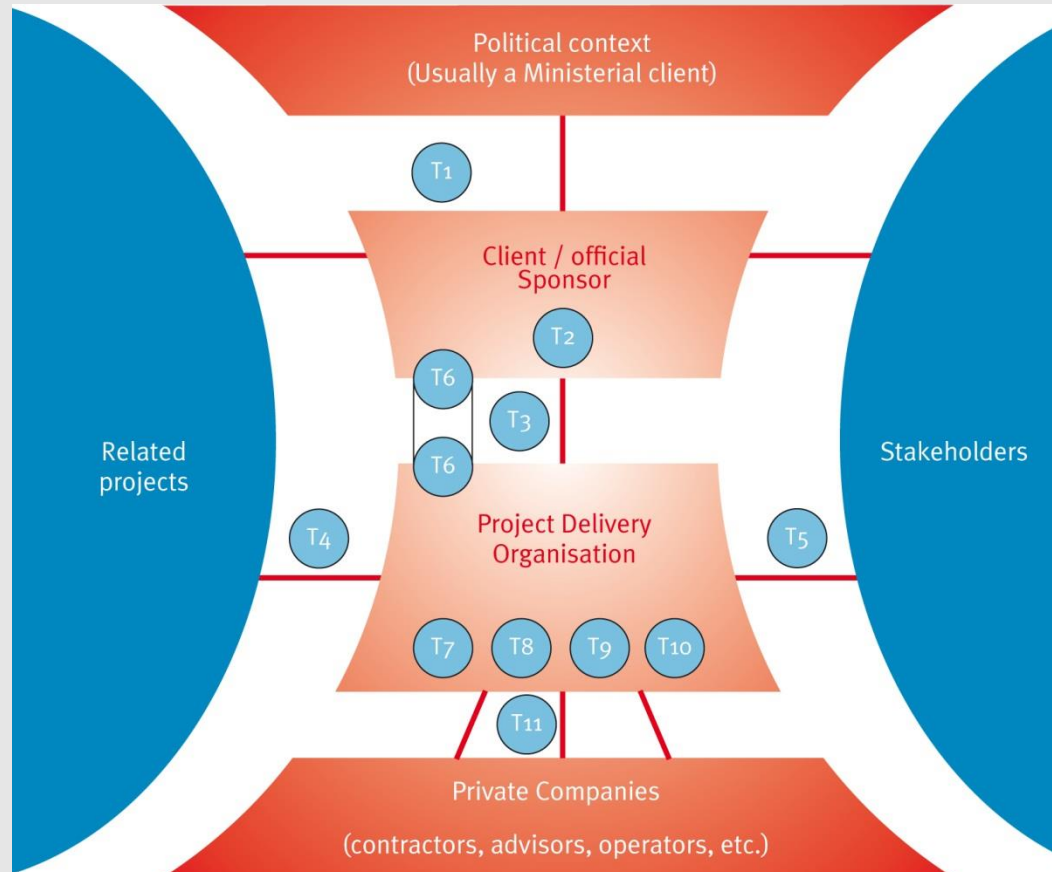
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- T9** Knowledge

## 2. IPAT – Model and Themes



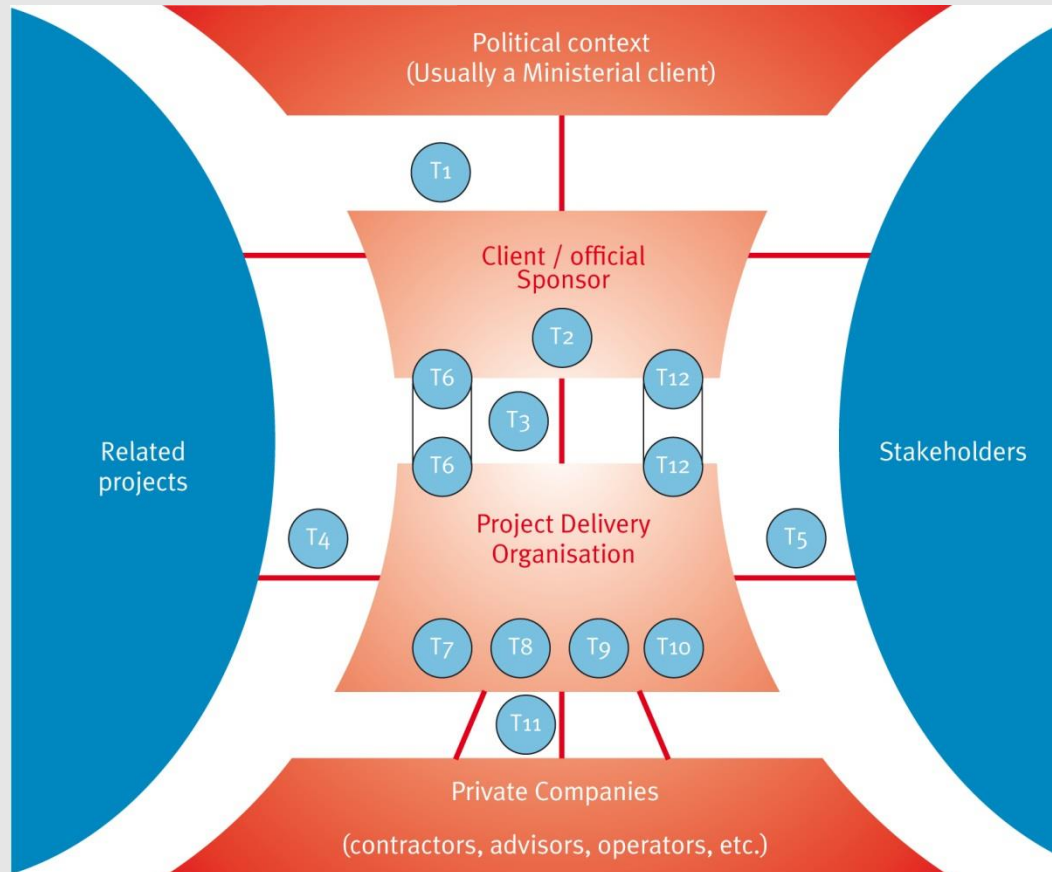
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- T10** Organisation & Management

## 2. IPAT – Model and Themes



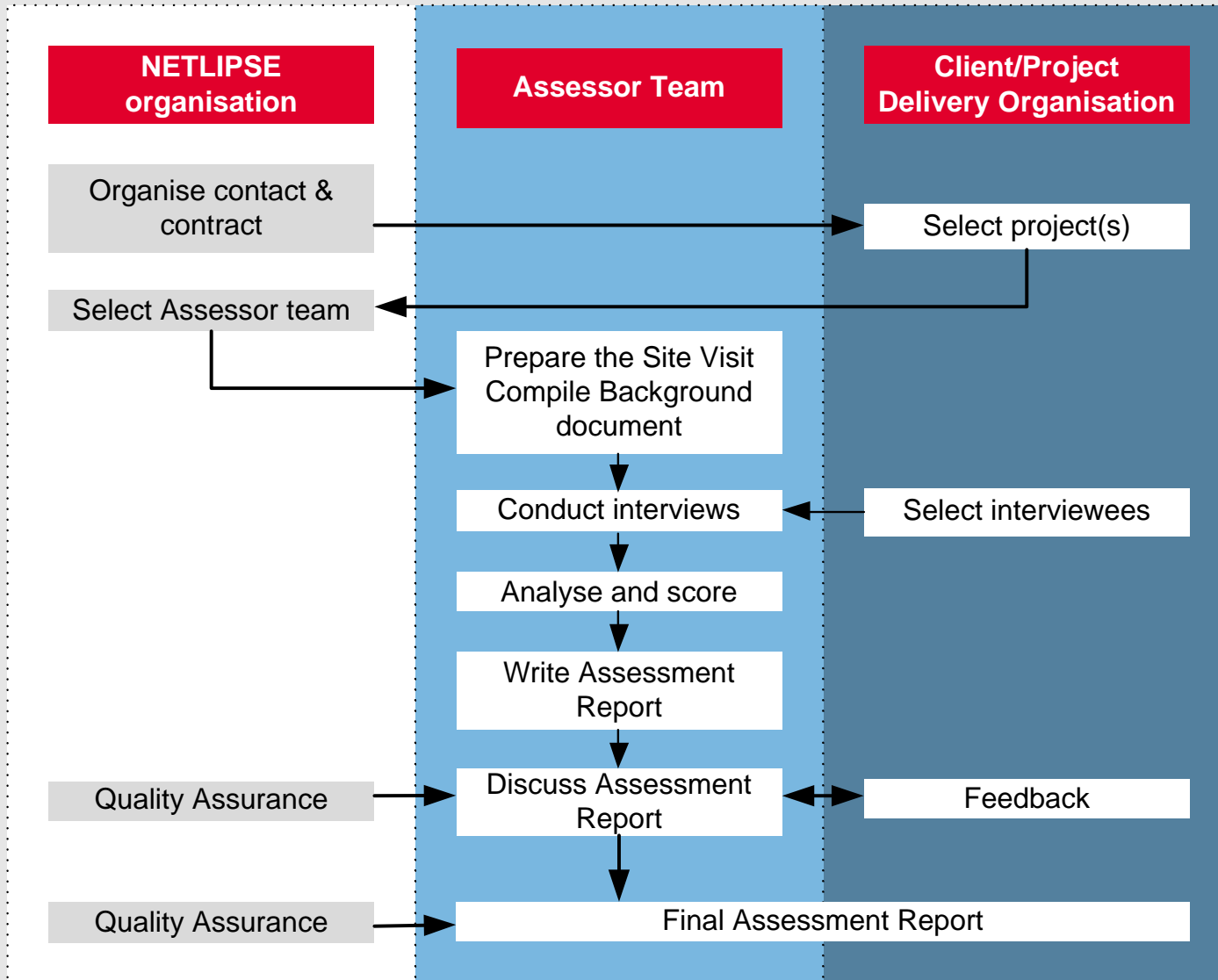
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- T11** Contracting

## 2. IPAT – Model and Themes



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- T8** Technology
- T9** Knowledge
- T10** Organisation & Management
- T11** Contracting
- T12** Risks

# 3. The IPAT-Assessment Process



### 3. IPAT Assessment Process Questionnaire – scoring

- Scored on the level of sub-themes (27) with specific areas to probe and seek evidence

#### Methodology:

- Individual assessors must score each of the sub-themes to reach a score on that level.
- These are then moderated across the group, discussed and a consensus at sub-theme level achieved
  - > Thus a strong reliance on the expert judgment and training of the assessors



# Example Question with open questions on a sub-theme

- To what extent is *stakeholder identification and assessment* being carried out by the Project Delivery Organisation and does it provide sufficient information to be ready to enter the next project phase?
  
- **Guidance Note:** consider the following aspects:
  - stakeholder (including media) identification;
  - stakeholder categorisation;
  - regular updating of stakeholder database;
  - understanding of prioritisation of stakeholders;
  - identification of stakeholder relationships and networks;
  - monitoring of changes in the stakeholder network(s).

### 3. IPAT Assessment Process

## Scoring – Four Point forces thinking

<b>Score</b>	<b>Qualification</b>	<b>This reflects</b>
<b>1</b>	<b>Very negative contribution to a successful project organisation</b>	<b>An immediate need to review and improve</b>
<b>2</b>	<b>Negative contribution to a successful project organisation</b>	<b>An urgent request to improve (weakness)</b>
<b>3</b>	<b>Positive contribution to a successful project organisation</b>	<b>Generally good with areas for improvement</b>
<b>4</b>	<b>Very positive contribution to a successful project organisation</b>	<b>Very good and incorporating best practice</b>

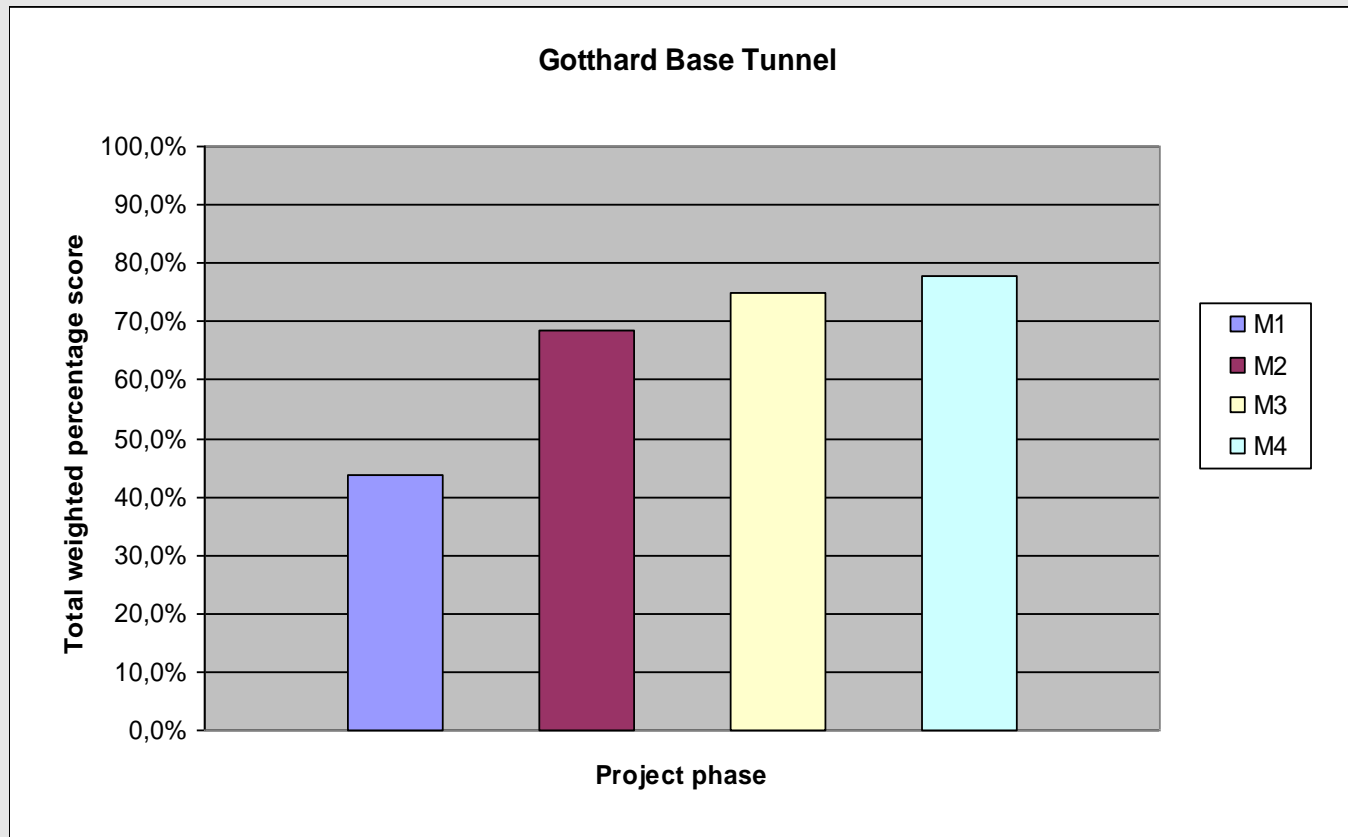
### 3. IPAT Assessment Process

#### Levels of importance

- These are different at different times within a project's lifecycle
- The assessment of the importance by stage depended very much on the experience of the team with the 15 NETLIPSE 1 Pilots
- The methodology:
  1. Determine the levels of importance by dividing 100 points over the 12 themes per phase
  2. Divide the points attributed to a theme over the subthemes within that theme

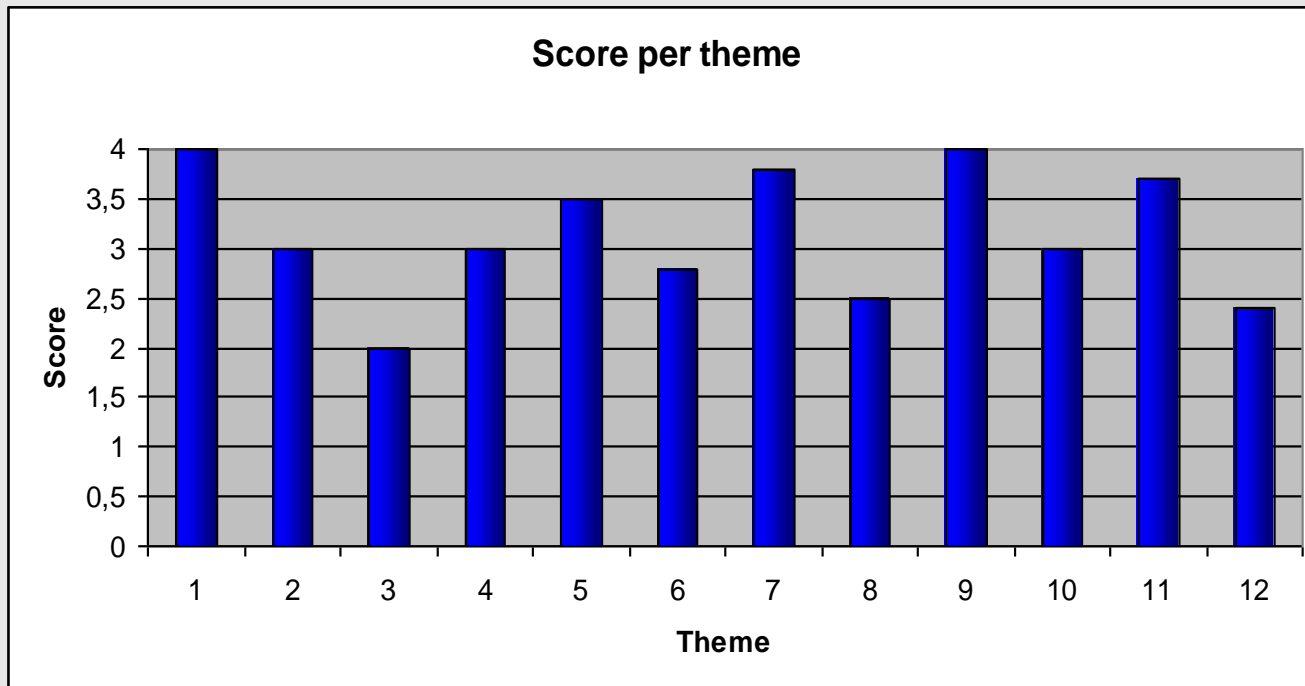
# 4. Interpreting the results:

## a. Graph of Total Score on all Themes

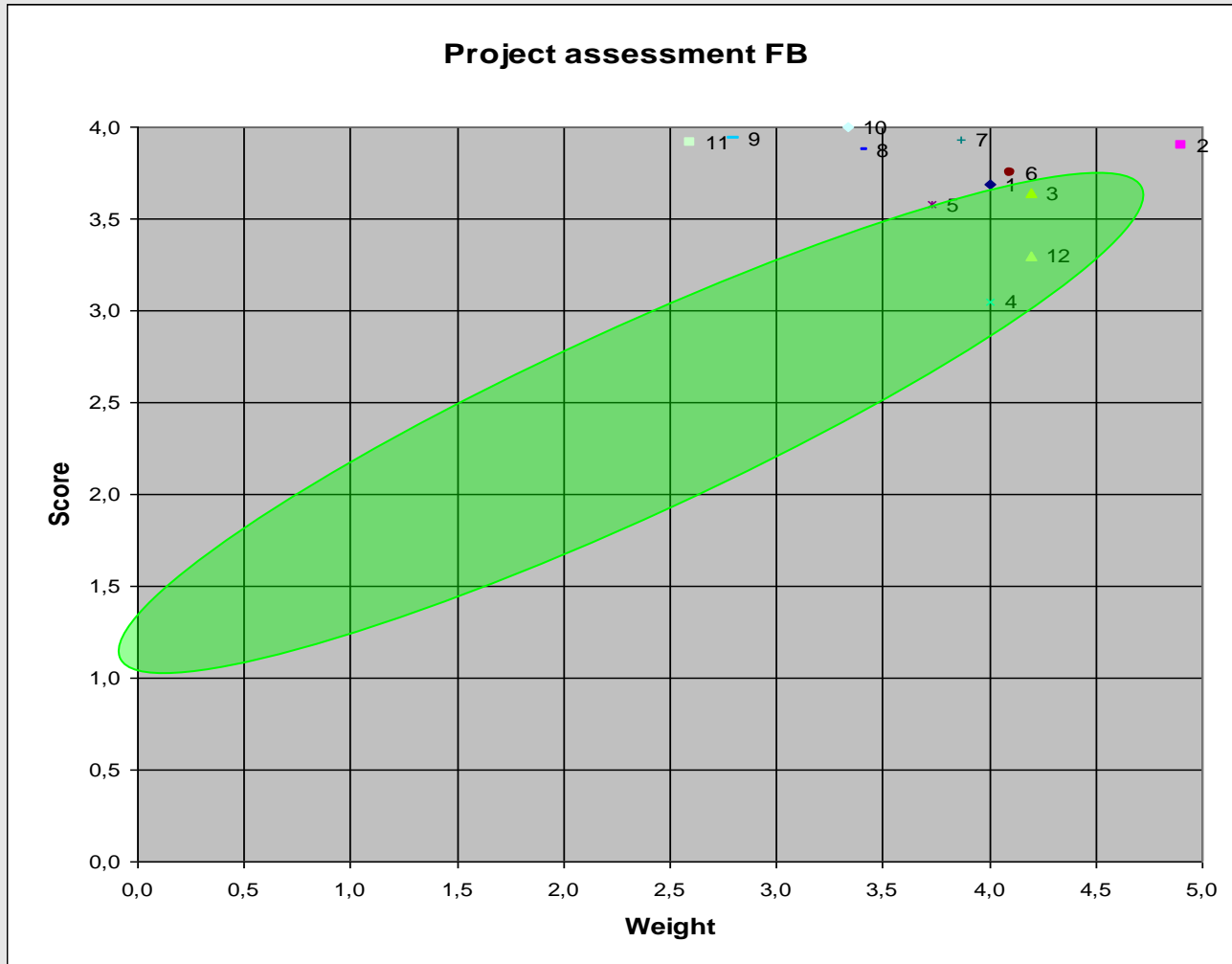


## 4. Interpreting the results: b. Columns by Theme

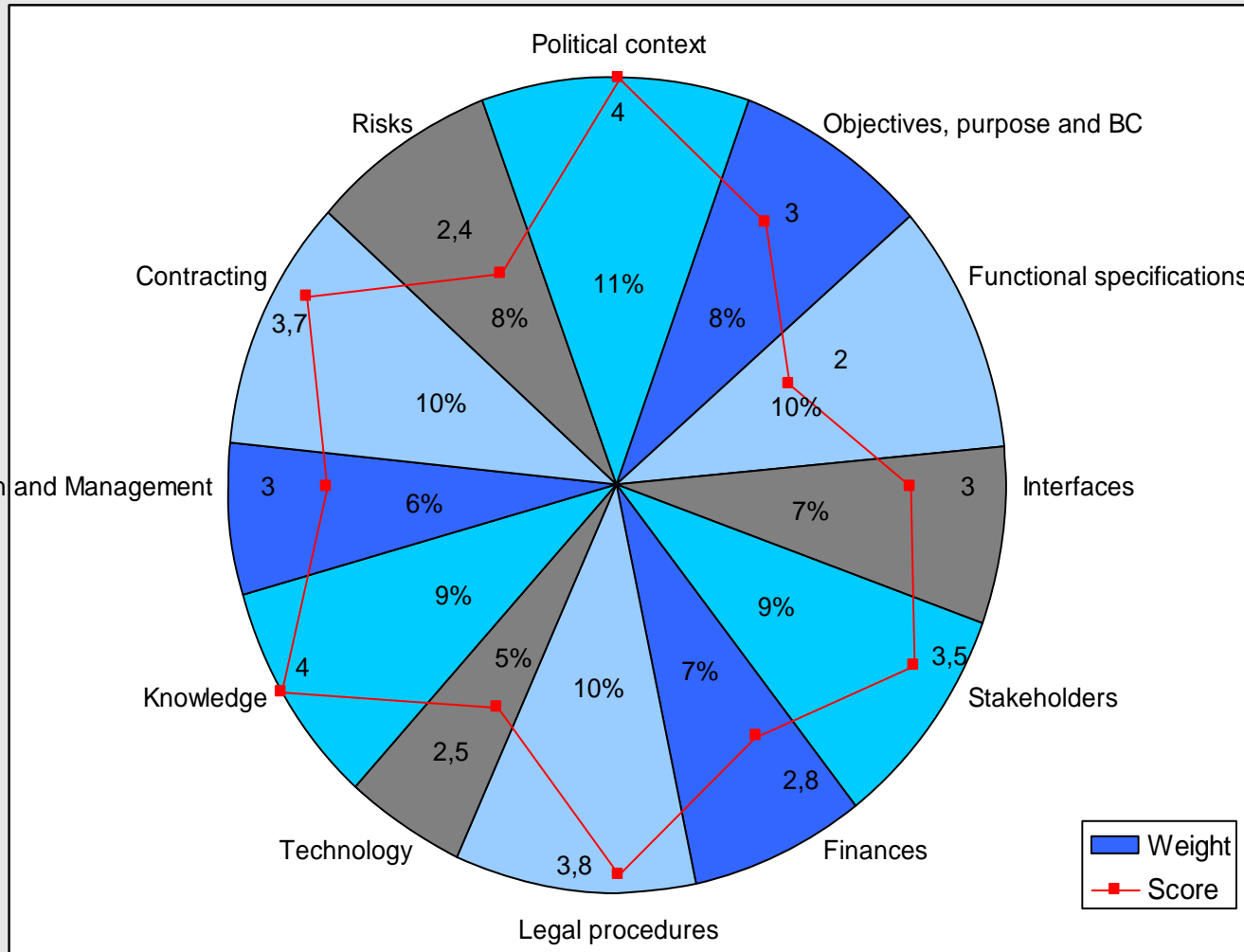
- Shows strong and weak areas at that stage in the project



# 4. Interpreting the results: c. Score matrix



# 4. Interpreting the results: d. Weighted Spider Diagram



## 5. Qualifications of IPAT Assessors

- Qualifications of lead assessors:
  - At least 10 years of practical experience and responsibility within major infrastructure projects
  - Good working knowledge of English
  - Independent from the project to be assessed
  - Successfully passed the IPAT Assessors Training
  
- Other assessors:
  - Significant practical experience and responsibility within infrastructure projects
  - Good working knowledge of English
  - Independent from the project to be assessed
  - Successfully passed the IPAT Assessors Training

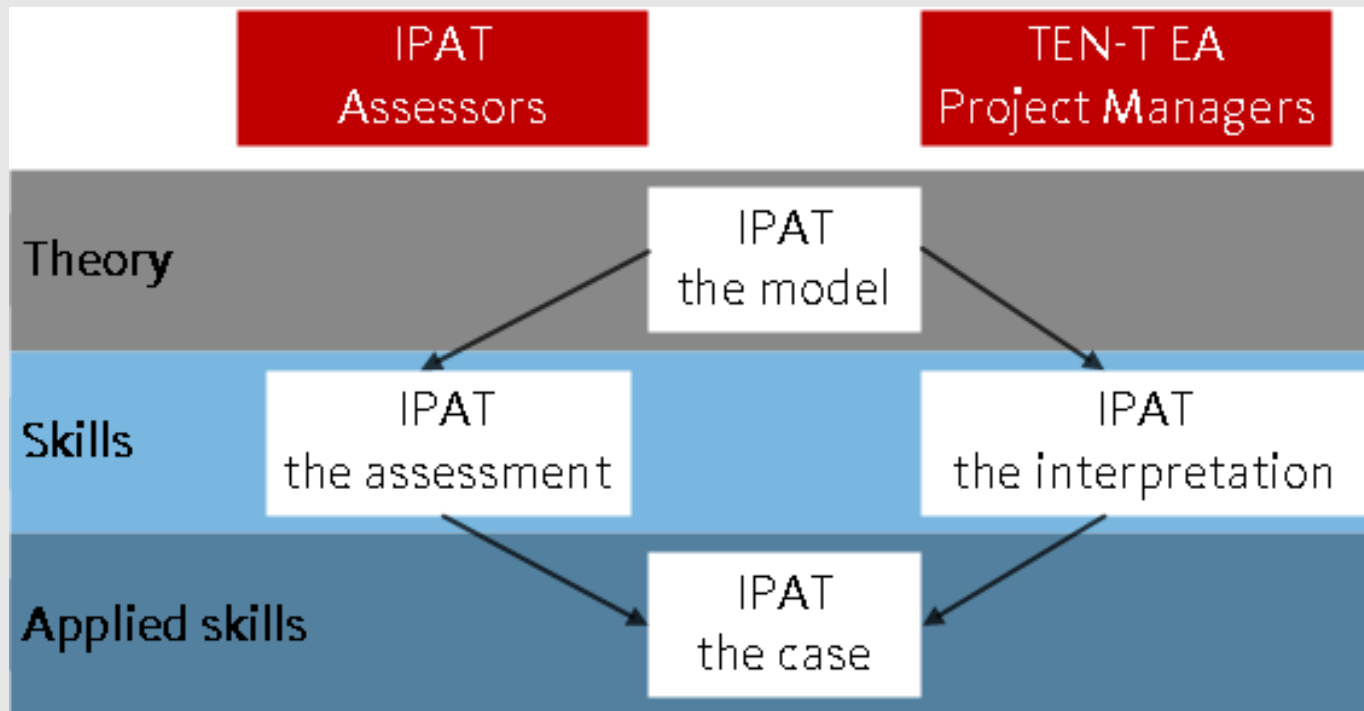


## 6. Composition of an Assessment team

- Set Criteria:
  - 1 lead assessor and 2-3 other qualified assessors;
  - At least 1 of the assessors should have local knowledge and experience;
  - At least 1 of the assessors needs good working knowledge of the native language;
  - A maximum of 1 assessor is involved in an IPAT assessment for the first time.
  
- Practical:
  - 1 of the team members is Secretary, takes care of organising the site visit and is the contact person for the PDO and the NETLIPSE organisation;
  - The assessors team is put together by the management organisation (NETLIPSE) by selecting people from a shortlist of assessors and a pool of lead assessors, taking into account specific skills and experience.

# 7. IPAT Assessors Course

- 2-day course (morning, afternoon, evening and next morning)
- Syllabus for the training programme completed



## 8. IPAT Pilot projects

- Pilot assessment projects completed:
  - West Coast Main Line (as failed under Railtrack)
  - West Coast Main (as assessed in NETLIPSE 1)
  - Gotthard Base Tunnel (four different stages)
  - Fehmarn Baelte
  - Koper-Ljubljane

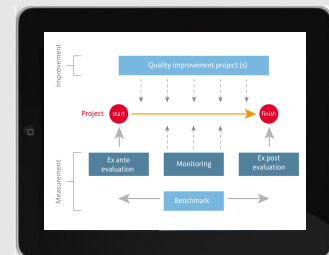
It was important that these were at different stages to understand the calibration of the IPAT. It was also helpful to select a project which had failed.

- IPAT Assessment arranged November 2013:
  - Slovak D3 New Road Svrčinovec – Skalité

# 9. Use and Value of IPAT – 1

## Sustaining High Quality

- The quality of the IPAT-assessment results relies on the openness and depth of information to be provided by the Project Delivery Organisation, the Client and, to some extent, by the Stakeholders
- The quality of the IPAT tool going forward relies on:
  1. The skill of the assessors in probing interviewees;
  2. The level of expertise and experience of the assessors;
  3. The approval of (draft) assessment reports by NETLIPSE Scientific and Quality Board to sustain common scoring and quality of IPAT use.



# 9. Use and Value of IPAT - 2

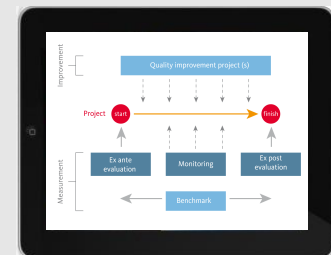
## Assessment of Deliverability

### 1. Ex ante:

- to check there is clarity on purpose and scope and to assess and validate the likely duration and cost of a new project or programme;  
*This would help the EC to judge if a proposed project should be financed (if it fits other set criteria)*
- to compare projects at a selection process (in the event of inadequate total funding one could support those most likely to succeed).

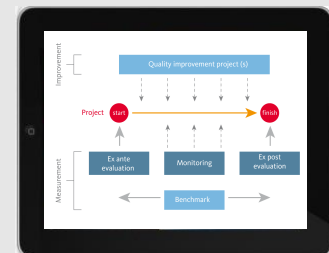
### 2. Monitoring:

- to monitor the progress of financed projects and predict timing of grant spend and delivery;
- as part of a special project investigation by the EC or governments in the event of problems.



## 9. Use and Value of IPAT - 3 For Project Improvement

3. To improve projects in execution:
  - to compare and benchmark the performance of the project organisation and processes against the performance of other LIPs;
  - sharing best practise through the wide experience of the assessors – pointers to improve projects or project areas.
  
4. Ex post:
  - to evaluate projects to learn as project organisation;
  - to evaluate projects to learn as the Commission.



# Questions?

- For further information on NETLIPSE, visit [www.netlipse.eu](http://www.netlipse.eu)

- Or pick up a NETLIPSE or IPAT brochure



- Or join us at our next Network Meeting:  
November 18-19<sup>th</sup> 2013 in Bratislava  
Hosted by the Slovak Republic Ministry of  
Transport, Construction and Regional  
Development

