



Finnish Hospital Construction Utilizing IPT Models

Jani Saarinen, Vison

Finnish Hospital Design Follow-Up Event, 20 May 2025

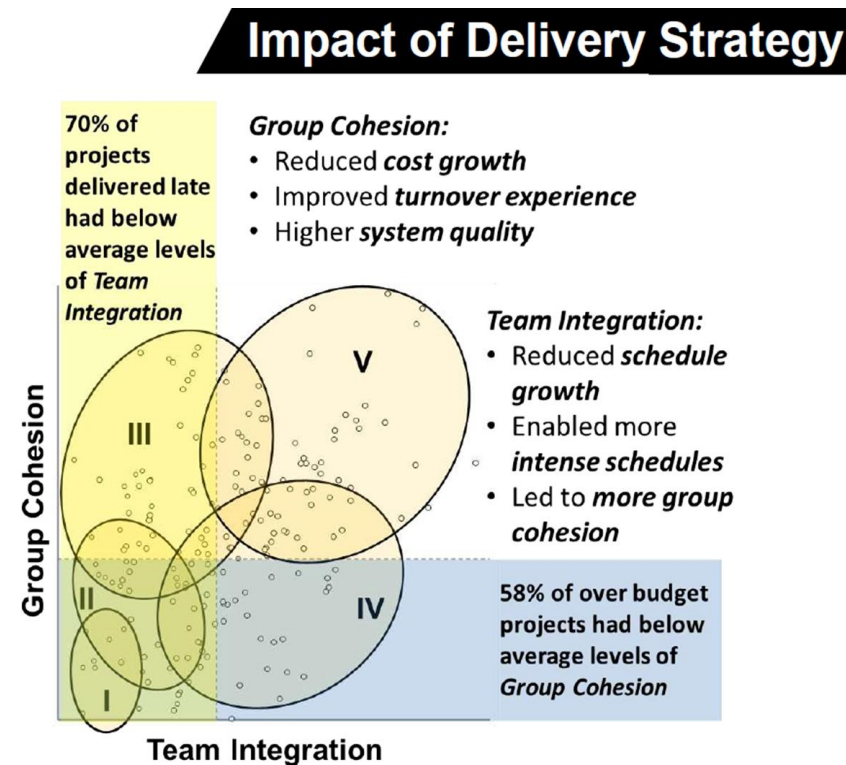


Integrated Project Delivery: A Collaborative Alternative to Traditional Contracting

Key principles of IPD Model

Integrated Project Delivery IPD

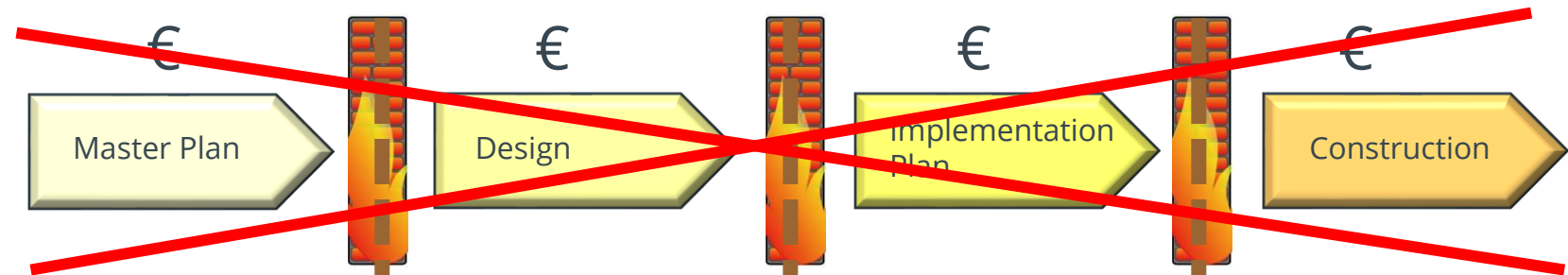
1. Early involvement of key stakeholders
2. Multi-party agreement
3. Common development phase
4. Shared risks and reward
5. Open relational contract, open book principle
6. Commitment on cooperation, collaboration, building trust and continuous improvement



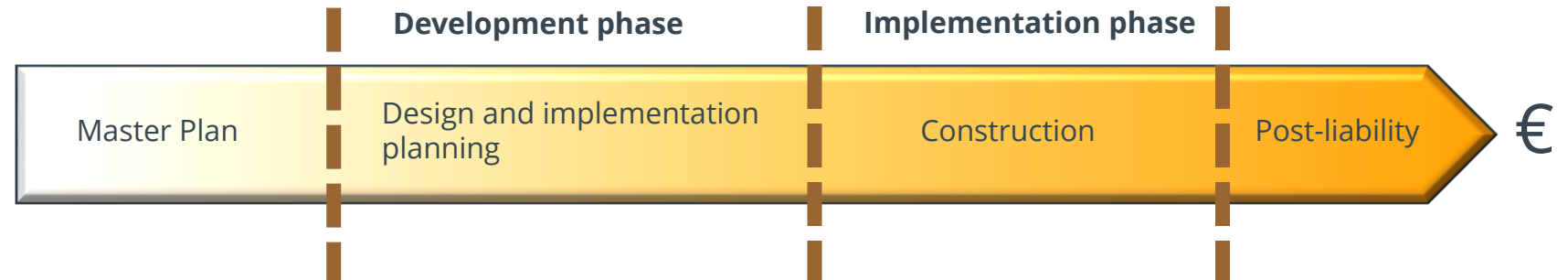
Courtesy Prof Robert M. Leicht, Penn State University, 2018

From silos to best for the project

Traditional projects

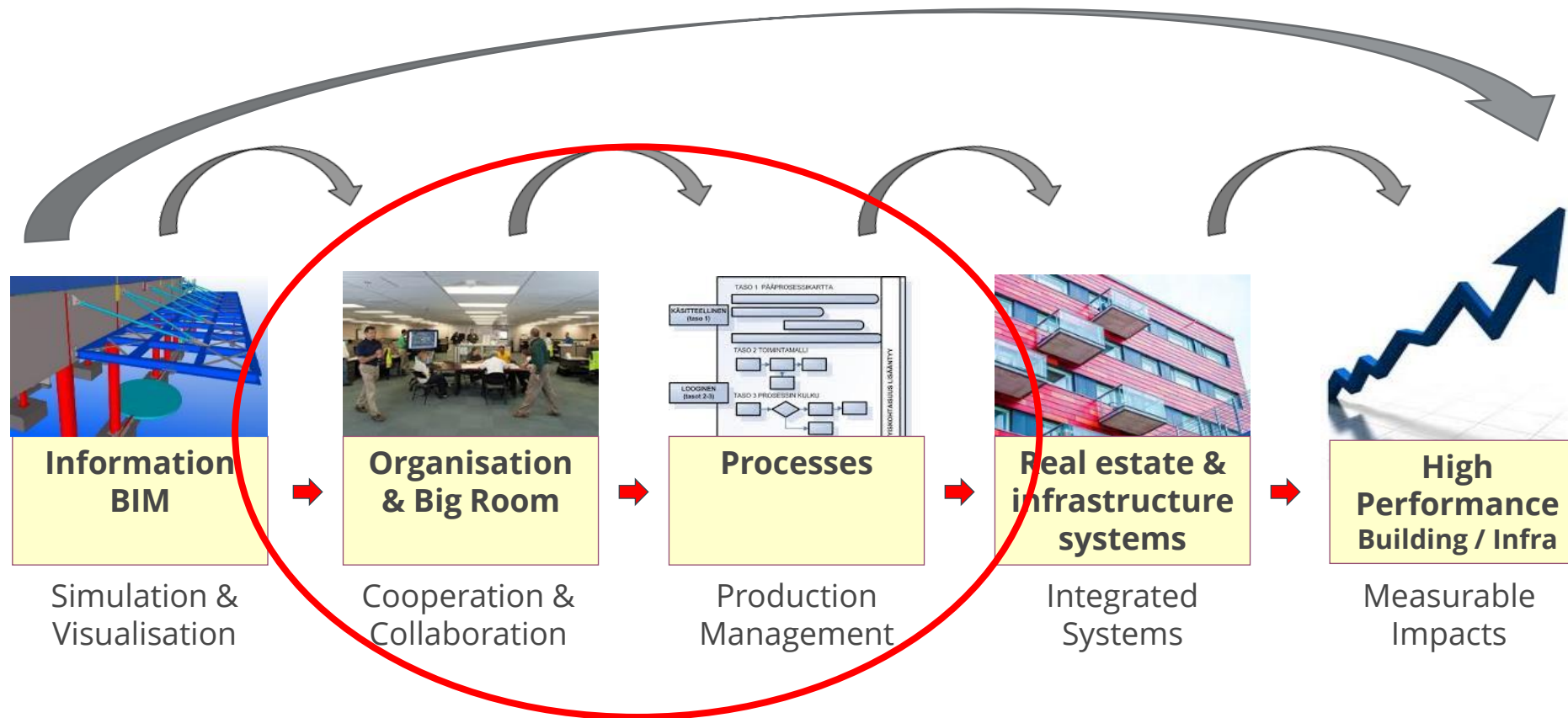


IPD projects



Biggest challenges in firs projects; shared responsibility between designers and builders / need of new alliance contract terms

Integration of teams and processes



The biggest mistake was to focus on tools and forget focusing people

Common Development Phase



Traditional vs. Integrated Contracts

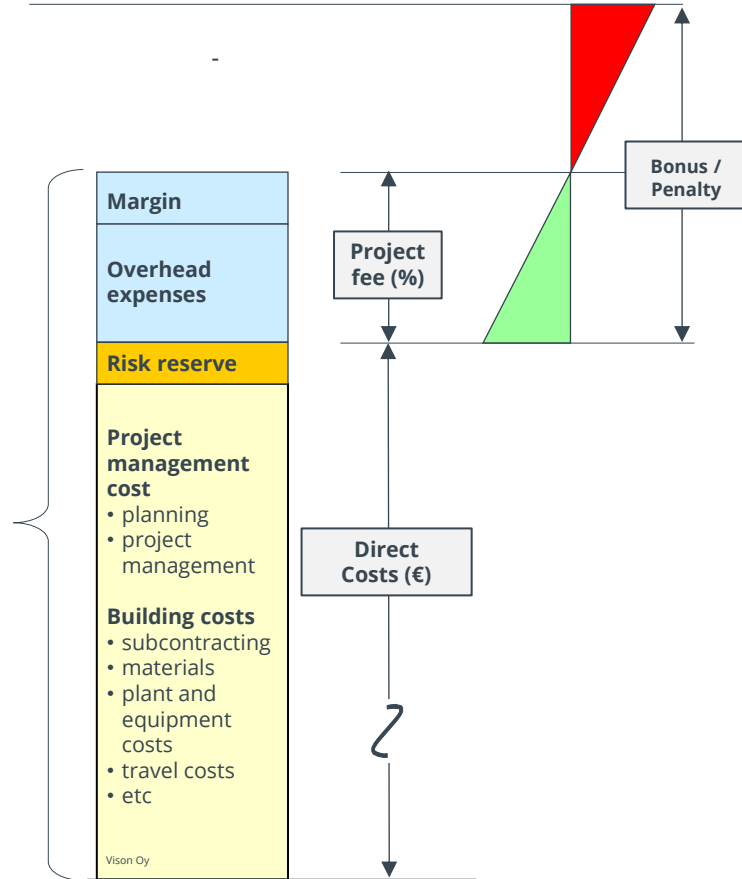
Traditional contracts

- **Transactional (fixed) contract**
- Bilateral agreements
- Precisely defined tasks and responsibilities
- **Fixed contract price and/or content**
- Contracting parties bear their own risks
- Penalties tied to quality and schedule, etc.
- Additional and modification works based on the contract
- No right to terminate the contract
- **General Conditions for Building Contracts** in use

IPD Contracts

- **Relational (open) contract, open book**
- Joint agreement
- Tasks and responsibilities at a general level
- **Common development phase to define the content, scope and a target cost of a project**
- Unanimous decision-making
- Joint incentives (bonuses/penalties) as well as joint change and risk management
- Joint liability for damages
- Joint intellectual property rights
- Scope changes decided by the client
- Client's exit right
- **Alliance Contract Conditions** in use

Shared risks and benefits



Indicative, not in scale

Open book budgeting and invoicing

- Common payment basis and incentives
- Project costs (direct costs) + Project fee (overhead + margin)

Common incentive system

- Incentives based on common objectives (bonus / penalty)
- Achievement of target cost / overruns
- Achievement of KPIs / underperformance

Open book principle

- Transparent budgeting and invoicing among the contracting parties
- Possibility to use an external auditor



IPD Projects in Finland

IPD Models in Finland

Project Alliances since 2011

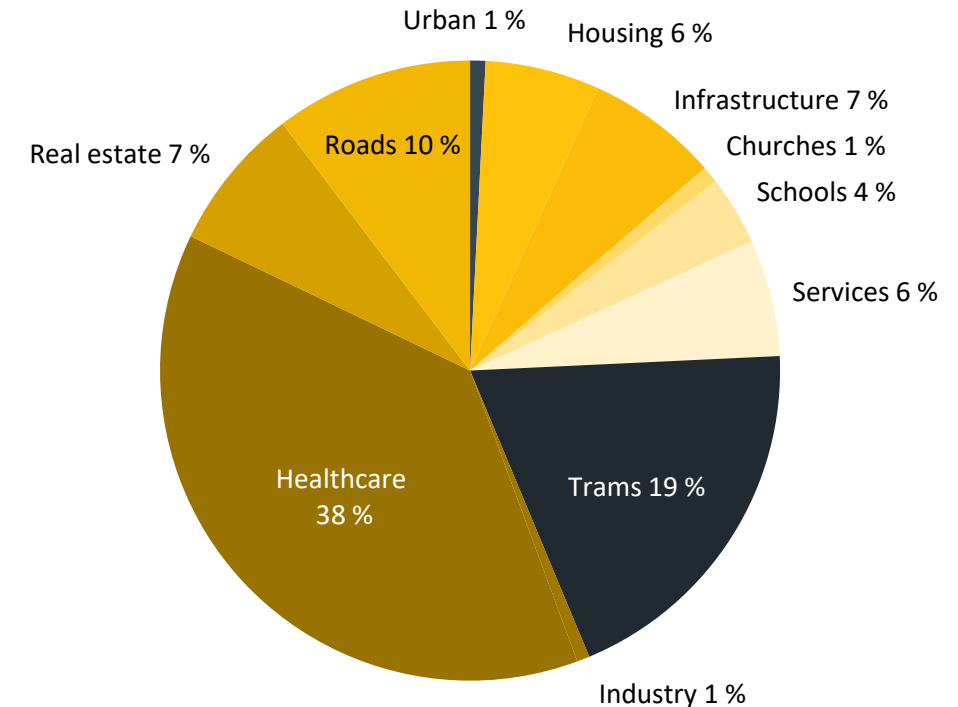
- Copied from a Australian model (multi party agreement)
- Collaboration, focusing on people and Lean philosophy applied from Californian IPD-models
- Finnish contract model in use in 2020

Integrated Project Deliveries since 2017

- Project management contracting with applied alliance principles (client and the contractor in the same contract, designers in a contractual relationship with the client)
- Traditional Industry standard contract terms (not alliance contract terms)

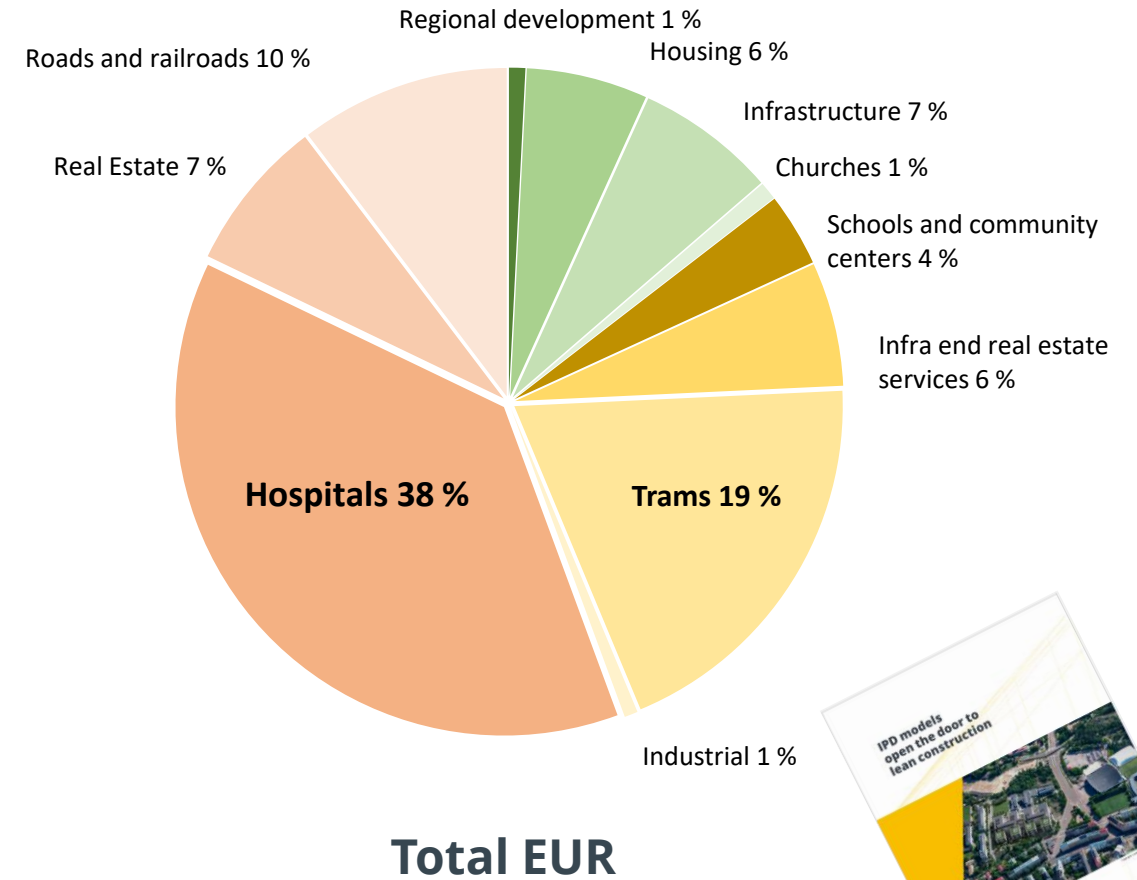
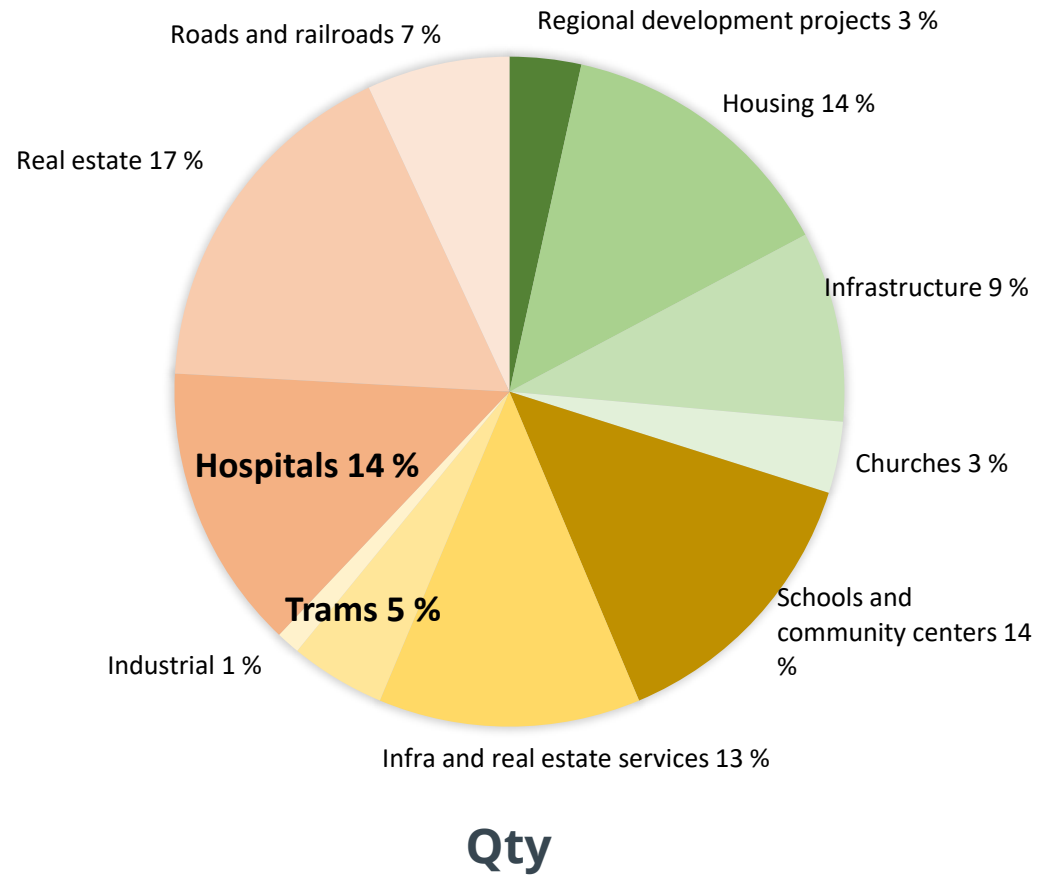
Finnish Project Alliance in Estonia

- Also used in the Rail Baltica project in Estonia



**Total value of Alliance Projects in 2025:
10-11 billion euros**

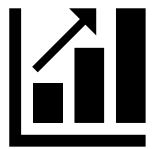
True alliance projects since 2011-



IPD Projects in Finland

Completed or ongoing IPD Projects

IPD Projects in Total



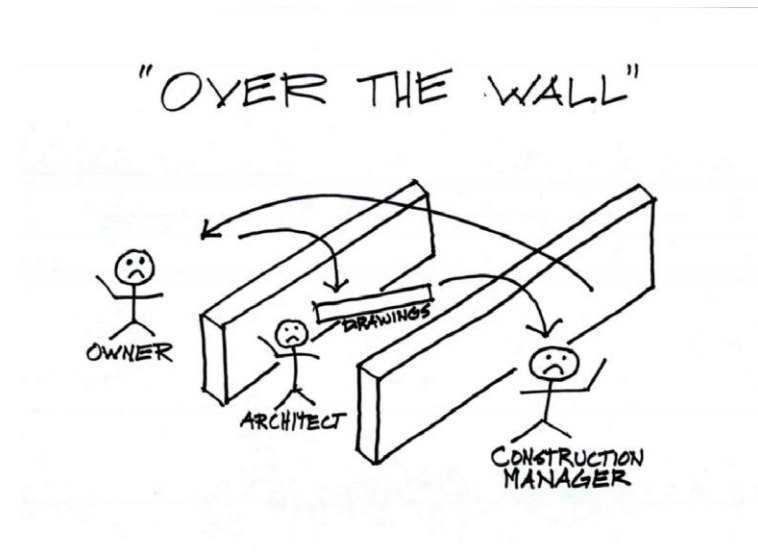
100 Project alliances **12-13** billion eur
40-50 Integrated project deliveries **2-3** billion eur

- Over 80% public projects, launched by government agencies, cities, or other public organizations
- Top 15 design firms, construction companies, and numerous smaller architectural firms involved
- Public projects tendered using the negotiated procedure according EU procurement directive

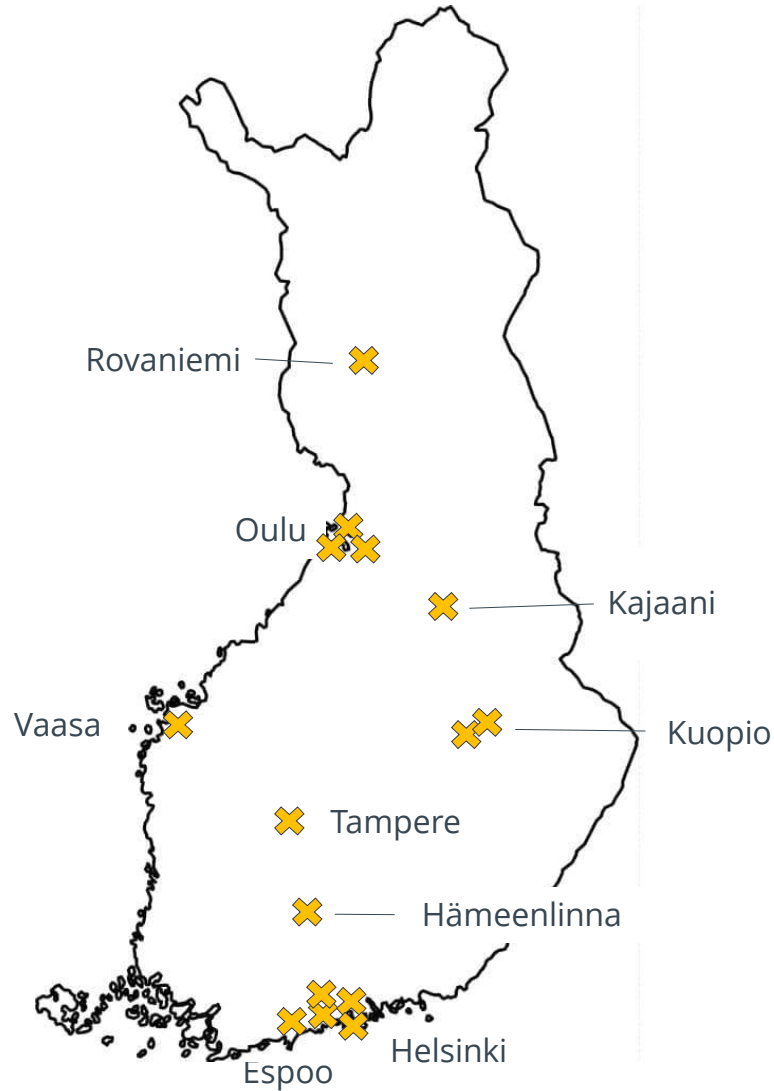
Healthcare IPD Projects



18 projects **4,7** billion eur



IPD Model in hospital projects since 2011



Ongoing

- **2032 Tampere** Hospital Expansion, €900M, IPD Project
- **2030 Helsinki**, Laakso Joint Hospital €1005M, Project alliance
- **2029 Oulu** C Building €160M, Project alliance
- **2026 Espoo** Jorvi Hospital €259M, Project alliance
- **2026 Hämeenlinna**, Ahvenisto Hospital €321M, Project alliance
- **2026 Kuopio**, Phase 3 €65M, Project alliance

Completed

- **2025 Oulu** Hospital, F Building €197M, Project alliance
- **2024 Helsinki** Oak Hospital €115M IPD Project
- **2024 Oulu** B Building €375M, Project alliance
- **2023 Rovaniemi**, Lapland Central Hospital €118M, Project alliance
- **2023 Oulu** A Building €240M, Project alliance
- **2023 Helsinki** Bridge Hospital €295M, IPD Project
- **2023 Vaasa** BothniaHigh5 €141M, Project alliance
- **2023 Kuopio** Hospital Phases 1-2 €101M, Project alliance
- **2021 Helsinki** Park Hospital €44M, IPD Project
- **2021 Kajaani**, Kainuu Hospital €165M, Project alliance
- **2021 Kempele** Health Center €14M, Project alliance
- **2021 Järvenpää** Social and Health Center €51M, Project alliance

ALLIANCE PROJECTS 2011-2023

	CLIENT	MILJ. €
1.	Lielähti-Kokemäki railway renovation	Finnish Transport Infrastructure Agency 80,1
2.	Vuolukiventie 1b renovation	University of Helsinki 18,0
3.	Tampere Tunnel	Finnish Transport Infrastructure Agency and City of Tampere 192,2
4.	Headquarters of Finnish Institute for Health and Welfare	Senate Properties 18,0
5.	Apartment house Retkeilijänkatu 3-7, Helsinki	Fira Oy 9,1
6.	Järvenpää Hospital	Kiinteistö Oy Järvenpään Terveystalo 51,0
7.	Lahti Travel Centre	City of Lahti 19,2
8.	Pakila street network maintenance contract	City of Helsinki 8,0
9.	Naantali Power Plant	Turun Seudun Energiatuotanto 50,0
10.	Joensuu Courthouse and Police Station	Senate Properties 31,0
11.	VTT Centre for Nuclear Safety	Senate Properties 30,0
12.	Renovation of Jyrkkälä apartment block, Turku	KOy Jyrkkälänpolku 23,3
13.	Apartment house Gunillankallio 10, Helsinki	The Seafarers' Pension Fund 13,0
14.	Kempele Health Centre expansion	Kempele Municipality 14,0
15.	Helsinki Airport pavement maintenance contract	Finavia 20,0
16.	Tampere Tramway	City of Tampere 266,0
17.	Oulu Children's and Women's Hospital	The Northern Ostrobothnia Hospital District 265,0
18.	Kainuu Central Hospital	Kainuu Social Welfare and Health Care Joint Authority 153,0
19.	Apron extension at Helsinki Airport	Finavia 100,0
20.	Hanaholmen Culture Center renovation	Senate Properties 30,0
21.	Hiukkavaara Community Centre	City of Oulu 20,0
22.	Kotka Police Station	Senate Properties 20,0
23.	Harppuunakorttelin apartment block, Turku	The Seafarers' Pension Fund 120,0
24.	Renovation of highway 6	Finnish Transport Infrastructure Agency 76,0
25.	Äänekoski-Jyväskylä railway renovation	Finnish Transport Infrastructure Agency 74,6
26.	Syvälahti School	City of Turku 23,7
27.	Helsinki Think Corner renovation	University of Helsinki 25,0
28.	Pitkäkangas School renovation	City of Oulu 10,0
29.	Pohjankartano School renovation	City of Oulu 10,0
30.	Central Jakomäki redevelopment	City of Helsinki 42,0
31.	Tesoma social and healthcare service contract	City of Tampere 150,0
32.	Apartment house Raitinkartano, Espoo	The Seafarers' Pension Fund 52,1
33.	Yli-Maaria School	City of Turku 22,0
34.	Suomenlinna Tunnel	Suomenlinna Administrative Board 7,0
35.	Railway network maintenance contract KP2	Finnish Transport Infrastructure Agency 4,8
36.	Kinnari School	City of Järvenpää 32,0
37.	Helsinki Jokeri Light Rail	Cities of Helsinki and Espoo 508,5
38.	Hämeenlinna Central Hospital	KHSHP 321,0
39.	Helsinki Airport terminal expansion	Finavia 300,0
40.	Lahti Southern Ring Road	Finnish Transport Infrastructure Agency 258,0
41.	Kuopio University Hospital	Kuopio University Hospital 164,0
42.	Vaasa Central Hospital H building	Vaasa Central Hospital 141,0
43.	Keravanjoki School	City of Kerava 36,0
44.	Rajatorppa and Hämeenkylä Schools	City of Vantaa 32,5
45.	Road information system ICT alliance	Finnish Transport Infrastructure Agency 8,0
46.	Uudenmaankatu office building renovation, Helsinki	KOy Helsingin Uudenmaankatu 16-20 8,0
47.	Tikkurila Church	Vantaa parish union 44,0
48.	Espoo Monikko	City of Espoo 46,0
49.	Apartment house renovation contract, Helsinki	HOAS 25,0
50.	Lohja Education Centre (Laurentiustalo)	City of Lohja 22,3
51.	Infrastructure cost management ICT service alliance	Finnish Transport Infrastructure Agency and Cities of Helsinki, Espoo, Jyväskylä, Tampere, Turku and Vantaa 8,0
52.	Street lightning and traffic lights contract	City of Joensuu 8,0

ALLIANCE PROJECTS 2011-2023

	CLIENT	MILJ. €
53.	Lapland Central Hospital expansion	Lapland Hospital District 118,0
54.	University of Helsinki main building renovation	University of Helsinki 28,0
55.	Apartment house Kulttuurimajakka, Espoo	The Seafarers' Pension Fund 15,0
56.	Ylivieska Church	Ylivieska parish 10,0
57.	Pakilanpuisto Schools and Day Care Center	City of Helsinki 53,0
58.	Operator services of Tampere Tramway	City of Tampere 90,0
59.	Oulu Future Hospital B building	The Northern Ostrobothnia Hospital District 375,0
60.	Railway network maintenance contract KP1	Finnish Transport Infrastructure Agency 130,0
61.	Tammela Stadion	City of Tampere 60,0
62.	Turku street network maintenance contract	City of Turku 33,0
63.	Tapiola Church renovation	Espoo Parish Union 13,0
64.	Helsinki Crown Bridges Light Rail	City of Helsinki and Helsinki City Transport 370,0
65.	Hippos student housing block, Tampere	TOAS 118,6
66.	Helsinki Finnish-Russian School	Senate Properties 25,0
67.	Jätkäsaari football hall, Helsinki	PPJ Football Club 3,7
68.	Helsinki Kalasatama Light Rail	City of Helsinki and Helsinki City Transport 300,0
69.	City Hall renovation	City of Lahti 22,9
70.	Oulu Hospital C building	The Northern Ostrobothnia Hospital District 500,0
71.	National theater renovation	Finnish National Theater 61,4
72.	Merikampus of Vaasa	University of Vaasa 14,0
73.	Jorvi hospital	The Hospital District of Helsinki and Uusimaa 225,0
74.	SUPO-house	Senate Properties 130,0
75.	Turku Concert Hall	City of Turku 62,2
76.	Laakso hospital	The Hospital District of Helsinki and Uusimaa and city of Helsinki 838,0
77.	Successive renovations -project	Asuntosäätiö (residential property owner) 10,0
78.	Track and signalling system maintenance alliance	Finnish Transport Infrastructure Agency 25,0
79.	National museum expansion	Senate Properties 55,0
80.	Vantaa prison new building	Senate Properties 56,0
81.	Vantaa heat storage	Vantaan Energia 108,8
82.	Hailuoto fixed link	Finnish Transport Infrastructure Agency 96,0
83.	Kouvola Asunnot apartments renovation	Kouvola Housing Ltd 10,0
84.	Kokkola Sports Park Alliance	Kokkola Sports park Ltd 50,0
85.	Martinlaakso Biopower plant	Vantaa Energy 60,0
86.	Kupittaa Partnership Project	City of Turku 190,0
87.	Vaasa cycling alliance	City of Vaasa 30,0
88.	Sea Water System Project Alliance	Helen 496,0
89.	Napsu Community Centre	City of Rovaniemi 39,0
90.	Kirjansalmi and Hessundisalmi bridges	Finnish Transport Infrastructure Agency 128,0
91.	Residential Real Estate Property Service Alliances (2)	Kouvola Housing Ltd 12,0
92.	Korpi alliance	Kajave 60,0
93.	Koskela depot	Metropolitan Area Transport Ltd 275,0
94.	Pirkkala-Linnainmaa Tramway, Tampere	City of Tampere 335,0
TOTAL		9 641,9

Publication: Alliance Report 2023 – IPD models open the door to lean construction

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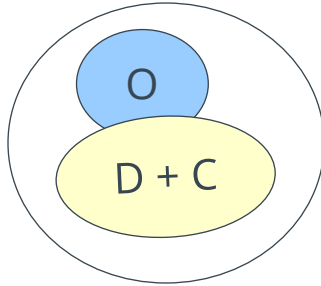


www.vison.fi/wp-content/uploads/2023/12/Vison-Allianssiraportti-2023_ENG_WEB.pdf



Procurement of alliance parties

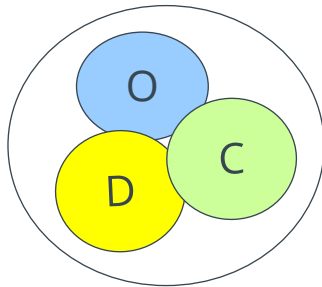
Most commonly used procurement models



designers and builders
as a **one team**

Selection of service providers as a single consortium

- + 1 public procurement
- + pre-integrated teams
- more expensive to tender
- individual members can not be selected



designers and builders
as **two different teams**

Selection of Designers and Builders Separately

- + cheaper to tender
- + individual members can be selected at some level
- 2 public procurement
- later team integration

Supplier selection and comparison criteria

Procurement notice



- Companies' Financials, Technical Expertise and Resources
- **Company references**

Preliminary offers



- **Project Team**
- **Team References**
- Interviews with Team Members, Exams or Case Tasks, etc.
- Draft project plan, Cost critique, etc.

Procurement by negotiation procedure

Final offers



- **Team's capability in workshops**
- Project plan, etc.
- **Project Fee (%)**

Comparing teams based on capabilities




- To **lead and organize**
- To **integrate** with each other and the client.
- To leverage all expertise and resources.
- To **innovate and develop**
- To **operate efficiently** and achieve results.
- To **communicate**
- To **evaluate and improve one's own performance**



Case: Laakso LYS Hospital

LYS Hospital

- HYS Hospital is a common project between the City of Helsinki and HUS (Hospital district of Helsinki and Uusimaa).
- The LYS Hospital will provide medical treatment and psychiatric and neurological treatment and rehabilitation.
- The limited liability real estate company Kiinteistöosakeyhtiö Laakson yhteissairaala is responsible for construction management, finance, own and maintenance of the forthcoming hospital buildings
- The real estate company will rent the premises to HUS and the City of Helsinki's Urban Environment Division, which will sublet the premises end-user units.

An aerial photograph of a hospital campus. A large complex of buildings is outlined with a dashed white line. To the north of this complex is a large, open, sandy area. To the east is a modern, angular building. A road runs along the bottom of the complex. Various callout boxes with arrows point to specific areas of the site.

New building to the north
gross area approx.
11,000 m²

New building
to the east
will be built in the Ohkola
area in Kellokoski

New access road from
Auroranportti underneath
Central Park

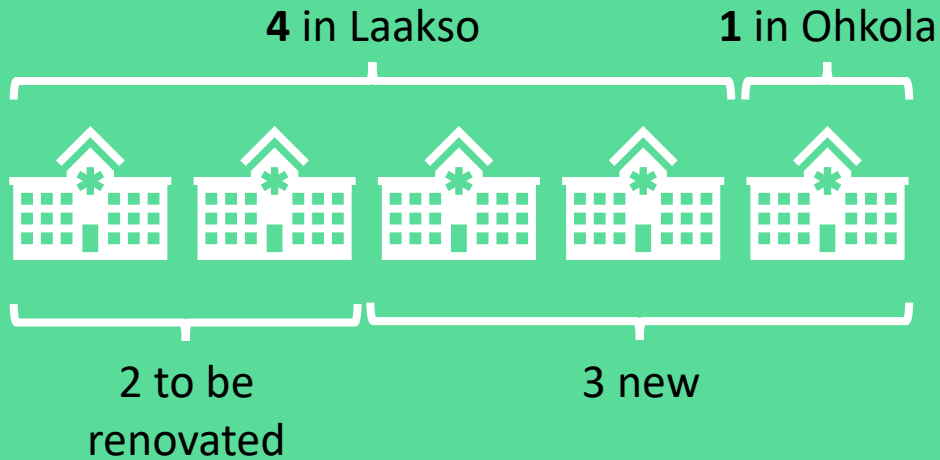
Main building
gross area approx.
90,000 m²

2 existing hospital buildings to be
retained and renovated
gross area approx. 17,000 m²

*The picture is in line with the new,
proposed project plan.*

LYS Hospital in figures

5 hospital buildings



more than 900 hospital beds
more than 900 bathrooms



550 underground parking spaces



2022–2030 construction schedule



EUR 1 110 000 000 (1/2024)
in construction costs



500,000 solid cubic meters of rock
to be excavated

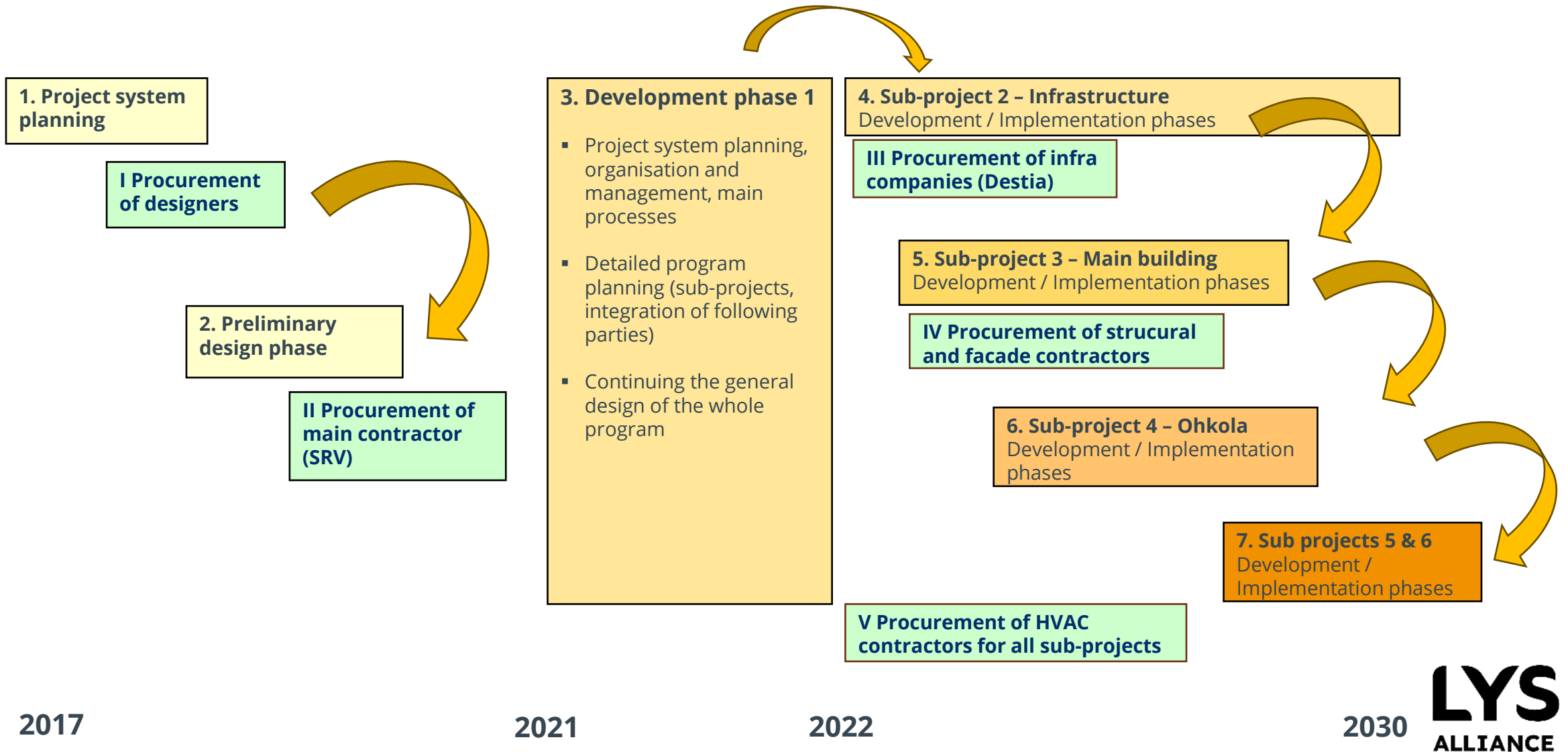


50,000 truckloads of blasted rock



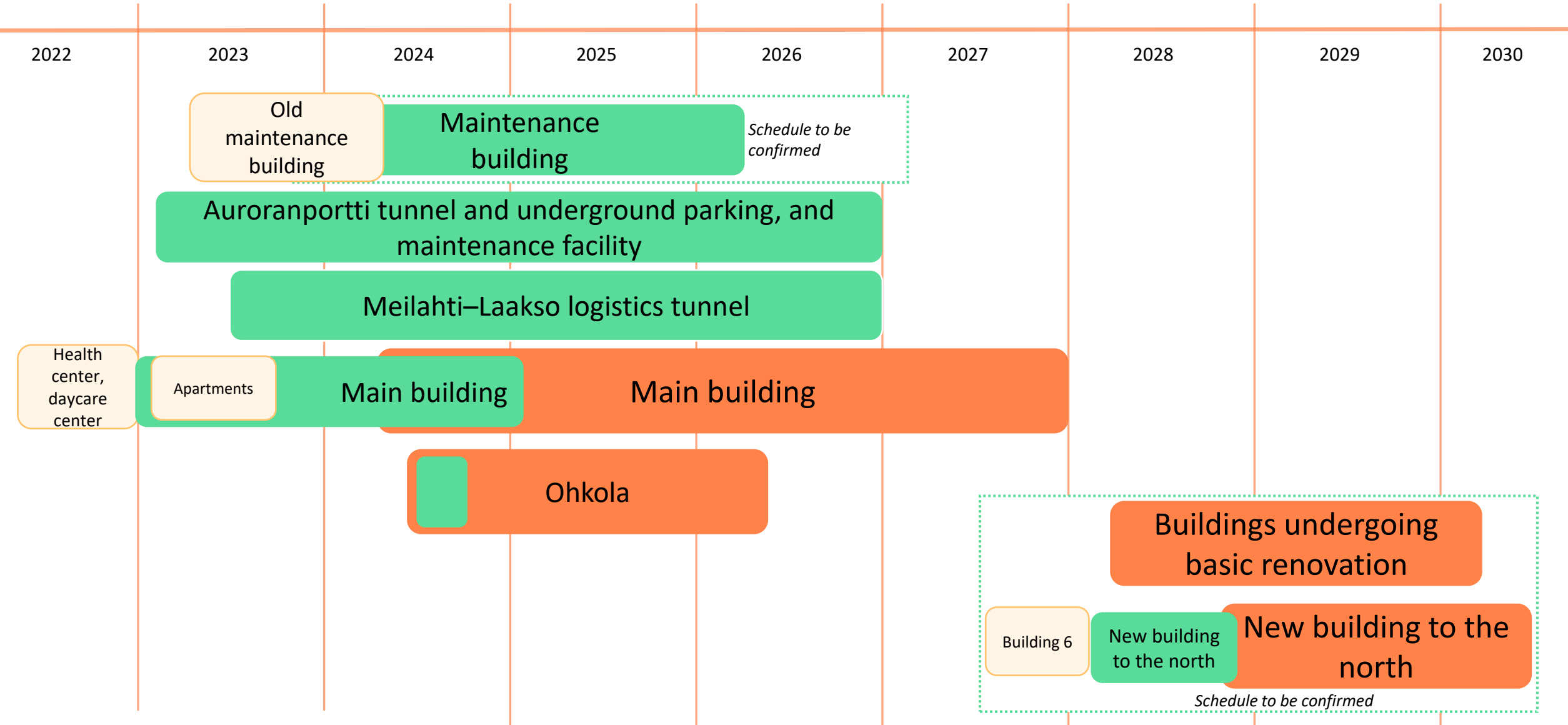
2,000 people working
when hospital operations
begin

Building the project system in phases



Building schedule

- Demolition work
- Infrastructure work
- Construction



LYS Hospital alliance parties

19 different organizations in same commercial framework, collective goals and risk sharing

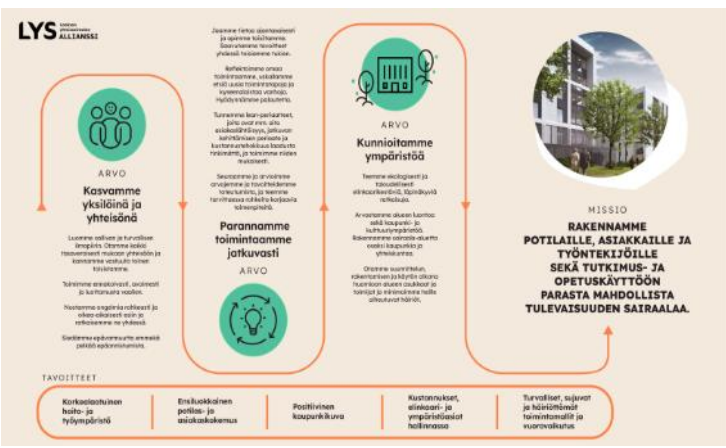
- **Client:** Real Estate Company LYS Hospital (50% HUS, 50% City of Helsinki)
- **Main contractor:** SRV
- **HVAC,** electrical and automation design: Granlund
- **General and architectural design:** Laakson Latu consortium: Tähti-Set Architects, AW2 Architects, Lukkaroinen Architects and UKI Architects
- **Structural, geotechnical and rock engineering:** UNITAS consortium: AFRY Finland, AINS Group Civil and Planning
- **Infrastructure alliance:** SRV, Destia
- **Technical building services alliance:** Amplit, Consti, Quattroservices

Principles of integration

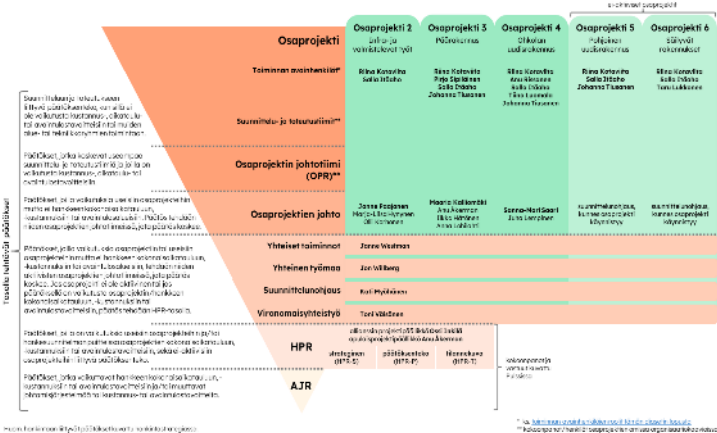


Building collaborative LYS Culture

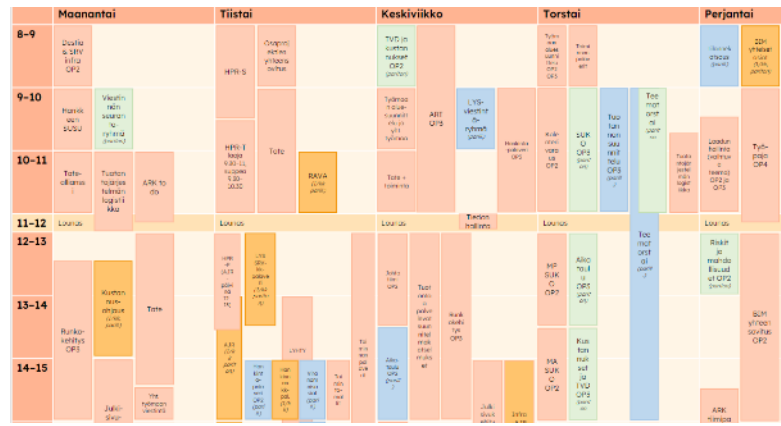
values



organisation



processes



objectives



management



Respect and continuous development





Results Achieved

International and domestic recognition



IPMA Global Project Excellence Award 2018

PM DAYS, 30-31 OCTOBER, HELSINKI, FINLAND
www.ipma.world



Vuoden Työmaa: Teollisuusallianssi osoitti voimansa Naantalissa

Se on Vuoden Työmaa. Allianssimalli osoitti hyötynsä, sillä kohde valmistui ajoissa ja allianssi budjetinnsa eikä työmaa-
kurten monissa voimalahankkeissa tätä ennen. Katso myös Rakennuslehden video kohteesta.



Liikenneviraston ja VR Trackin allianssi voitti työmaakilpailun

vuoden työmaa 2012 Rakennuslehden raati valitsi Lielahden ja Kokemäen välisen 90 kilometriä pitkän rata-
osuuden parantamisen vuoden parhaaksi työmaaksi. Työ on edennyt luottavaisesti kuin iirra. Iivsi allianssim
on osoittanut toimiv

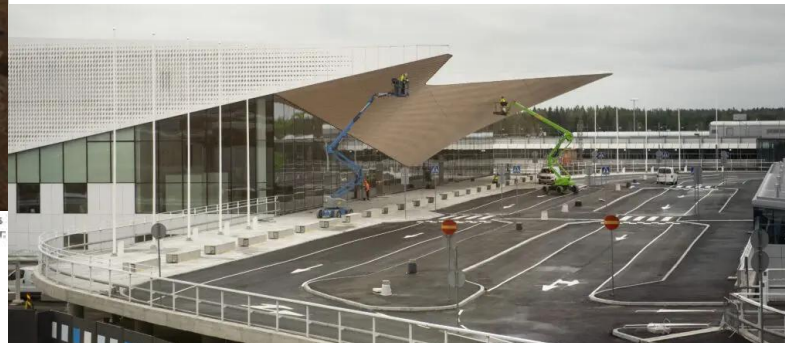
UUTSET KORJAUSRAKENTAMINEN

Helsingin yliopiston päärakennuksen perusparannus on Vuoden Työmaa 2020



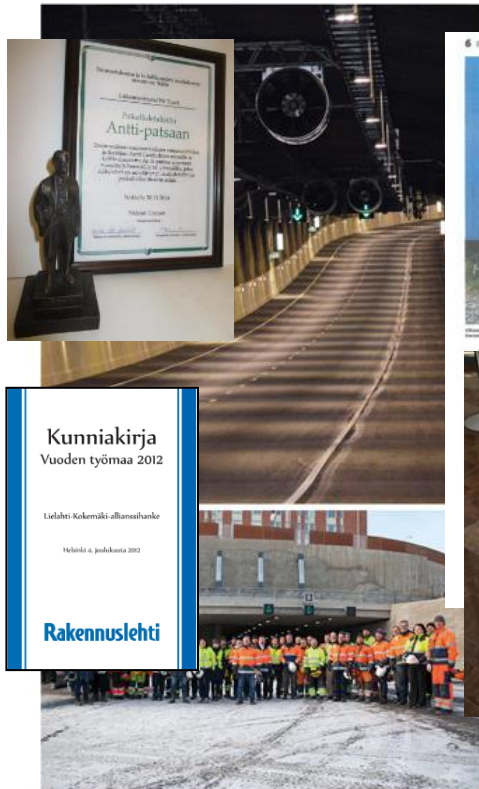
SRV:n vetämä allianssi voittoon – lentoaseman T2-termiinaali on Vuoden työmaa

Helsinki-Vantaan lentoaseman termiinaali 2:n allianssiprojekti voitti Rakennuslehden Vuoden työmaa -kilpailun.



der budget. The project was complicated and had to mitigate many risks. Delivered within the schedule, under budget and with high quality and safety results, the project is considered to be a great success.

safety performance. Number of accidents decreased by 50%. Public Image indicator: 88% satisfaction.



The benefits achieved in IPD Projects

More value for money and less waste

- Improved on-budget and on-schedule project delivery
- Faster turnaround time
- Higher quality and improved user satisfaction
- Improved lifecycle sustainability and reduced environmental impact
- **Better collaboration and transparency among different parties**



Enhanced social and industry impacts

- Improved transparency, governance, and industry and corporate responsibility
- Greater transparency, openness, and compliance
- **Advancement of healthcare and hospital processes**
- Increased sustainability of construction and buildings
- Accelerated sustainable and digitalization
- **Adoption of lean construction**
 - Takt time production
 - Target value design
 - Collaborative management etc.

Key challenges, lessons learned

- Use of external expert consultants
- Client's resources
- Procurement through negotiated procedure, evaluation of bidders in development workshops, offering based on fees (not price)
- Determination of target cost during the development phase
- Integration of subcontractors
- Transparency of production plans
- Change management
- New leadership."

Futher information

- Lean Construction Institute Finland: <https://lci.fi>
- Research and development project on IPD models by Finland's leading public organizations: www.IPT-hanke.fi
- Report of project alliances: www.vison.fi/wp-content/uploads/2023/12/Vison-Allianssiraportti-2023_ENG_WEB.pdf
- Integrated Hospital Design Alliance: <https://ihda.fi>
- Vison: www.vison.fi



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