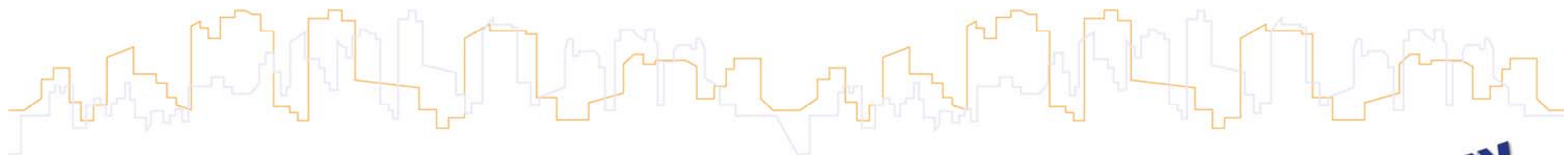


# Project FeedBack Systems for Continuous Improvement

Miia Asikainen, Finnish Transport Agency  
(FTA)



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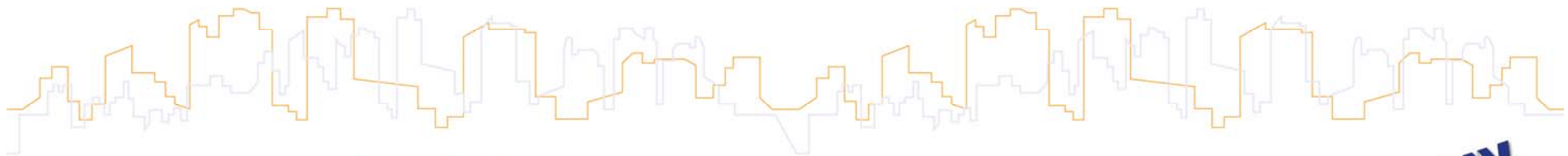
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# I would like to present you

- Finnish Transport Agency
  - Basic information
  - Finnish Transport Agency's objective to improve productivity
- Project FeedBack Systems



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# The Finnish Transport Agency (FTA) in brief

The Finnish Transport Agency is responsible for maintaining and developing the level of service in the transport infrastructure administered by the government.

The Agency is accountable for an infrastructure property of nearly 20 billion euro.

The Agency procures transport infrastructure services from the market.

Yearly procurement budget is 1,9 billion euro.

The aim of the Agency is to **promote** the functioning of the transport system as a whole, to **improve** transport safety and to **contribute** to a balanced and sustainable development of the regions.

Of the Agency's approximately 650 employees about 150 are stationed in the regions (20 %).

# We improve the transport infrastructure to ensure effective travel and transport chains



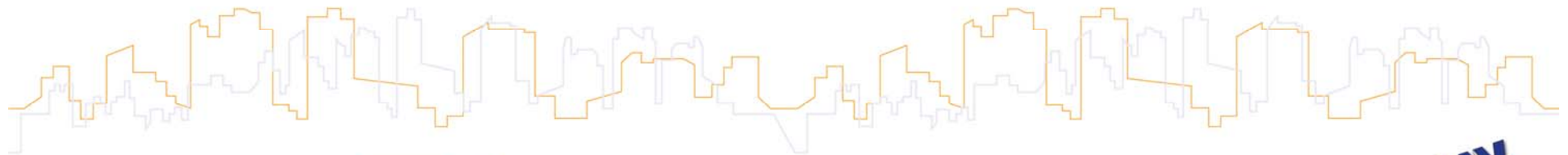
railway traffic



maritime traffic



road traffic



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# Infrastructure provides a platform for growth



Infrastructure assets

**20**

billion €



Current spending on ongoing projects

**4.4**

billion €



FTA's share of the total infrastructure market

**1/4**



Annual budget approximately

**1.8**

billion €



FTA personnel

**650**

experts



Number of people the FTA employs indirectly through projects

**12,000**

# FTA, Smart routes and intelligent traffic



## Vision

Smart routes and intelligent traffic - for you



## Strategic goals

Well-functioning transport routes enhance competitiveness  
Smooth and safe travel

**We act in a responsible, effective and innovative way**

The Finnish Transport Agency is an excellent workplace for professionals

## Mission

We enable smooth, efficient and safe travel and transport



## Values

Boldly professional  
Achieving results together  
For the common good



# Different challenges and opportunities

## Western Finland:

- to ensure effective transport chains to important traffic nodes and ports.

## Northern Finland:

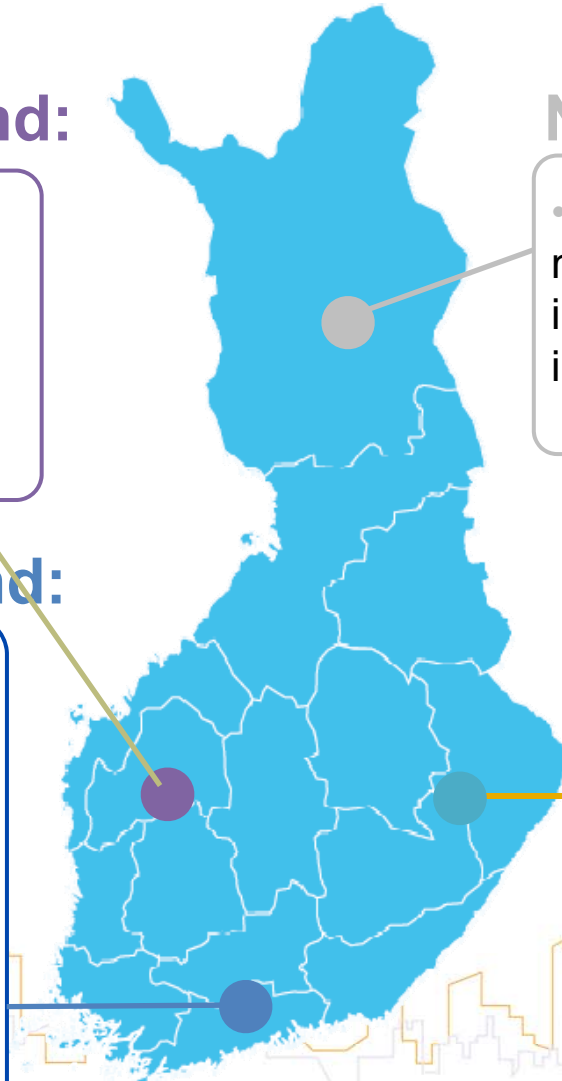
- to meet the needs of the mining/other heavy industries and the tourism industry

## Southern Finland:

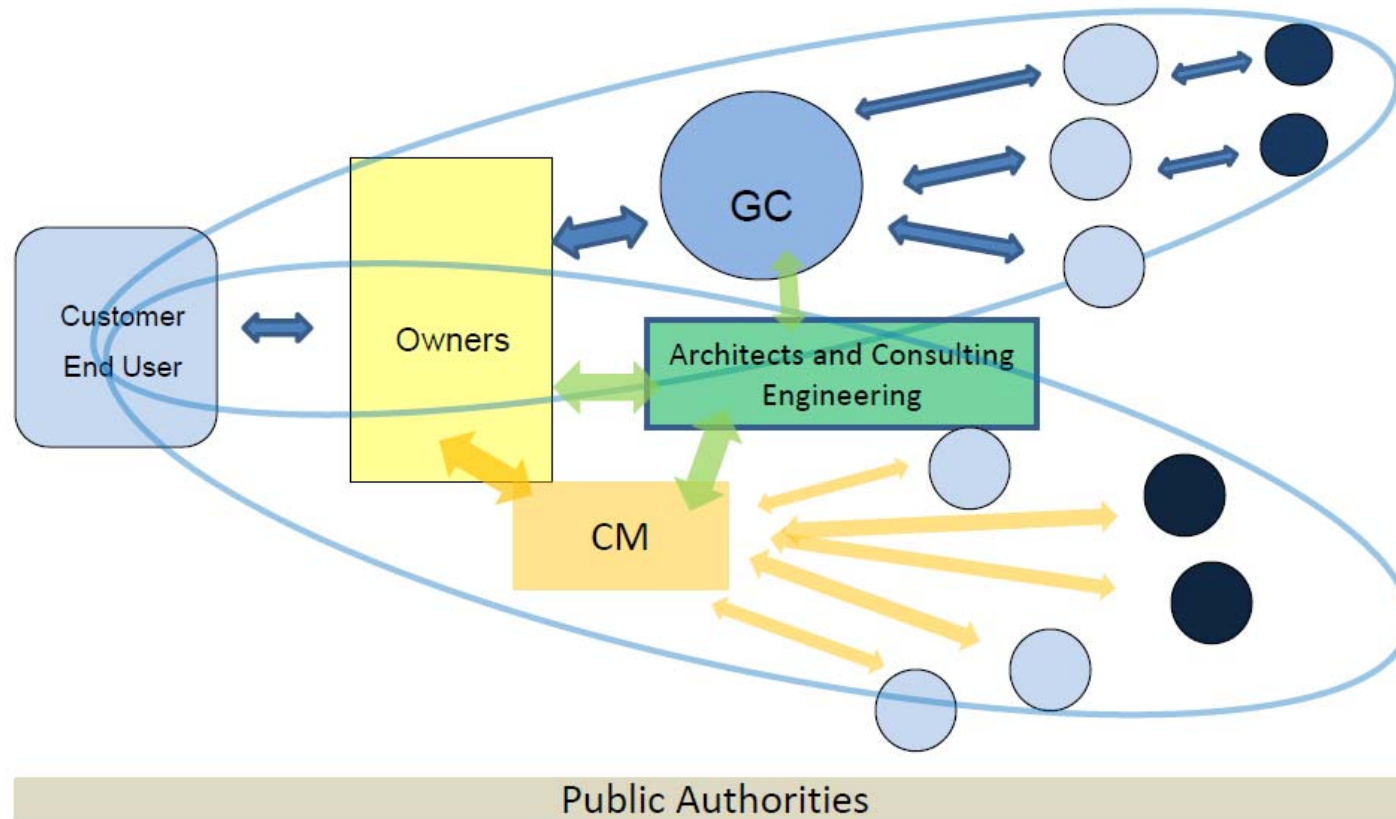
- to provide adequate capacity for the nationwide and international transports of trade and industry
- to facilitate the mobility of labour by good public transport connections

## Eastern Finland:

- to provide connections to Russia
- to meet the needs of the tourism, mining and forest industries
- Saimaa Canal operations



# Supply Chain Management in Public Sector



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# FTAs strategic targets for using the Lean and Alliance-model



- **Background:**
  - Increase in productivity has been much lower in construction industry than in other industries
  - Productivity potential has been recognized and a significant part of it is connected to the way of acquiring services and cooperating during the project
  - FTA has been obliged to develop the industry in cooperation with Finnish infrastructure builders to be the most effective in Europe
- **Strategical targets for Lean and Alliance-model**
  - **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**

# Changing culture is the issue

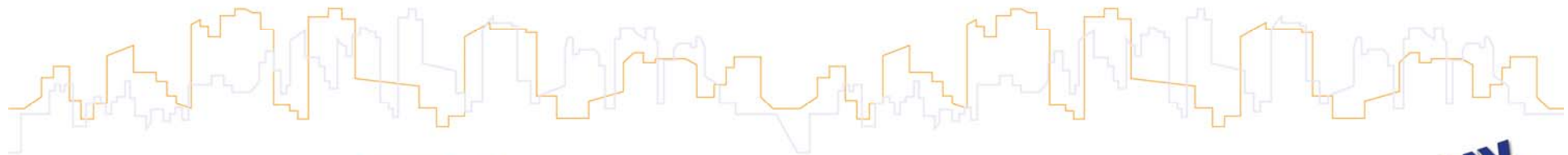
## - Building trust, trust, trust

## Dialogue with the industry



# IPD –Integrated Project Delivery

- The owner and service providers combine an integrated project team to implement the project
- Target is to provide value for the owners money



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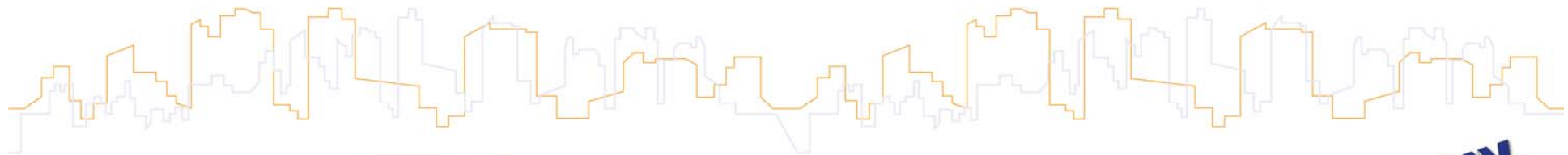
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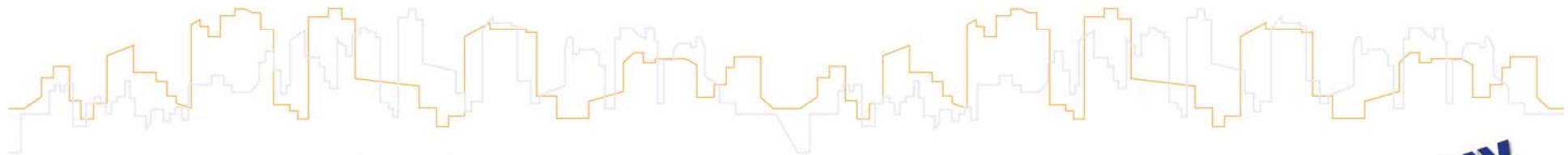
# One way to do IPD is Alliance Project Delivery

- Some Key words:
- The commercial model of Alliance encourage everybody to do everything for the best of the project
- You can not succeed by optimizing only your own delivery



# Why IPD ?

- We were not satisfied to:
  - Risks Management
  - Costs Control
  - Operational transparency between owner and contractor
  - Lack of innovations
  - The construction sector's productivity



# Alliance key words

- Risks will be shared collectively
  - If participant can't control some risk, then it is owners risk
- No blame between participants
  - except if it is question about wilful default
- Open book method with payments
  - Direct costs will be paid by the open book method
  - Fee is based of actual costs

# The Pilot Alliance (IPD) Projects

- **The rail renovation project Lielahiti – Kokemäki (106 M€)**  
Why Alliance?
  - New way to look at co-operative between operator(s), owner and
  - non owner participants
  - Simply enough to create the model for alliancing in Finland
- **The Tampere onshore road (185 M€)**  
Why alliance?
  - Two owners, lot of third parties, technical challenges, critical lead time, in the middle of the city

## Achievements, "Collaboration is efficiency"

Total management of construction works, construction plans and owner's administrative procedures. All decisions are made "best for project"

Taking "lean-principles" to practice:

- Close collaboration in safety issues. Everyone works together with jointly agreed goals and common rules.
- Collaboration in work coordination, management of change and innovative problem solving create efficiency.
- Training and guiding play a key role
- New way of collaboration requires constant learning during the project



# Challenges

- Adopting the working culture when people are working also in other projects, “turning the alliance mode on”
- Finding good incentive elements for subcontractors
- Key employees possibilities to focus enough, because the working in alliance is very effective *“things do not wait ... they go on”*
- Find the right and important experiences from the Pilot project



## Lessons learnt

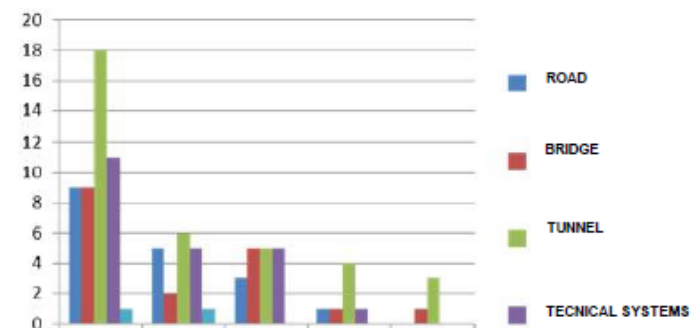
- Clear evidence of innovation promotion
- Explode the ideas and innovations systematically
- Direct costs and fees will always be paid for the service providers
- We can plan and prepare right things in the right time

→ Time table is not stretching because of the changes

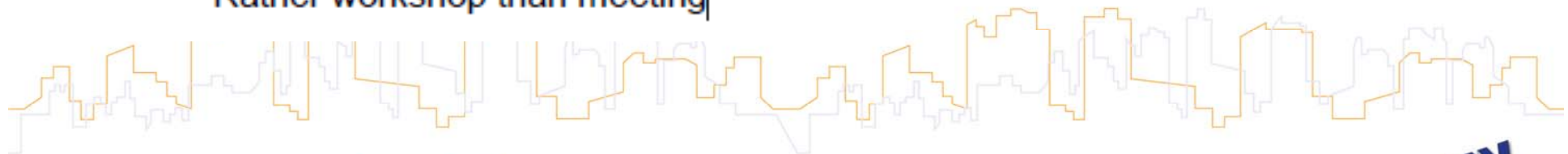
- One and only Big room is better
- Rather workshop than meeting



More than 50 ideas → More than 20 innovations

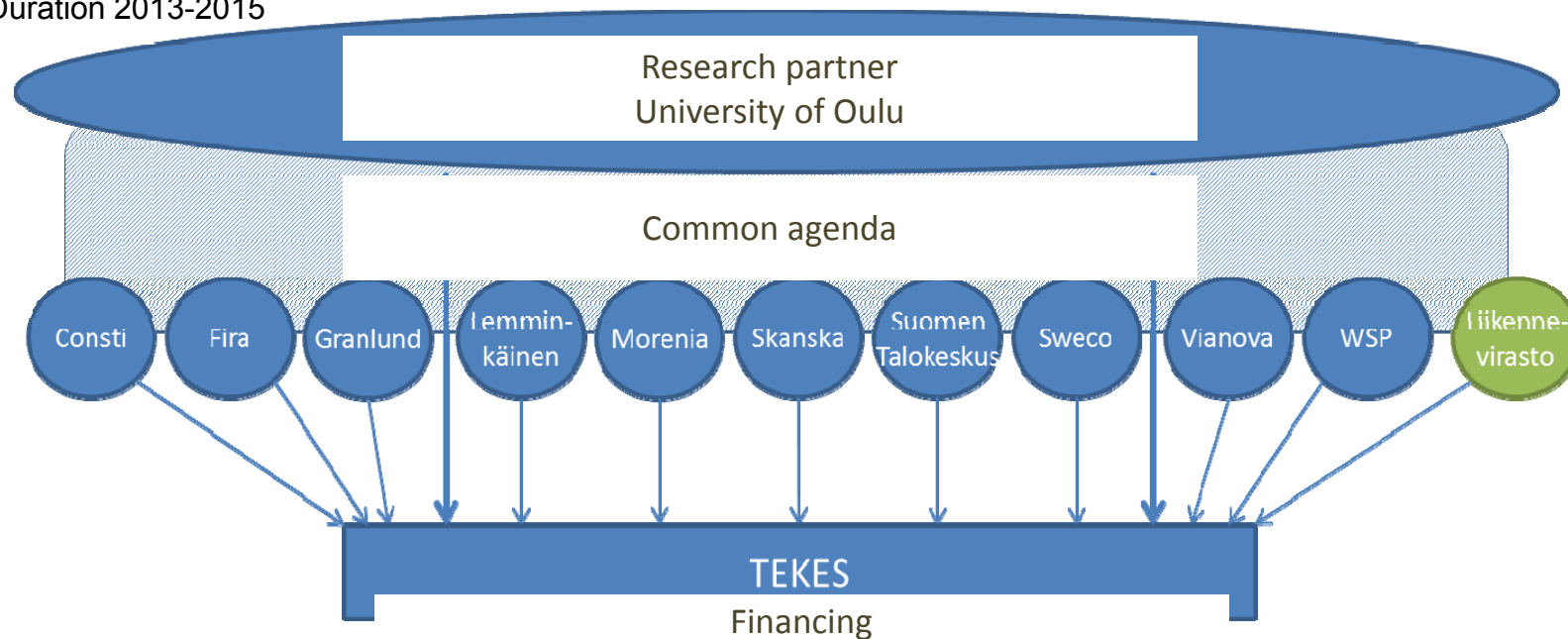


Technology groups takes responsibility to explode the ideas

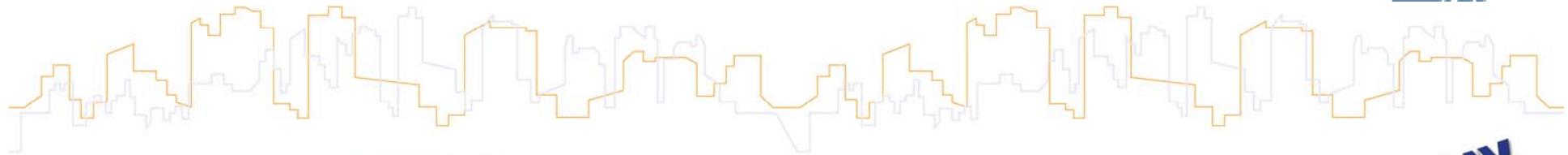


# LCIFIN2 Research Project

- ✓ 12 organizations
- ✓ Financing 4,5 M€
- ✓ Duration 2013-2015




OULUN YLIOPISTO  
UNIVERSITY of OULU



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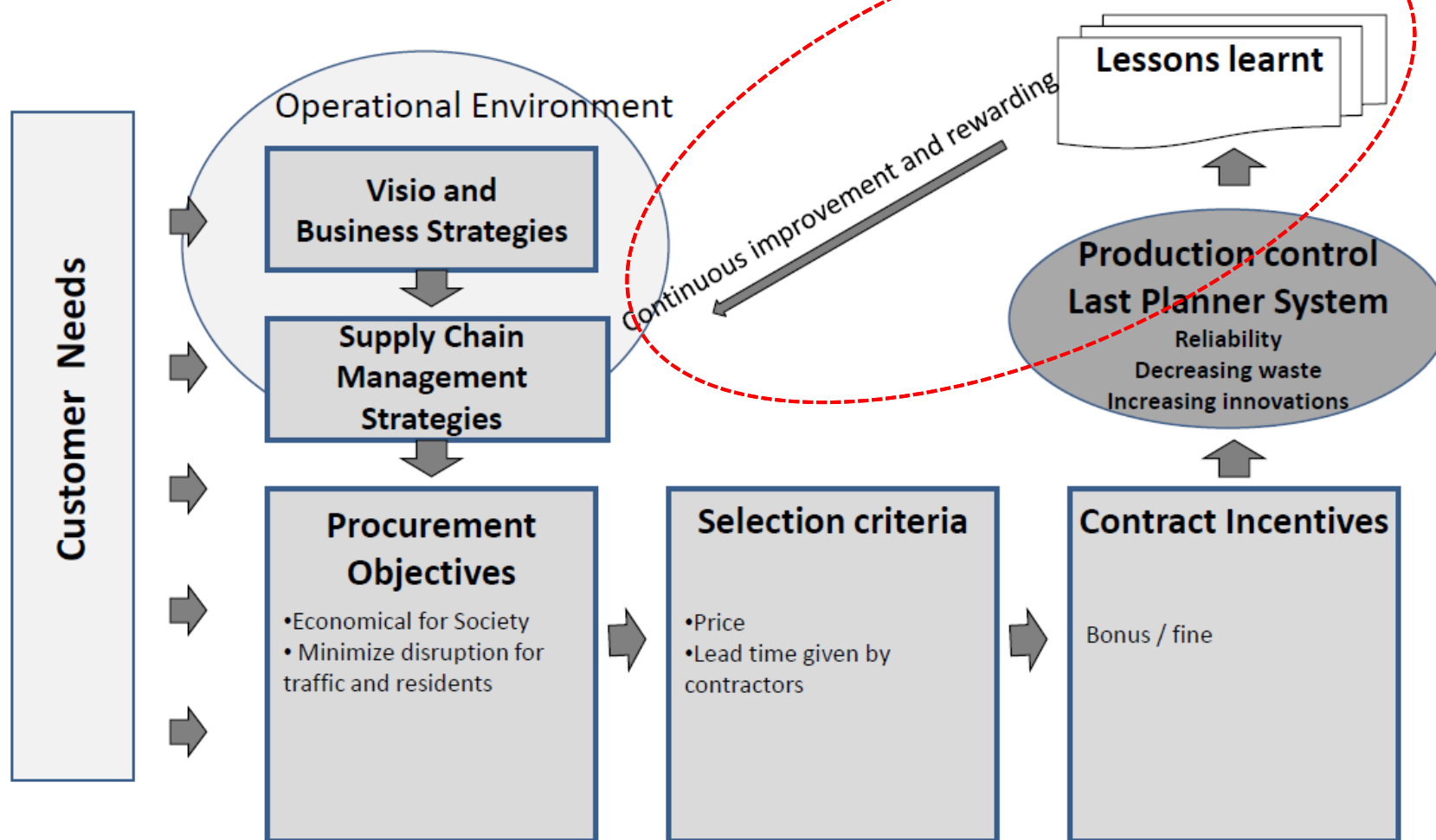
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Project feedback  
is a tool for learning  
and development

# Implementation model



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# Measuring customer satisfaction

- Measuring customer satisfaction with feedback is important for organisations, for example,
  - in improving communication between parties,
  - enabling mutual agreement,
  - evaluating progress towards the goal,
  - and monitoring results and changes.
- It is also one essential attributes of TQM
- One central element of TQM is benchmarking which promotes the principle of continuous learning also in construction with the help of internal and external benchmark

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# Background

- Systematic utilisation of project feedback has been poor in the construction business.
- Typically, construction companies conduct customer surveys separately, and their quality and exploitation is underdeveloped.
- In addition, the utilization of the information has been found to be sporadic and ineffective.
- Customer feedback is also mainly collected only late in the project when most of the customer's money has already been spent, in which case the feedback that has been collected has no effect on operational procedures during the project.
- It is also well known that the poor performance of one party will affect the performance of the next party

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# Customer feedback in construction industry

- The **complex nature** of the construction process, **changes in project organisation**, the **uniqueness of each project** and the project parties' different objectives make it difficult to exploit past experiences and customer feedback in future projects.
- These fundamental characteristics of construction projects also complicate the evaluation of the project outcome and emphasise the need for developing effective and efficient evaluation system

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# Construction Quality Association, RALA



- The common feedback system for the entire construction business in Finland is operated by the Construction Quality Association, RALA which is a joint association representing clients, contractors, and consultants in Finland.
- RALA's aim is to improve the prerequisites of construction quality.
- RALA's tools for improving construction quality are **certification of competence, certification of quality systems, and a project feedback system** for clients and construction companies.

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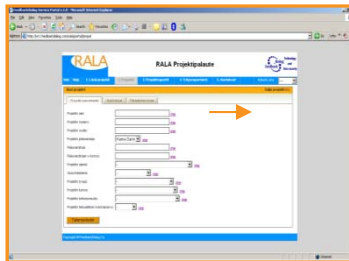
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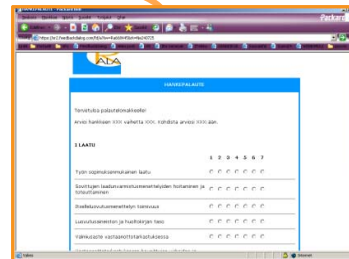
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# Operational model

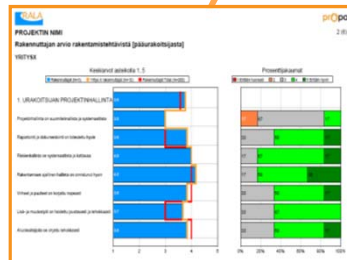
## Feedback execution plan



## Feedback rounds



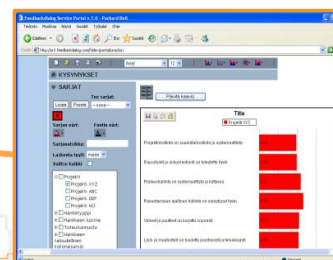
## Static site reports



## Utilisation of the feedback

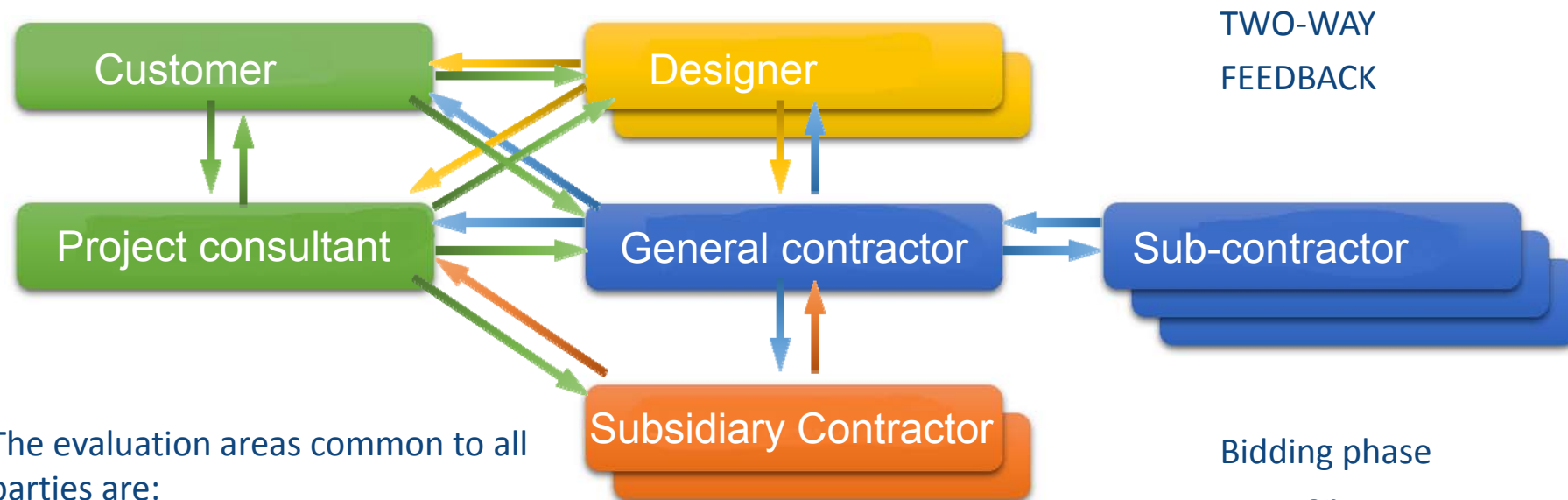


## Dynamic company reports



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# Feedback flows



TWO-WAY  
FEEDBACK

The evaluation areas common to all parties are:

- project management
- cooperation
- staff
- accomplishing goals

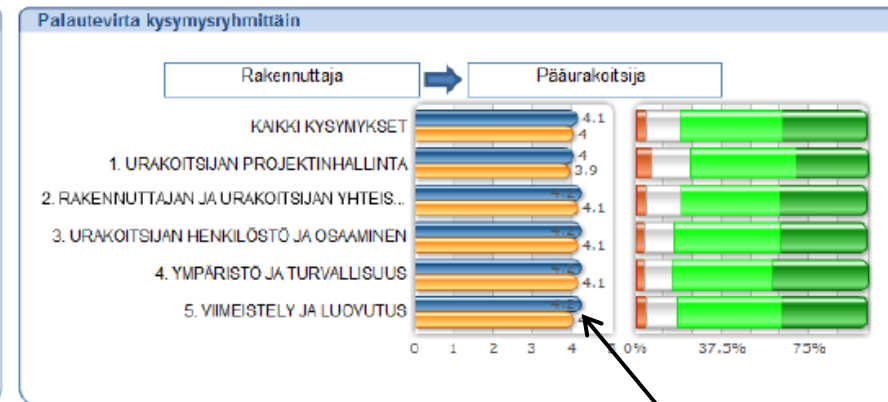
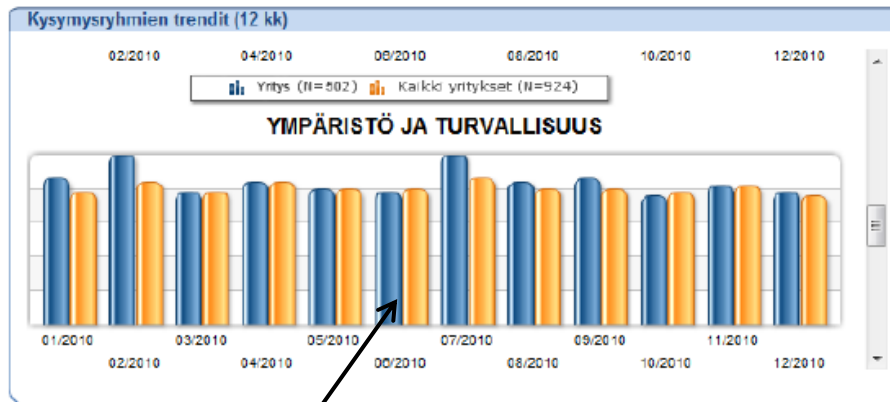
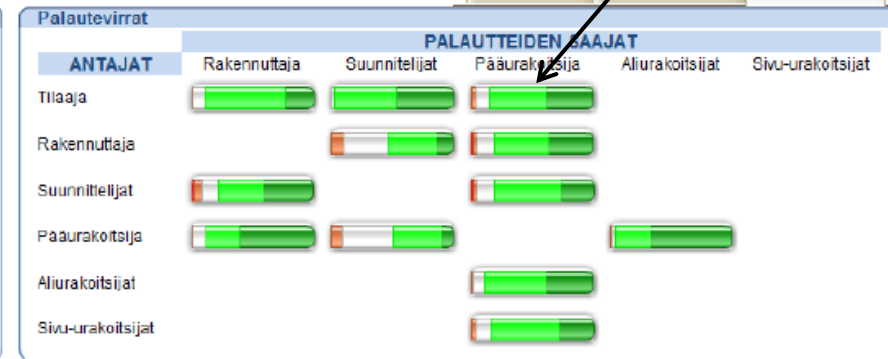
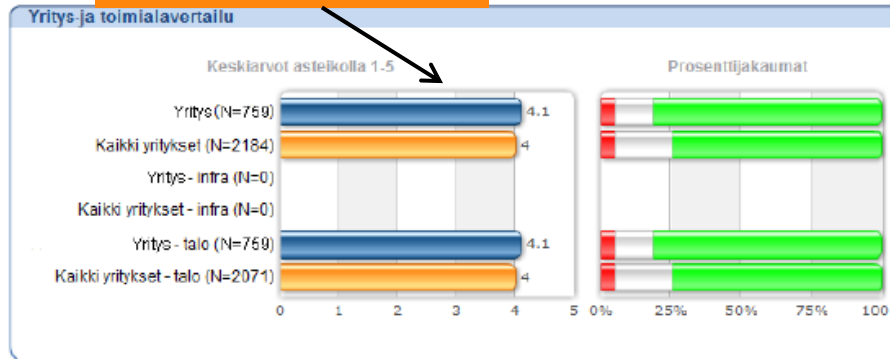
TOTAL  
15 QUESTIONNAIRES  
WHICH CAN BE USED  
FLEXIBLE BY PROJECT NEEDS

Bidding phase  
or  
During the project  
or  
After the completion  
of the project

# Reporting

Company and  
industry  
benchmarking

Feedback  
flow  
performance



Trends by question  
groups

Question groups  
by feedback flows

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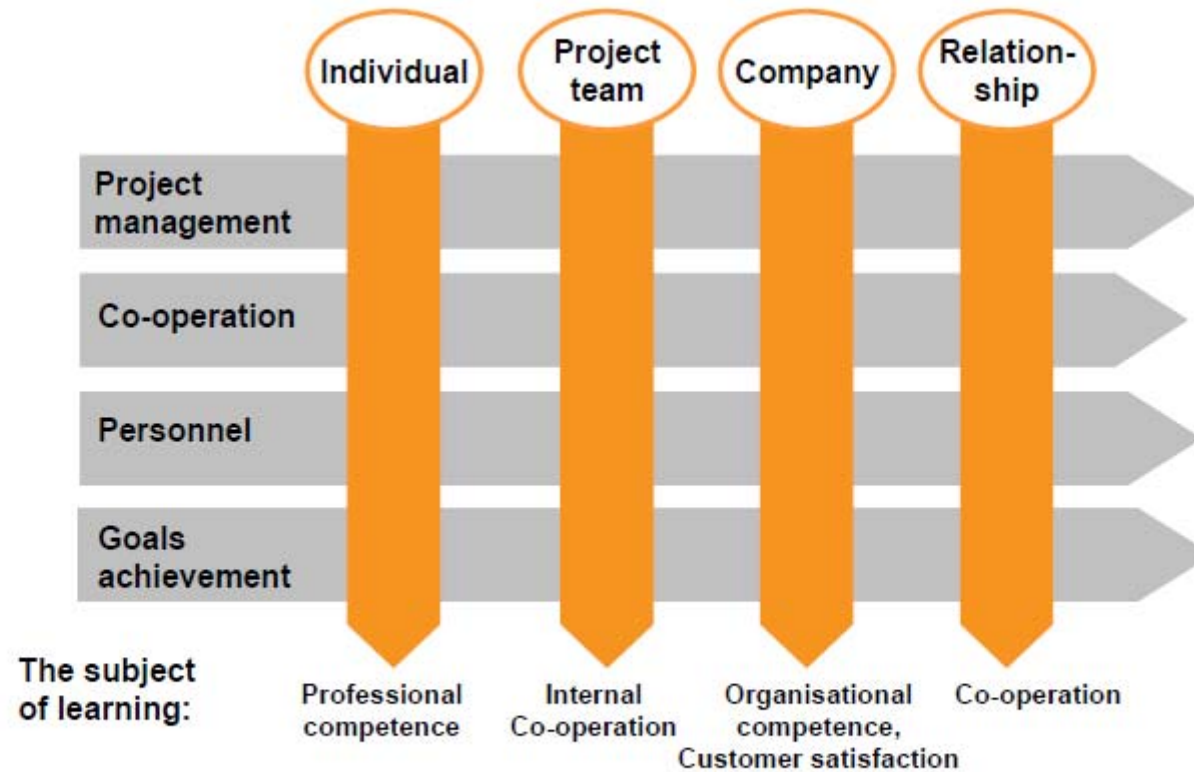
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# Benefits

- **Common benefits**
  - Perceiving needs for development and targeting operations
  - Improving cooperation and operations through openness and mutual learning
  - Developing customer orientation
- **Customer**
  - Can be used as a supplier evaluation and ranking tool
  - Process management and administration
  - Ensuring the fluency of the construction project
- **Construction companies**
  - Enabling company level comparisons and shows needs for development
  - Providing initial data for customer relations management
  - Producing initial data for the company's standards
- **Designers and suppliers**
  - Persistent development of cooperation and operations
  - Perceiving needs for development and targeting operations

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# Learning levels



CEM Facility Services Research



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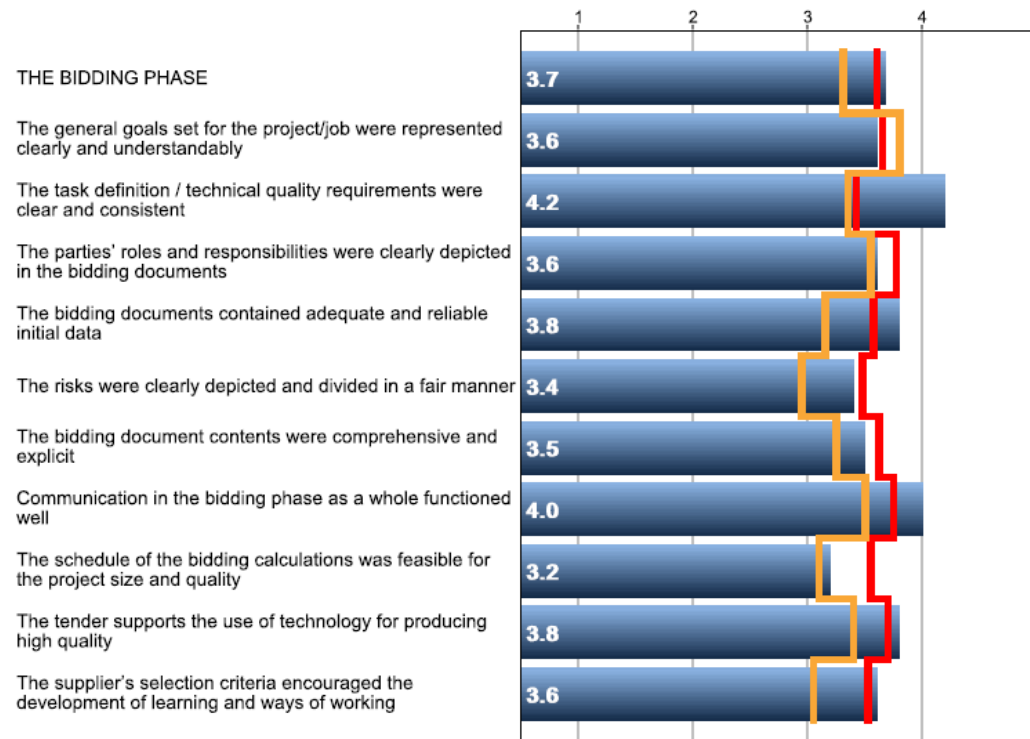
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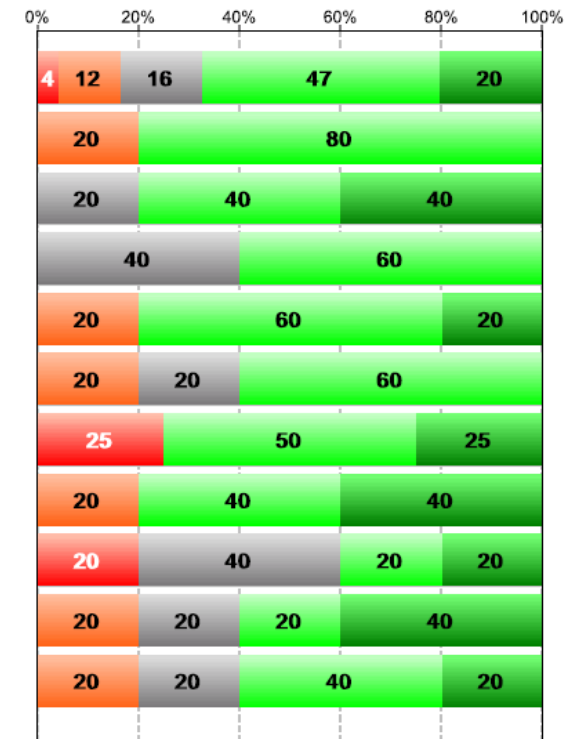
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# FTA example: Main contractor's evaluation of the client's duties; bidding phase

Average results 1-5



Percentage %

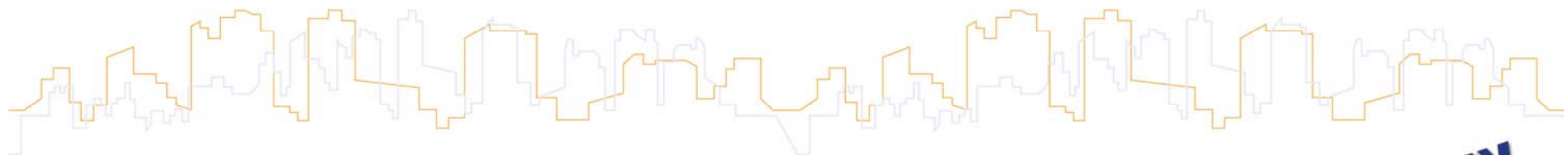


■ Project main contractors (N=5) ■ 1010547-1 main contractors (N=7 P=2) ■ All main contractors (N=11)

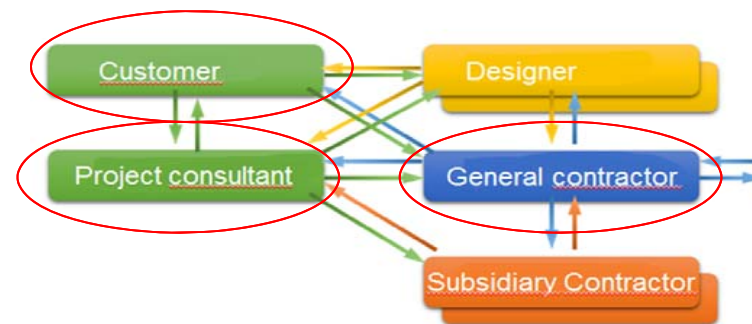
■ 1 Very poorly ■ 2 ■ 3 ■ 4 ■ 5 Very well

Construction Quality Association, RALA, has collected project feedback through the system since 2008.

- The system has a total of
  - 1 747 projects
  - about 6000 feedback



- 2014 RALA has analyzed about 2600 feedbacks given by customer and project consultant to the general contractor



- The conclusion of the study was that the quality in construction projects is better than it is generally claimed

# Results of the study

## Good areas



- Co-operation between parties
- The main contractor personnel and work management skills and a sense of responsibility
- Management of occupational safety issues

## Satisfactory areas - some improvement needed



- Quality assurance procedures relating to project management
- Communication and documentation
- Additional work management
- Time management of the construction

## Weak areas - a lot of room for improvement

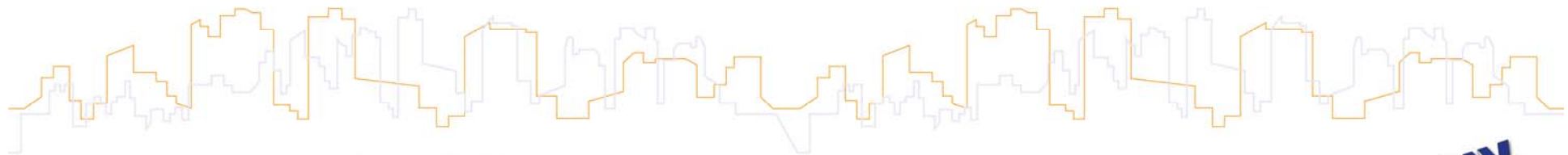


- Control of sub-contractors activities
- professional skills of Sub-contractors' staff
- Systematic risk management

Source: RALA

# Smart routes and intelligent traffic - for you

Finnish Transport Agency (FTA)



## References:

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