

Alliancing in Finnish Transport Agency, Finland

Pekka Petäjäniemi, Director, Finnish Transport Agency

Prosjekt 2017, Oslo 8.11.2017

Finnish Transport Agency - Infrastructure* provides a platform for growth



€ Infrastructure
assets

19,5 billion €



€ Current spending on
on-going projects

2.9 billion €



€ FTA's share of the total
infrastructure market

1/4

***Roads, Railways & Fairways**

€ Annual budget
approximately

2,1 billion €

FTA personnel

650
experts

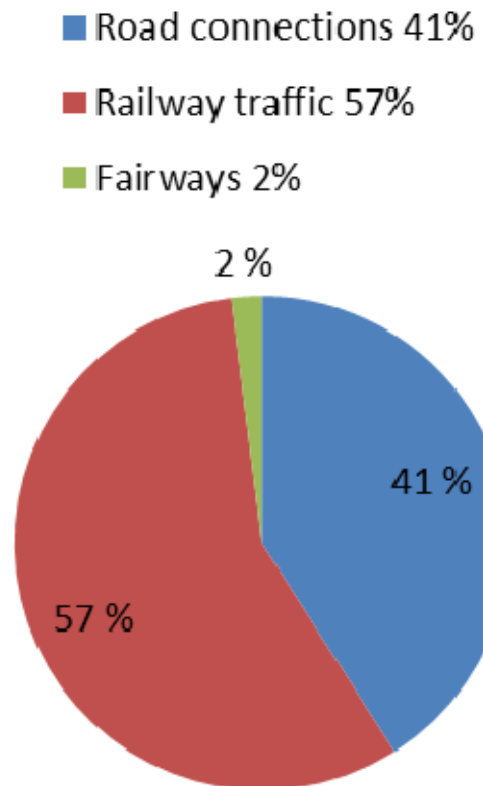
Number of people the
FTA employs indirectly
through projects

12,000

Major Projects in Finland 2017

- In 2017 about 600 Million euros will spent on large investment projects
- Current projects of the Projects Division amount to about 2,6 Billion euros.
- 30 projects underway, of which
 - 20 road connection projects
 - 8 railway traffic projects
 - 2 fairway projects
- An additional 4 projects in the preparation phase
- A total of 26 project managers are working in the Major Projects Division.

**Financing for development investments
per type of transport infrastructure (2017)**



Current major projects

ROAD PROJECTS

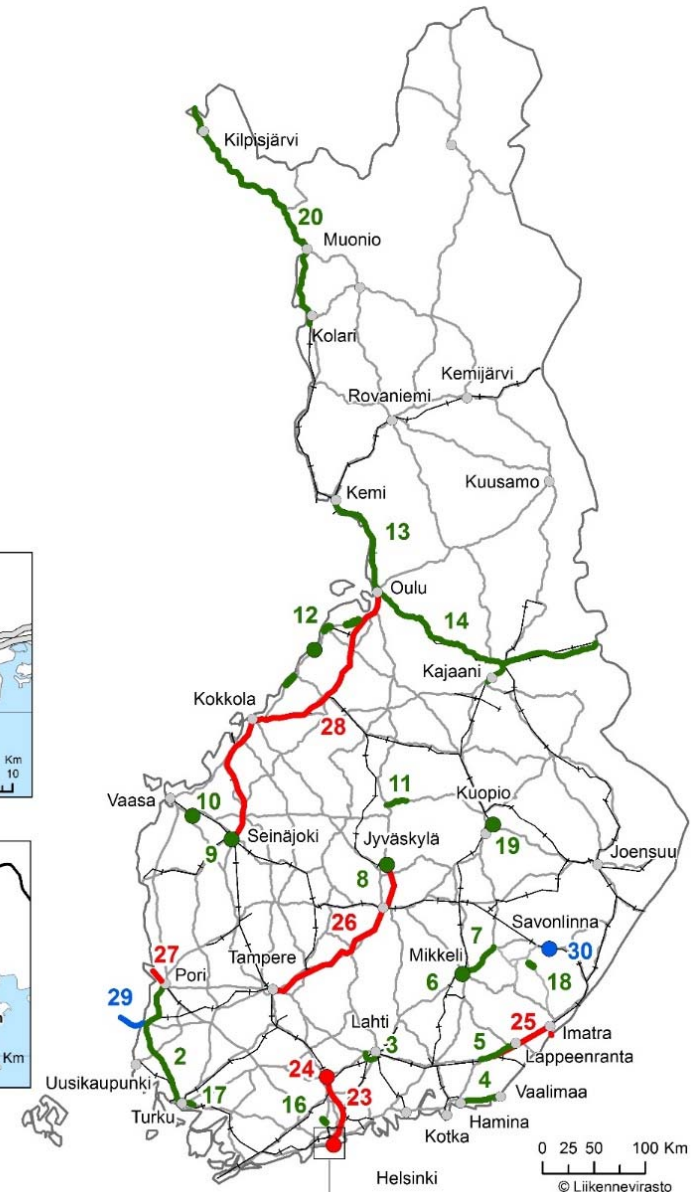
- 1 Mt 101, Kehä I parantaminen
- 2 Vt 8 Turku-Pori
- 3 Vt 12 Lahden eteläinen kehätie
- 4 E 18 Hamina-Vaalimaa (PPP-hanke)
- 5 Vt 6 Taavetti-Lappeenranta
- 6 Vt 5 Mikkelin kohta
- 7 Vt 5 Mikkeli-Juva
- 8 Äänekosken biotuotetehtaan liikenneyhteydet
- 9 Vt 19 Seinäjoen itäinen ohikulkutie
- 10 Vt 3 Tampere-Vaasa, Laihia kohta 1. vaihe
- 11 Kt 77 Viitasaari-Keitele
- 12 Vt 8 Pyhäjoen ydinvoimalan tieinvestoinnit
- 13 Vt 4 Oulu-Kemi
- 14 Vt 22 Oulu-Kajaani-Vartius
- 15 Vt 1 Kirkkojärvi
- 16 Mt 132 Klaukkalan ohikulku
- 17 E18 Turun kehätie
- 18 Mt 438 Vekaransalmen lossi
- 19 Vt 9 Jännevirta
- 20 Vt 21 Kolari-Kilpisjärvi (Aurora)

RAILWAY PROJECTS

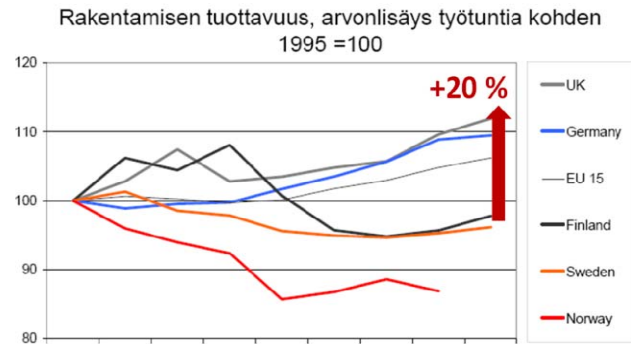
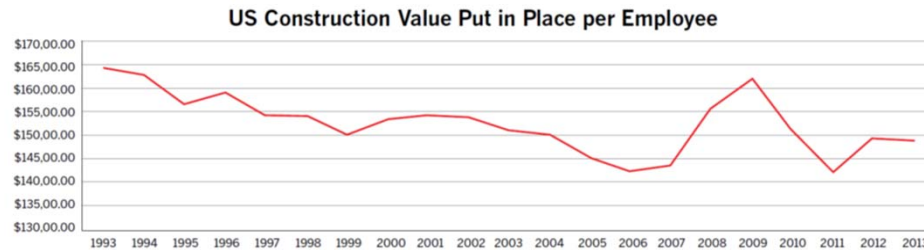
- 21 Helsingin ratapiha
 - 22 Keski-Pasilan länsiraide
 - 23 Helsinki-Riihimäki kapasiteetin lisääminen 1. vaihe
 - 24 Riihimäen kolmioraide
 - 26 Luumäki-Imatra
 - 27 Äänekosken biotuotetehtaan liikenneyhteydet
 - 28 Pori-Mäntyluoto sähköistys
- Pohjanmaan rata

FAIRWAYS PROJECTS

- 29 Rauman meriväylä
- 30 Savonlinnan syväväylän siirto



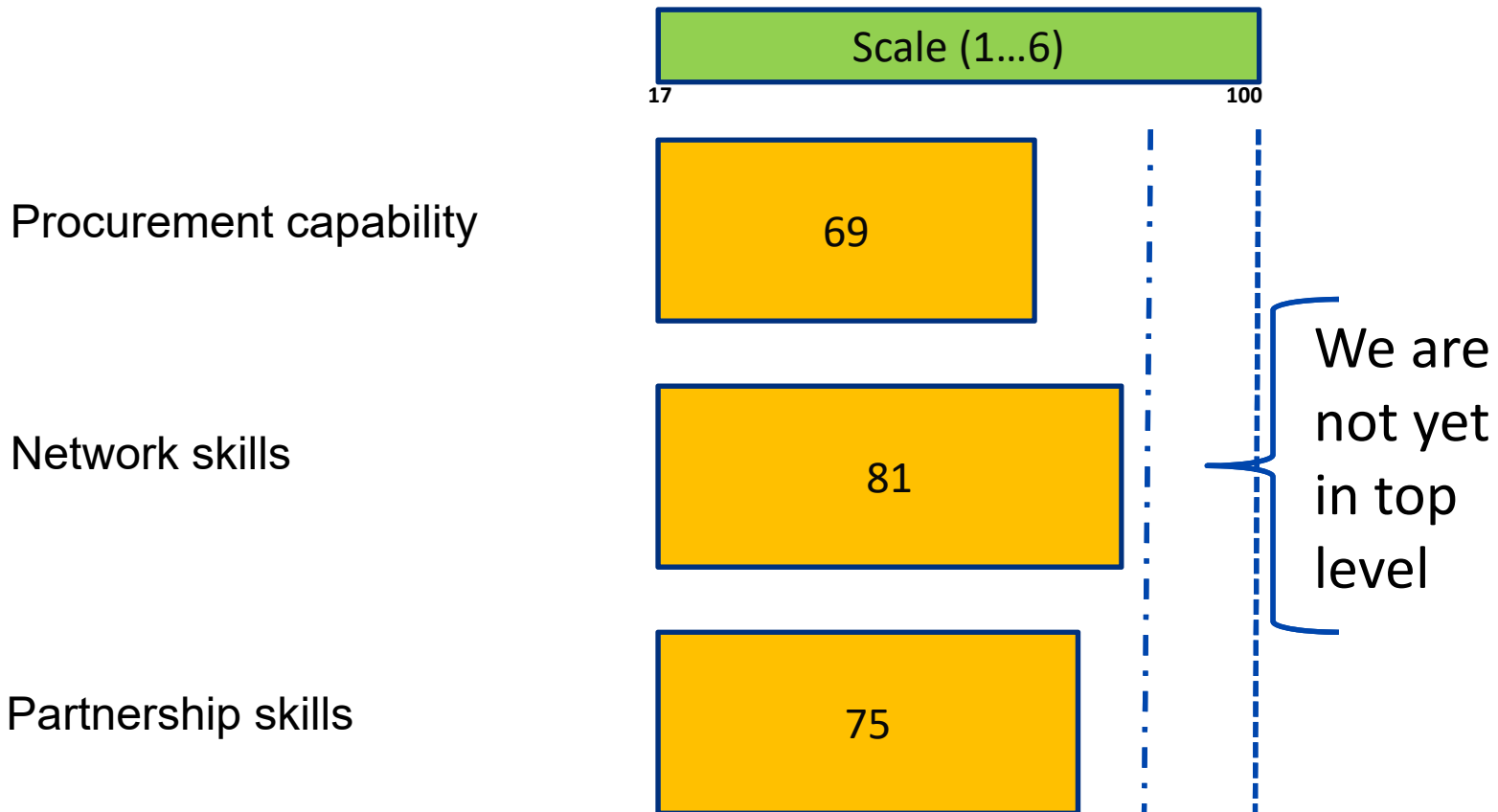
FinnTrA's Strategic Targets for Lean



- To improve productivity of the entire industry
- To change the culture into a more open and trusting way of working
- To improve the customer satisfaction for end products – faster, better quality and cheaper
- To develop innovativeness and knowledge
- We do believe there is huge potential, which is connected to the way of acquiring services and cooperating during the project



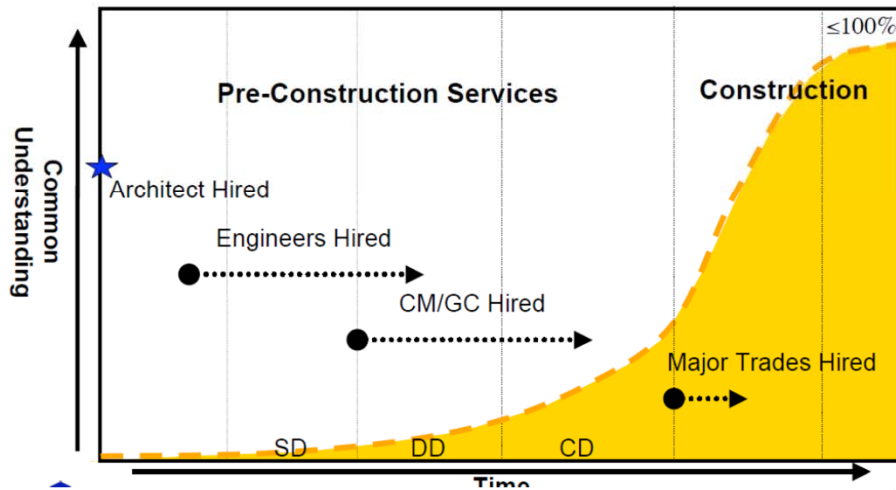
Contractors and Consultants estimate FTA every year



The most development areas in FTA:

- The sharing of risks and benefits in contracts
- The selection criteria, which are encouraging contractors to develop their expertise and innovations

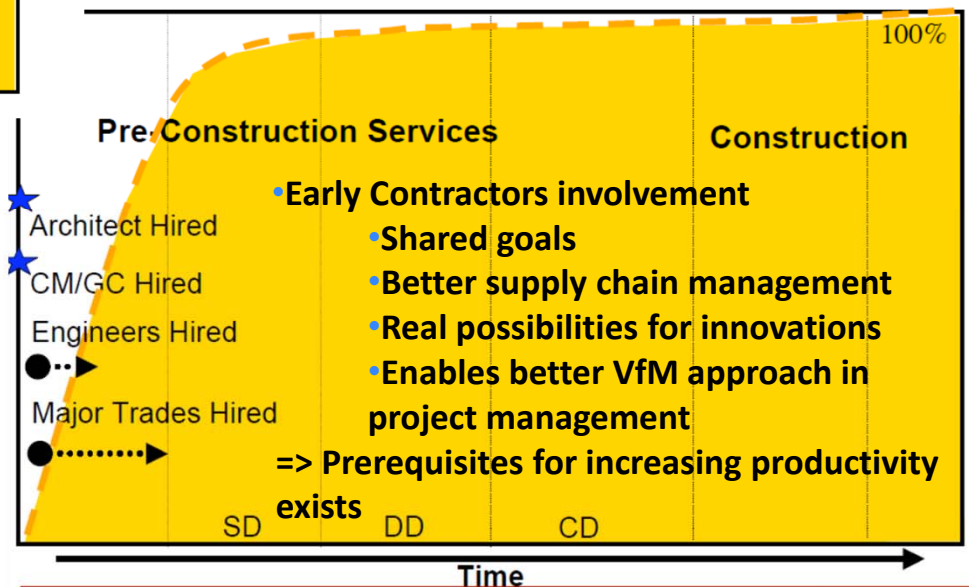
Traditional Project Delivery Level of Common Understanding



- Confrontation
 - Extra works
 - Problems with time schedules
 - Owner and service providers do not have common goals
- => Prerequisites for VfM do not exist
- => Low productivity

This is one of the keys!

Integrated Project Delivery Level of Common Understanding



- Early Contractors involvement
 - Shared goals
 - Better supply chain management
 - Real possibilities for innovations
 - Enables better VfM approach in project management
- => Prerequisites for increasing productivity exists

Alliance Main Principles

Commercial Modell

- **Best Commercial Success only if the whole project is succeeds in those targets which the client has set**
 - **Functionality**
 - **Quality**
 - **Life Cycle**
 - **Environment**
 - **Price/Schedule**
- **There is no need to optimize only your own delivery**
Instead it is profitable
- **Do everything for the whole project's best**
and so that
- **Project achieves clients targets**
- **decision-making will be unanimous (also target cost)**
- **risks will be shared**



Value based Evaluation Criteria

Evaluation criterion		Weight			
		Stage2		Stage3	
		total	sub	total	sub
A.	Capability	100 %		75 %	
A1.	Project implementation plan and organisation	25 %		10 %	
	A1.1 Project implementation plan and organisation		25,00 %		10,00 %
A2.	Track Record	35 %		10 %	
	A2.1 Track record in Key Result Areas		25,00 %		10,00 %
	A2.2 Learning from mistakes		10,00 %		no evaluation
A3.	Value for Money	40 %		30 %	
	A3.1 Setting the target outturn cost		25,00 %		15,00 %
	A3.2 The budget critique		15,00 %		15,00 %
A4.	Alliance ability and leadership	0 %		25 %	
	A5.1 Alliance understanding and demonstrated leadership capabilities		no evaluation		25,00 %
B	Price			25 %	
B1	Fee %		no evaluation		25,00 %
	A+B Total	100,00 %		100,00 %	



- 2 Full days workshops in Stage 3 with best two Consortiums
- Workshop evaluation with teamwork specialist

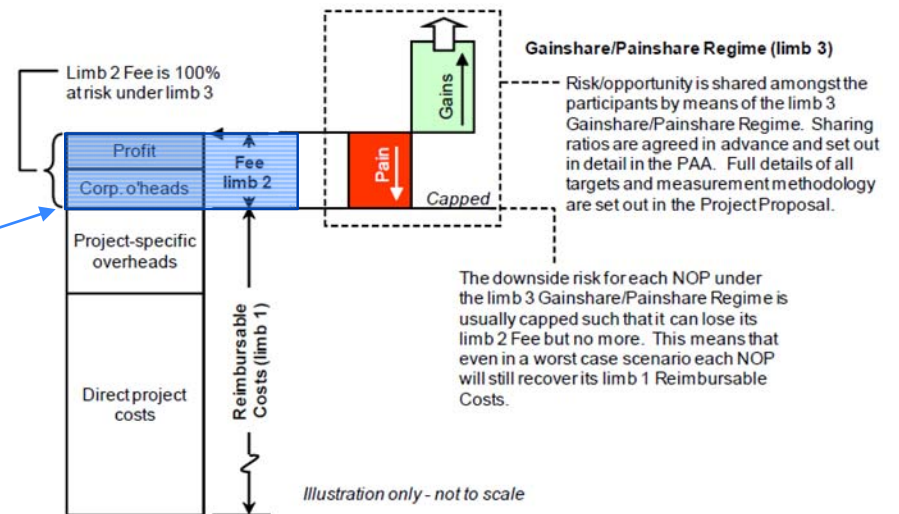
Establish Alliance

European Union procurement legislation

According to the EU directives and Finnish legislation:

- The price should be used, when contracting authority is making comparison of tenders
- Two possible selection criterias:
 1. The lowest price, or
 2. the most economically advantageous tender (so-called quality and price)
- In Tampere, the **limb 2** was used as a price element.
- Contracting entities should write out justifications for every comparison criteria

The “3-limb” NOP compensation model



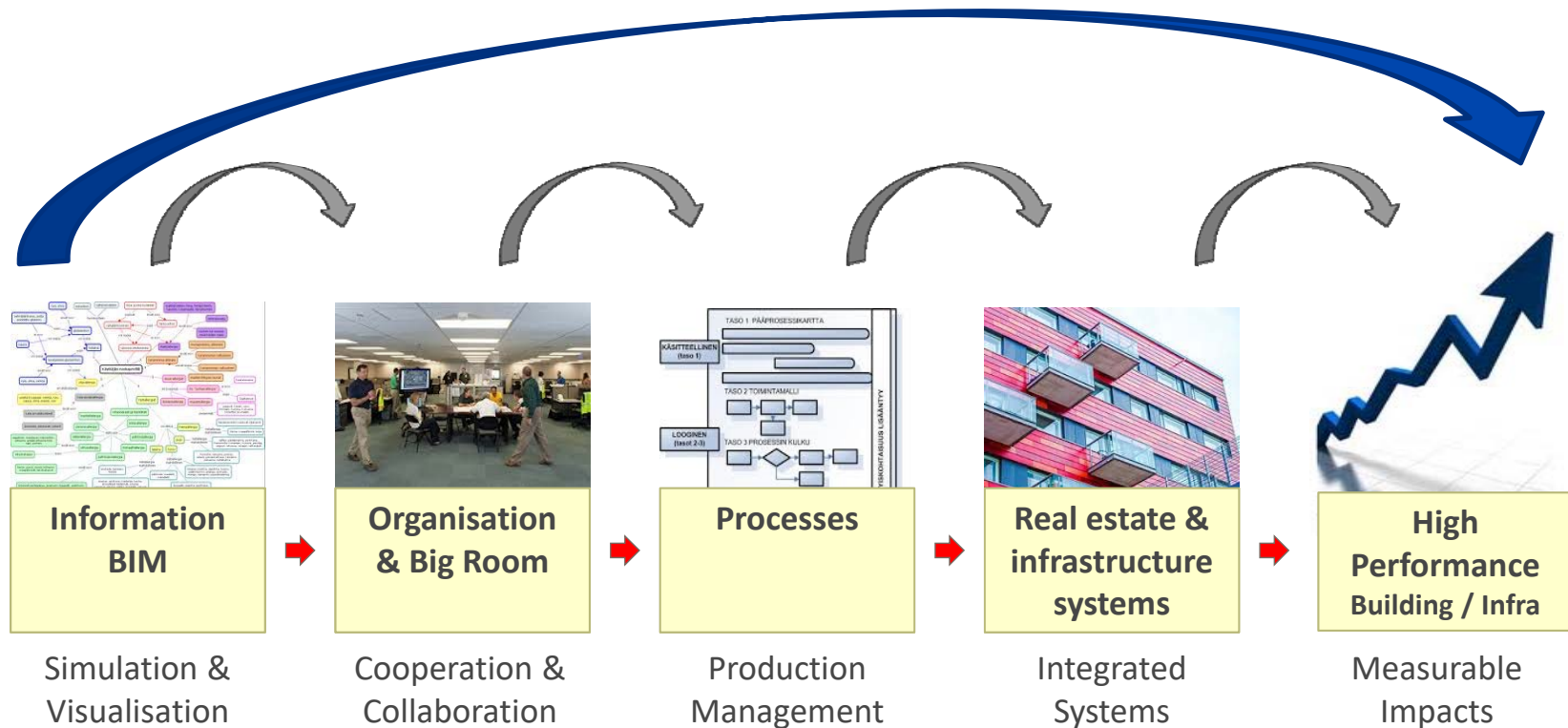
Project Alliancing
Building on the Australian experience – May 2010 Helsinki

Alliance selection process characteristics

- Workshops and interviews in addition to evaluation of documents
- Procurement of organization; Top-Team
- Selection process binds momentarily a lot of resources and needs commitment. People need to be familiar with the alliance model
- A bidder must bind key persons to the project already at the bidding stage and it's not possible to use a separate bidding organization anymore
- Bidding for an alliance requires from contractors less effort than DB and PPP but new kind of skills are needed
- Bidding for an alliance requires from consultants similar effort than DB and PPP – rules with contractor side should be agreed
- The owner's role changes from a buyer and supervisor to an active project actor and this requires new competence
- New roles: probity adviser, alliance specialist, independent estimator, financial auditor

High Performance Building / Infrastructure

Information - resources – processes - technology



Integrated contracts – Integrated commercial model – integrated action plans

Source: DPR Construction

www.liikennevirasto.fi

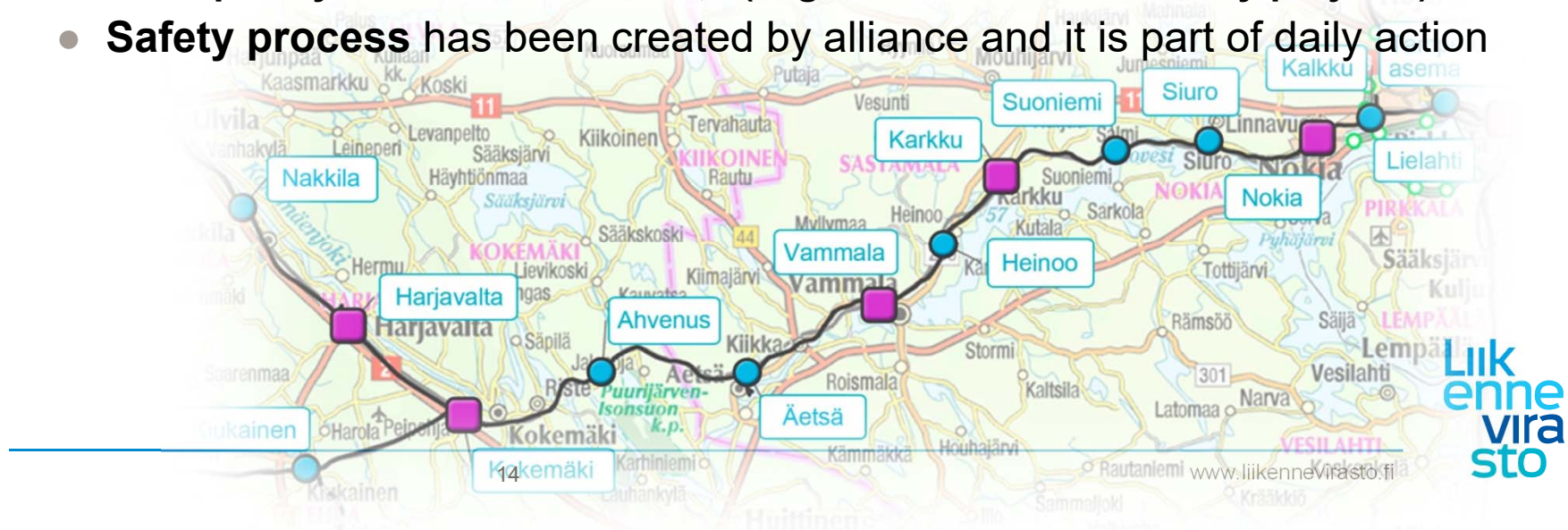
Liikennevirasto

Experiences of Project Alliance in Finland

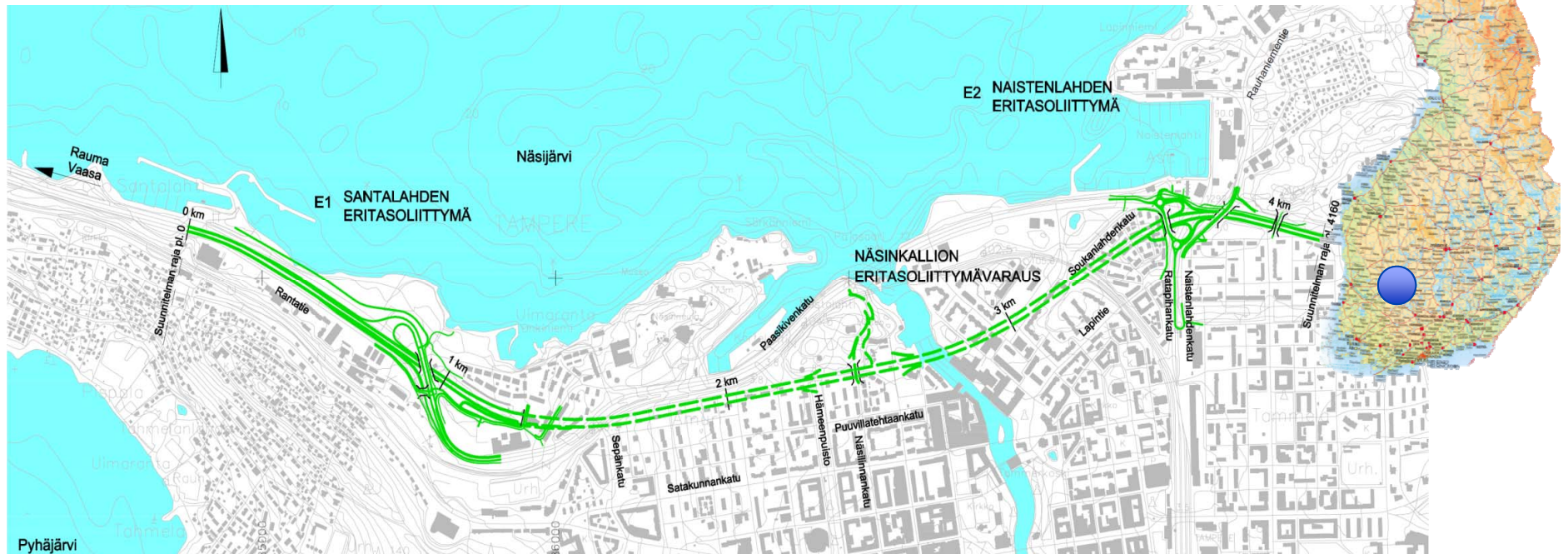
Tampere–Kokemäki rail renovation project

First Public sector Project Alliance Pilot in Europe 2011-2015

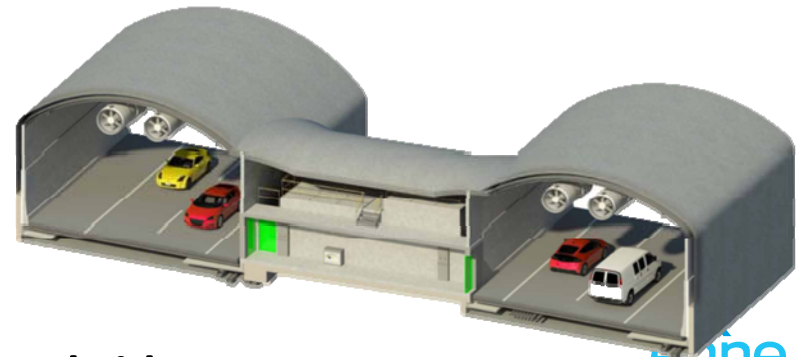
- Length of railway renovation project 89,6 km
- Project original budget 91 M€ (incl. owner's material 20–30 M€)
- Key Result Areas:
 - Accuracy of traffic during construction:
 - **Freight Traffic 99,93%, Personal Traffic 99,65% (Avg. In FIN ~82 %)**
 - Project Completion – **half a year ahead of Schedule**
 - Safety level has been **high level** throughout the project delivery
 - **Frequency of work accidents 6,2 (avg. In Finland 20 in railway projects)**
 - **Safety process** has been created by alliance and it is part of daily action



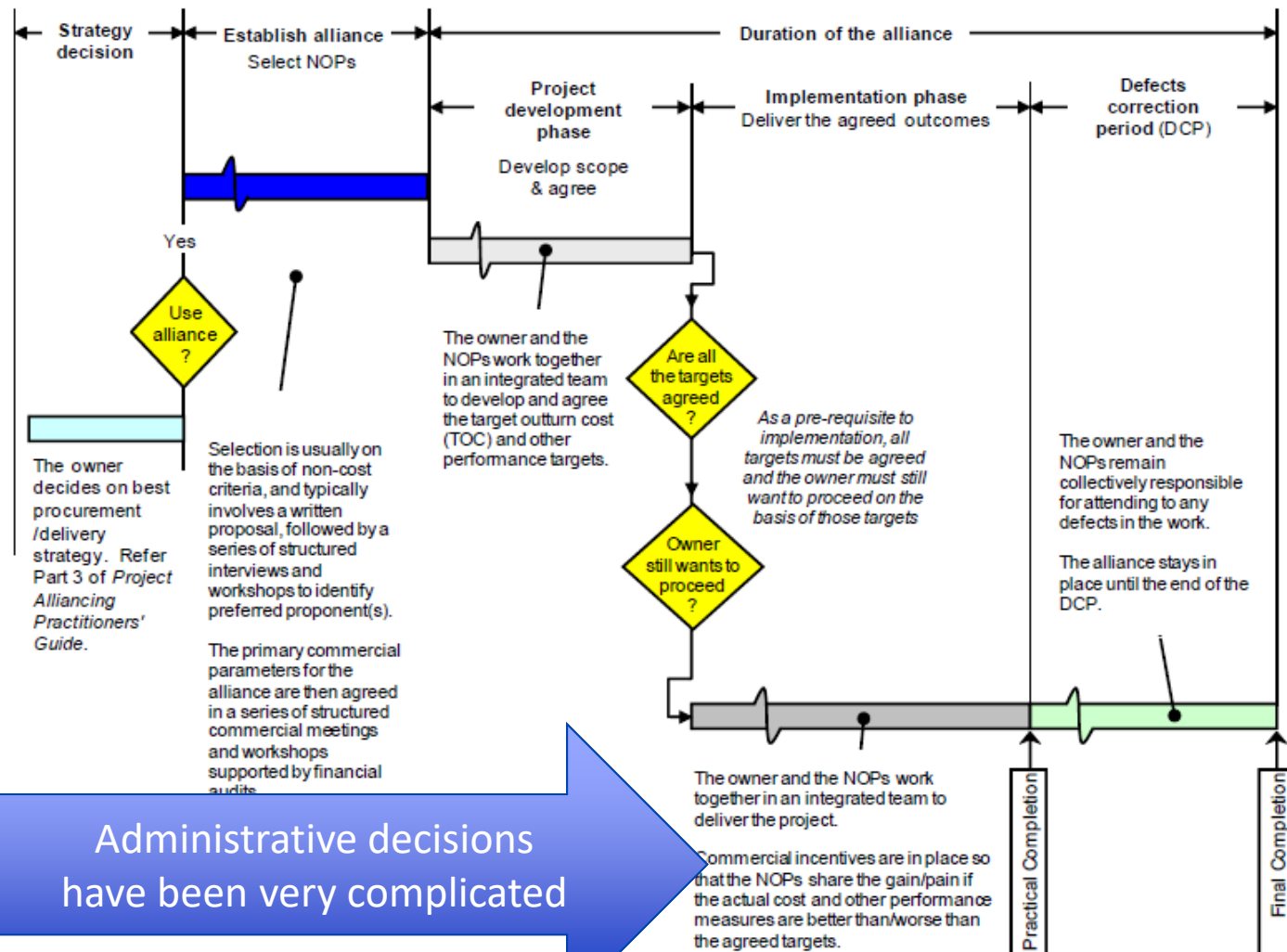
The Tunnel of Tampere



- 2 pieces of one-way 2,3 km road tunnels in the middle of the Tampere city center
- Interchange in both ends and provision for one in the middle
- 4,2 km highway and 4,0 km streets, 7 new bridges



The Alliance process in Tampere Tunnel



Project Alliancing

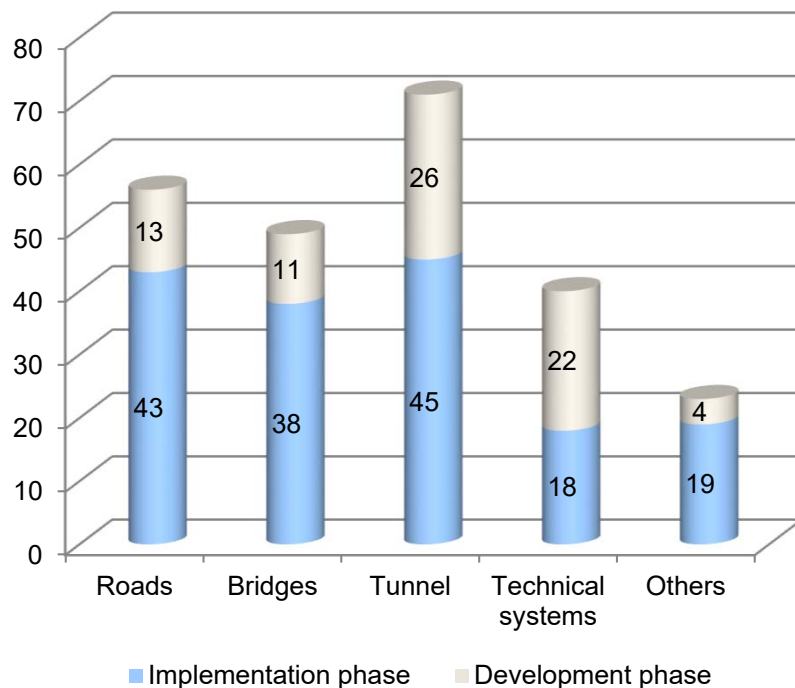
Building on the Australian experience – May 2010 Helsinki

Slide 17

www.iiikennevirasto.fi

What has been achieved so far & Lessons learnt

More than 200 ideas → More than 30 innovations (VfM over 20 M€)



Technology groups have taken the responsibility to develop the ideas

- Clear evidence of innovation promotion, but ideas have to be systematically developed into innovations
- Less waste with internal processes since Alliance can define, plan and prepare what is best for the project => right things in the right time
- One and only Big room is a must
- Rather workshop than a meeting
- Quick and unanimous decision making is not a problem even with 5 parties in an Alliance
- You get what you measure (KRA)

Main Road 6: 30 km from 2 -lanes to 4 -lanes

Project

- Main Rd 6 Taavetti-Lappeenranta -renovation (10 km new alignment & 20 km old) and widening 2015-18
- Cost estimation 80 M€ - target cost 72 M€
- Owner FTA, design consults Pöyry Finland Oy & Ramboll Finland Oy and contractor Skanska Infra Oy

Idea

- Two phase Alliance procurement:
 1. First design consults
 2. After ½ year Contractor

Why

- Consults completed BIM -model, soil investigations and made preliminary proposals for final solutions.

Results so far

- Target cost will be reached
- Safety level high = 0 accidents!
- Faster delivery
- Traffic harms have been minimized
- Lean tools in use



Jyväskylä - Äänekoski rail renovation

Project

- New Bioproduct Mill (private investment 1,3 Billion) in Äänekoski will start their production in Q4/2017
- Invest decision 4/2015 – rail renovation design and construction 2015-17
- Budget 80 M€
- Owner FTA – service provider VR Track Oy

Idea

- Market dialogue and fast decision about contract model
- Fast and transparent procurement with one step Competitive Dialogue (3 mnts & 10 days)

Why

- Renovated railway connections (inc. electrification) should be in traffic same time as Biopruduct Mill

Results so far

- Project in schedule – Biopruduct Mill opens 9/2017
- Safety level high



Main Road 12 Lahti Southern By-Pass

Project

- 12,5 km new main road – partly (7,2 km) in “forest” and partly (5,3 km) in built-up, populated area with 2 tunnel and challenges with ground water level
- Five interchange and two tunnels: concrete tunnel and rock tunnel
- Budget 275 M€ - City of Lahti will cover 77 M€

Idea

- Market dialogue with over 50 service provider participants
- After that decision about project size and contract model

Why

- Market dialogue is important step of strategic decision

Results so far

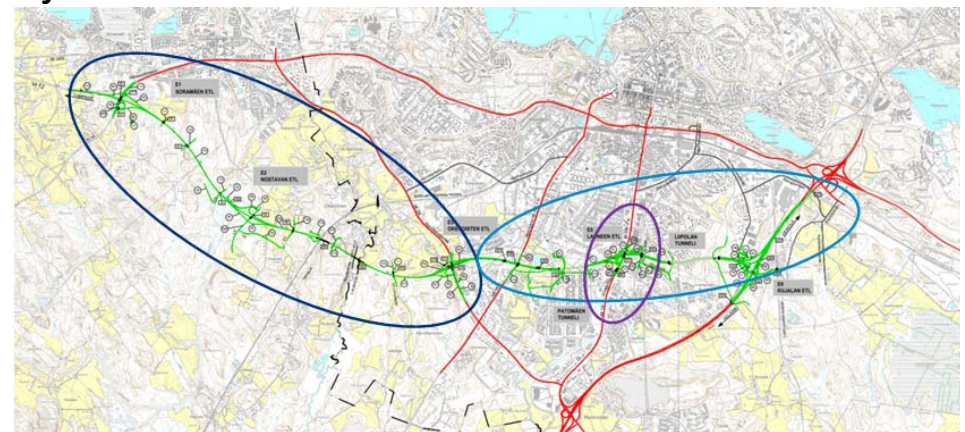
- 55 % voted for Alliance in built-up part of project
- If one huge project – DB and Alliance equal
- Project has been started 2017
- DB & Alliance
- Timing for divided project

- Vastausten lukumäärä
 - Urakoitsijat: 7 vastausta, joista 1 anonyymi
 - Suunnittelijat: 11 vastausta, joista 2 anonyymejä
 - Rakennuttajakonsultit: 4 vastausta
 - YHTEENSÄ: 24 vastausta

Edustamani taho on: (24 vastausta)

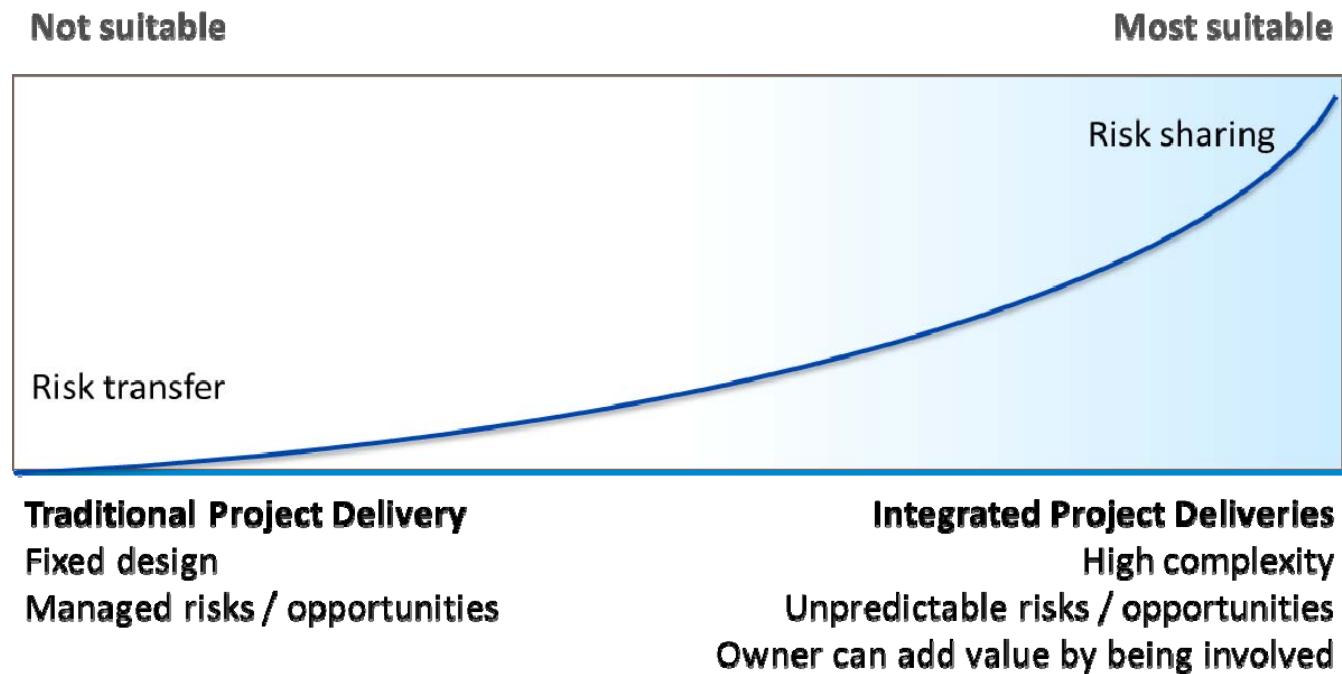


- Rakentaja (pääurakoitsija tai allurakoitsija)
- Suunnittelija
- Rakennuttajakonsultti tai rakennuttamiseen asiantuntijapalveluita tarjoava toimija
- Muu asiantuntija



If you are thinking about to start an Alliance

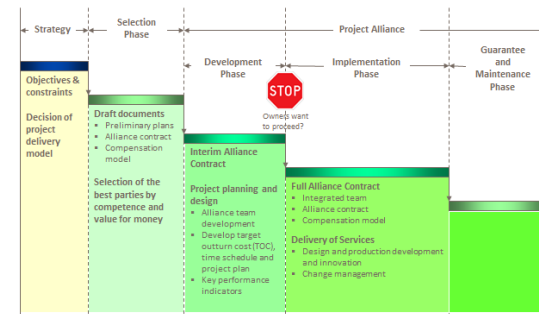
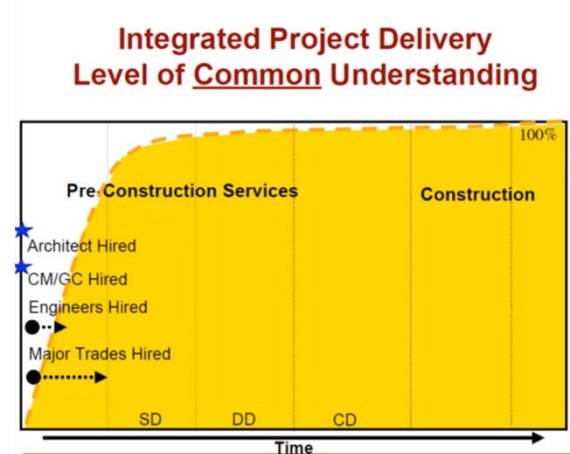
- Think carefully, when it is good time to use the Alliance
- Use the good old way when you can't justify the new way
- But when you choose it, then make sure you get the whole benefit out of it



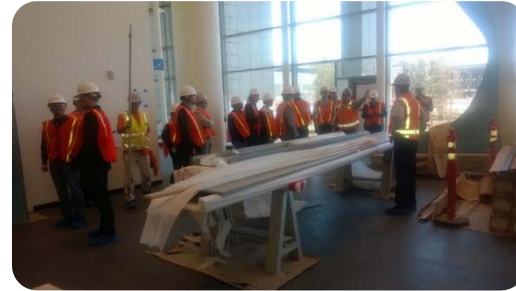
Source: Project Alliancing, May 2010 Helsinki, Jim Ross, PCI Group

Challenges of Leadership and Readiness for Project Alliance

- Understanding the philosophy
 - Both the owner and the industry
- Communication
 - Clear messages
- Fair and simple process
 - Open, honest and straight
- Strong ambition
 - Understandable reasons for using alliance
- Trust
 - Fair pain-gain sharing



We believe, when you are developing your culture..



Together we are stronger



How the human being survive 70 000 years ago ? And became a leading species on the earth?

www.liikennevirasto.fi

Liikennevirasto