Discussion Paper

The Dutch HSL PPP contract

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PPP contracts require us to consider what we want to achieve not what we want to build – The Infrastructure Provider contract for the HSL was for delivery of a service

Setting up PPP contracts challenge traditional concepts of project specification

- Value-For-Money (VFM) objectives are the cornerstone of PPP policies and optimal risk allocation is the critical path to achieving VFM

- Risks are not eliminated in PPP contract structures – they are merely moved along the supply chain to those best able to mitigate the risk

- A PPP remains a contract for delivery so just because the contractor wears a tie does not mean he is not wearing a pair of muddy boots.

Thalys test train on HSL Rotterdam-Belgium section (achieved speed of 332 kph)

Today we would like to look back through 5 years of implementation and see if what we set up 5 years ago is actually delivering.

The decision to proceed with a PPP for the IP contract started with budget constraints but ultimately was driven by service delivery and manageability

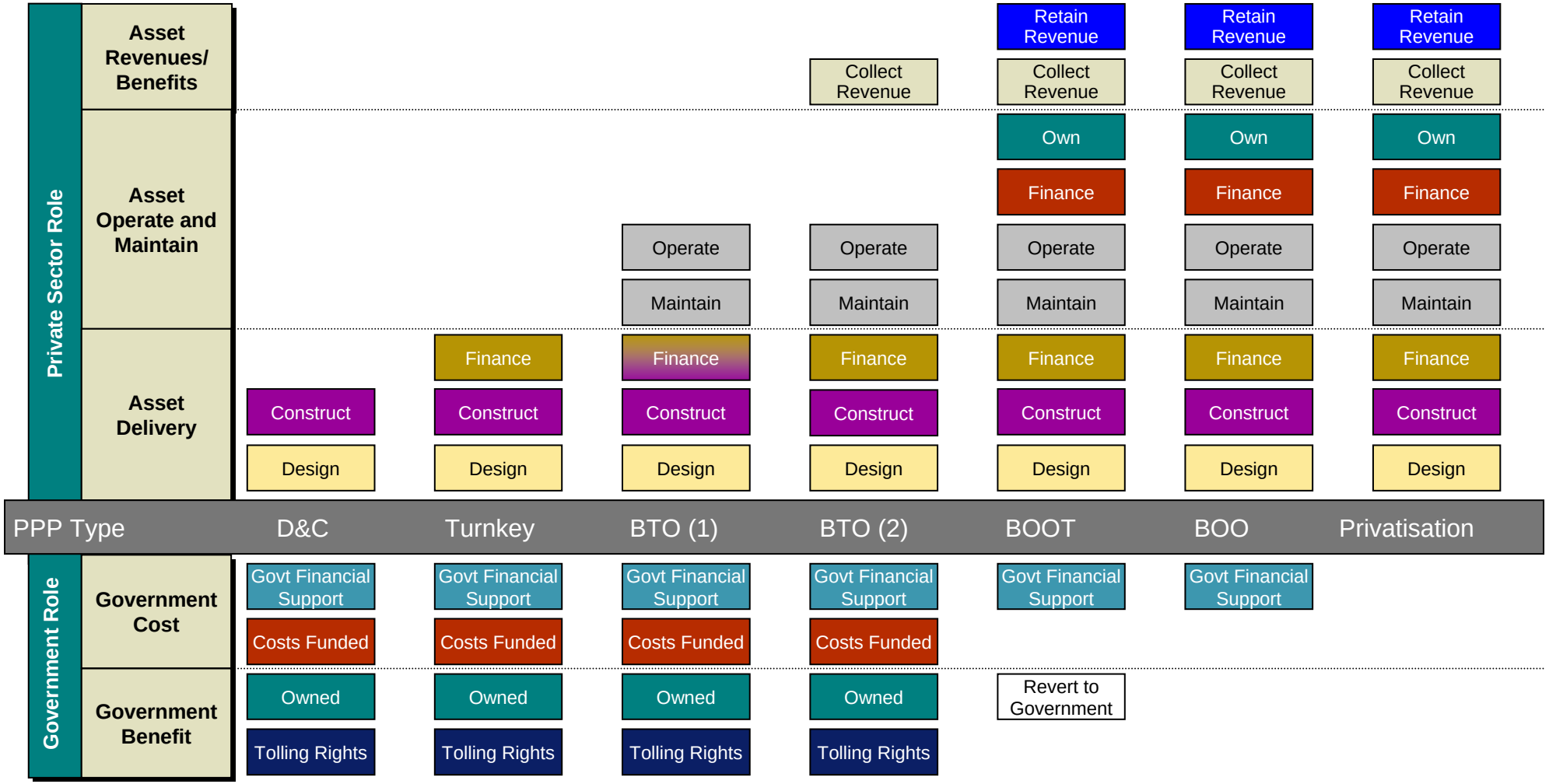
Traditional Design & Construct

- Focus to deliver project on time and on budget
- Potential antagonistic relationship between Public and Private sectors
- High level of system integration risk for Government
- Maintenance and service of project often only considered as an after thought
- Project typically procured in stages, with separate bid and award processes causing delay and loss of continuity between stages
- Likely project 'life cycle' costs will be more than original estimates, and take longer to complete
- Payment to private sector based on delivery of specified design

Service Delivery

- Focus on delivery of a Service – the infrastructure is a vehicle to achieve service
- Asset is designed to balance initial and ongoing project life cycle costs
- Preventive maintenance conducted to reduce overall ongoing costs
- Contractual structure usually includes Design, Build, Finance and Operate/Maintain
- Payment to private sector based on performance against contractually committed service levels, with incentive regimes to reward success and penalize underperformance

There are many different models that can be described under the title of PPP



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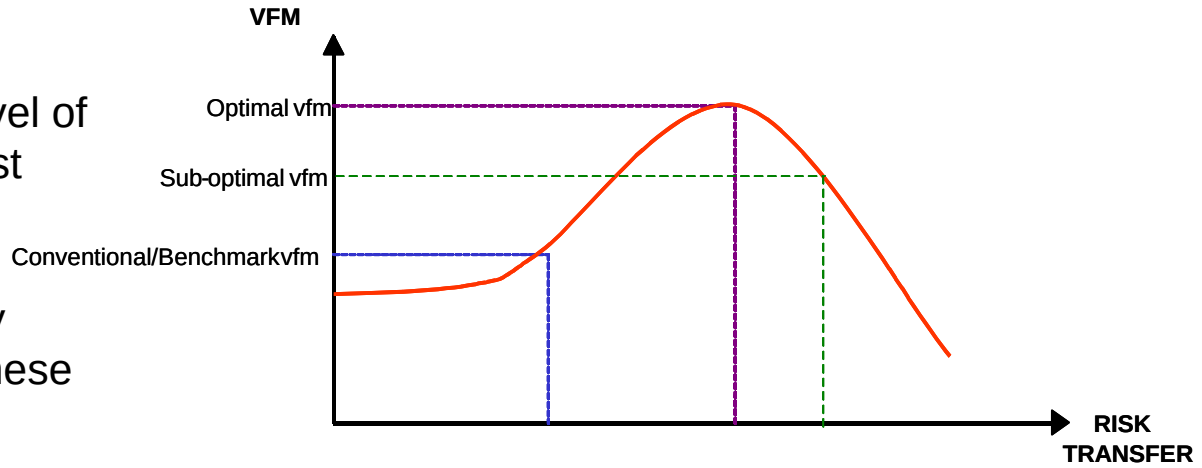
Value-For-Money (VFM) objectives lead to optimal risk transfer, the cornerstone of PPP's

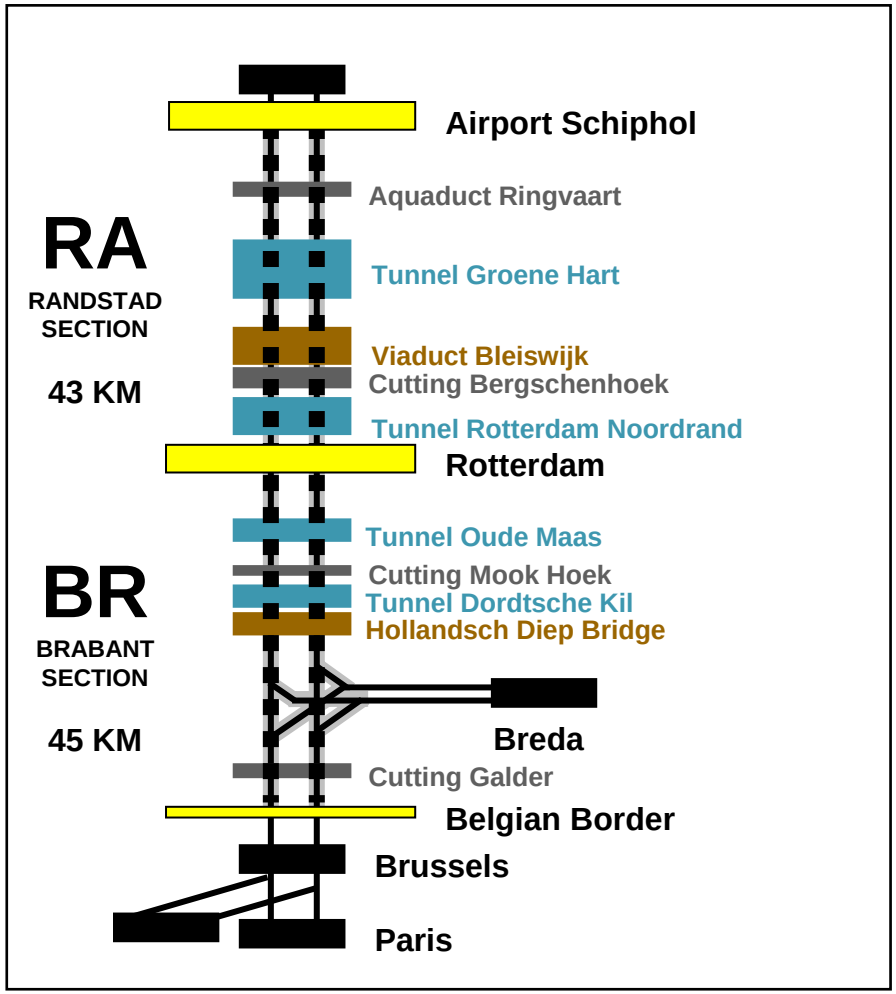
- VFM is attained when an optimal level of risk transfer is achieved at the lowest cost
- The private sector cannot effectively managed some risks – transfer of these risks would not improve VFM



- Value of risk transferred from Government to the private sector needs to include:
  - Assessment of the likelihood of a particular risk occurring;
  - Extent to which that risk constitutes an exposure; and
  - Premium that needs to be paid to a third party to divest that risk.
- Optimization of risk sharing requires flexibility in procurement procedures and contractual arrangements.

Risks are not eliminated in PPP's – they are merely moved along the supply chain to those best able to mitigate the risk

The HSL Transportation System covers two “pipes” Rotterdam - Amsterdam and Amsterdam Belgium. For a flat land there are a remarkable number of civil structures required.



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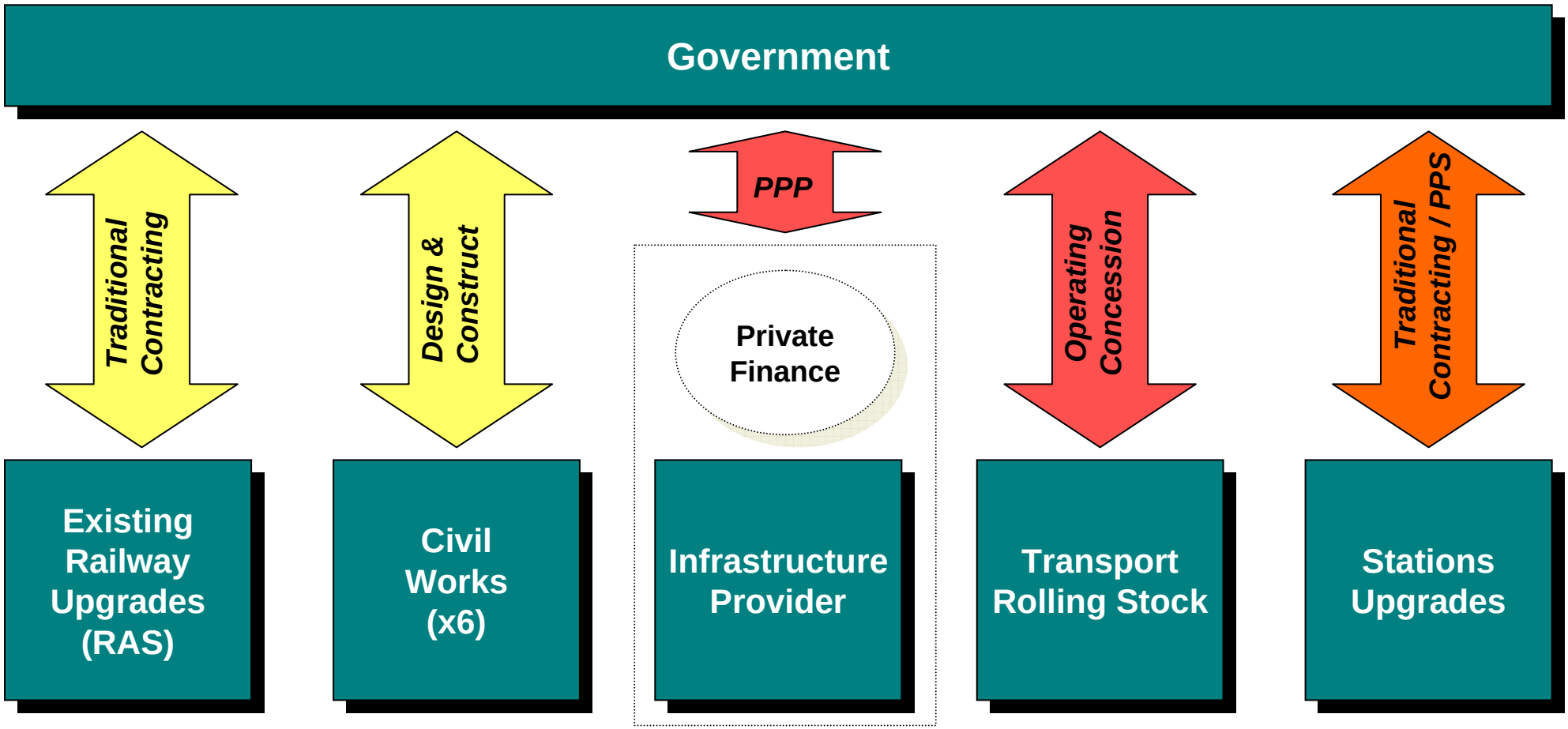
The view of the contracting structure including the position of the State shows a fundamental exposure

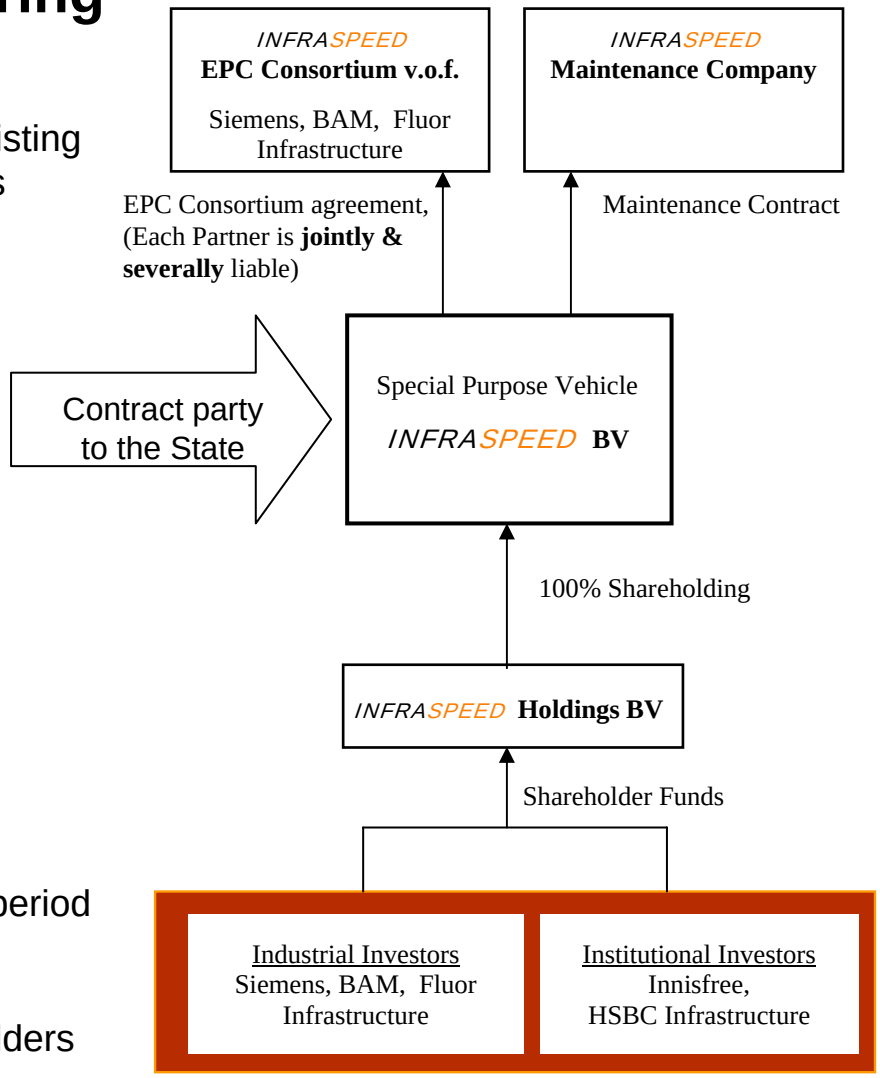


The Infrastructure Provider for HSL is a DBFM contract. Understanding a few key elements of the contract allows for a clear understanding of the rights and obligations

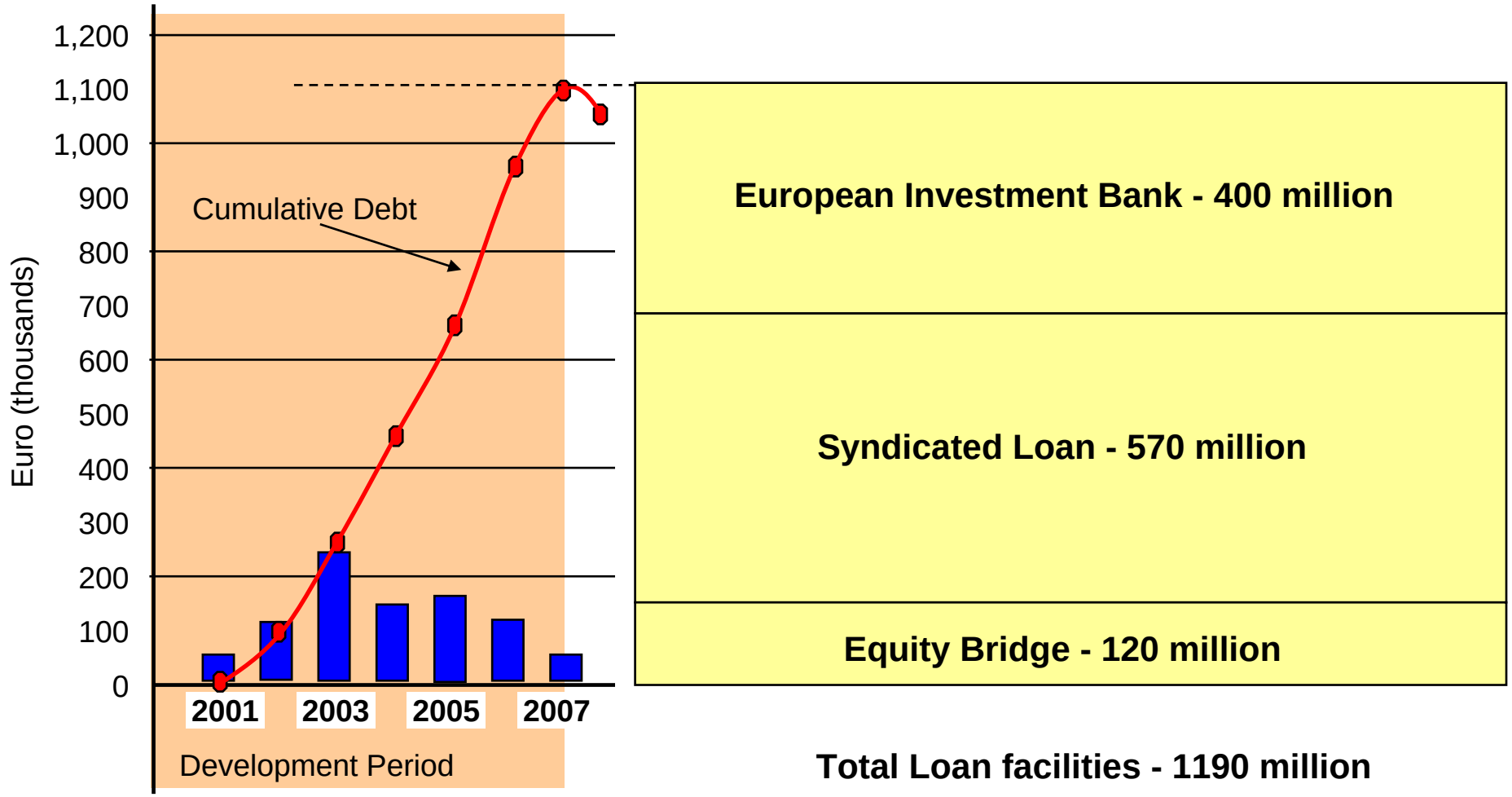
- The Contract is for the provision of a service, not hardware
  - The State is buying availability for 25 years
  - Assets become the property of the State as a function of Dutch Law and commercial arrangements
- All Risks are for the Infrastructure Provider unless otherwise stated
  - Negotiations focused heavily on the definition of Non Attributable events, Delay events and Compensation Events
  - No gaps through lack of detailed specification.
- The Infrastructure Provider is to finance the construction and will not begin to be paid until he delivers Availability to the State
  - Compliance to the Requirements is needed to start the cash
  - The amount of cash is dependent on the Availability provided
- Tender baseline and changes are still very relevant
  - Design Hold Date, agreements and Consents

The contractor adopted a conventional SPV approach with extensive risk sharing along the corporate line

- The EPC consortium is a VoF (vennootschap onder firma) consisting of Fluor Infrastructure BV, Koninklijk BAM NBM nv and Siemens Nederland N.V.
- Infraspeed BV is 100% owned by Infraspeed Holdings BV
- Infraspeed Holdings BV is owned by:
  - Industrial Shareholders **51%**
    - BAM Group 21.5%
    - Fluor Infrastructure 7.1%
    - Siemens 22.4%
  - Institutional Investors **49%**
    - HSBC Infrastructure 24.5%
    - Innisfree 24.5%
- The State requires Industrial shareholders to be locked in for a period of 3 years after the Original ATD (par 6.1.11, Schedule 3)
- The banks restricts redemption of share capital, lock in shareholders and require the ongoing existence of Infraspeed Holdings BV.



Cumulative construction and interest costs during the construction phase results in the financiers being extremely exposed prior to the commencement of State Availability payments



The structure of the contracting packages was primarily driven by the time and complexity of the structures, a clear decision was made for a horizontal spilt even with the associated risk.

Issue	Key drivers	Result
Allocation of scope between civil contracts and the IP	▸ Quality of the ground required specialist (local) knowledge. Foreign companies not comfortable with the risk ▸ Size of packages kept to reasonable size with clear differentiation of disciplines (tunnels, bridges)	▸ Problems with the Civil contracts and structures, question on efficiency of market and consequent concessions on T&Cs ▸ Original plan for over 80 contracts reduced to 5
Type of Civil contracts	▸ Desire for innovation but the design had already been done ▸ Not enough time to redo the civils specifications – Treaty with Belgium	▸ The DB structures did not provide room for the “D”. DB was implemented at “last minute” ▸ Lack of contract pedigree opened risk exposure of the State
Interface obligations	▸ Provide obligation for the contractors to assist each other in the interface management	▸ T&C were inconsistent between contracts, leaving State at risk ▸ Timing of contracts clashed on delivery

The IP scope and risk began as a clear allocation but very quickly became complicated. The Sea and Islands philosophy has proven remarkably robust

Issue	Key drivers	Result
All risks for the IP unless otherwise noted	▸ Burden of proof transferred to the contractor, with exception to remain with the State	▸ State interference clawed back risks, need to keep a close eye on the engineers ▸ Continually challenged by the contractor but remained intact, The philosophy was critical in building defences.
Scope defined as a supply with IP to do what was necessary to deliver	▸ Risk of delivery to be with contractor “The IP shall make available HSL infrastructure”	▸ Remarkably successful as one of the fundamental truths of the contract
Interface obligations	▸ Obligation to interface to remain with the party who was doing the work.	▸ Contractor backed away from all interface interaction, and the State stepped in. Risk passed back to the State. ▸ Some risk transfer did not work (ProRail and Belgium interface)

Troubles also arose with a break in the connection to the real world of railway operations - when was the last time the anyone spoke with the operators?

Issue	Key drivers	Result
Operating procedures	▸ Design of the systems should compliment the method of operation	▸ Lack of operating procedures invariably required that they be written to reflect the equipment design
Safety case and Systems Engineering	▸ A structured top down approach was required to demonstrate compliance with TSIs and deliver a safety case	▸ Worked as a contract tool very well, although serious expectation gap between contractor and State has been the source of constant pain
Non Attributable Events	▸ Define those events for which non availability would not be penalised, hence State risk	▸ Definitions have stood the test of time, however several challenges were encountered with construction staff acting in ways that could have diluted their effectiveness. This required constant attention
External operations	▸ Identify how the railway was to interact with its environment (e.g. flood doors and the waterschapen)	▸ Lack of clarity up front from interfacing parties ahs resulted in risk coming back to the State with associated cost. Ned to have clear definitions resolved earlier

The scope of the train operator played a key role in identification of the scope of the IP and required functionality

Issue	Key drivers	Result
Hot Box detection	▸ Required by TSI to be onboard but concessions are possible	▸ Defined as onboard in the IP contract, then someone gave a concession
Civil specifications should support operator requirements	▸ The quality of the infrastructure as promised in the transport concession should be supported by the civil and systems construction	▸ A break in technical specification of the substructure with the requirements resulted in state capturing additional risk (e.g. ride comfort)
Tunnel cross sections	▸ Tunnel cross section should support speed profile of the line (pressure wave)	▸ IP raised the track height and did not want the pressure risk ▸ State reduced a cross section to save cash and inadvertently extended the journey time
Performance	▸ Deliver a railway that would allow the desired performance to be achieved	▸ Not a universally accepted language, nor one that was understood. Great success in certain aspects

There were good arrangements in place, however even with the best of intentions gaps developed which required significant amount of attention to close – and integration - and culture

Issue	Key drivers	Result
Indexation	▸ A simple and responsible mechanism to index costs and penalties	▸ Drafting error in the contract resulted in an exposure of the State in order of 400 million Euro, took time to repair
Performance payments	▸ Performance regime to incentise delivery of the service	▸ Regime quickly became complex but proved very effective in driving contractor design decisions (ERTMS L1)
Systems Integration	▸ All projects to be aligned to provide a coherent approach to delivery of a transportation system	▸ Integration across contracts was complicated by the timing and management structure surrounding the project, lack of co-ordination did result in some additional costs with some scope between the cracks
Culture	▸ The contract managers are Dutch, the contractor is American	▸ The Dutch are always willing to talk about a problem. If the client is willing to talk, an American thinks he has a chance of getting his claim paid.

Despite these examples, the contract structures and risk allocation at HSL have proven to work well and the PPP has been successful at focusing on the delivery of the service,

- The overall experience has been positive with the PPP contract holding up remarkably well. Cost escalation on the IP contract is expected to be in the order of 10% for the EPC value
- The blend of Functional Specifications and the Performance Regime has kept the contractors focused. Scope definition in high level service requirements reduced the number of scope claims. It was a struggle to keep the engineers under control.
- The clear and simple contract philosophy on the IP contract made it possible to win many claims
- The full impact of “concessions” needed to be better understood – The desire of some to “do a deal” was sometimes out of balance with the overall systems objectives. Systems integration is critical
- Decisions on risk/scope tradeoffs should be taken in the view of the whole project. There is no place for tunnel vision
- Operations are the final product and need to be involved at the earliest stage. Similarly the definition of safety concepts should be made clear, well communicated and adhered to thought out the project
- The management organisation should learn to keep its hands off – design freedom means freedom to design.
- Keep a central view on the money, the risk, the scope and the performance, then you have control

A successful risk allocation and scope definition within a contract structure covering multiple projects needs a vision on the ultimate objectives, not just pockets of excellence

The presentor today...

John Boss

Background:

- John has been working with the HSL project since 1998. He was responsible for development of the functional specifications and the performance regime as well as its calibration. He has played a key role in the contract management organisation bringing the IP contract to Financial Close and through to system availability.
- John works for Booz Allen Hamilton and has been delivering infrastructure projects for over 25 years. He has also worked on Copenhagen Metro, Hong Kong airport railway and Parramatta Rail link to mention a few

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