

An introduction to the Lund model for Innovation Ecosystem Portfolio Tracking

Developed by Lund University and
Future By Lund innovation platform



From single point of growth to ecosystem scaling and growth

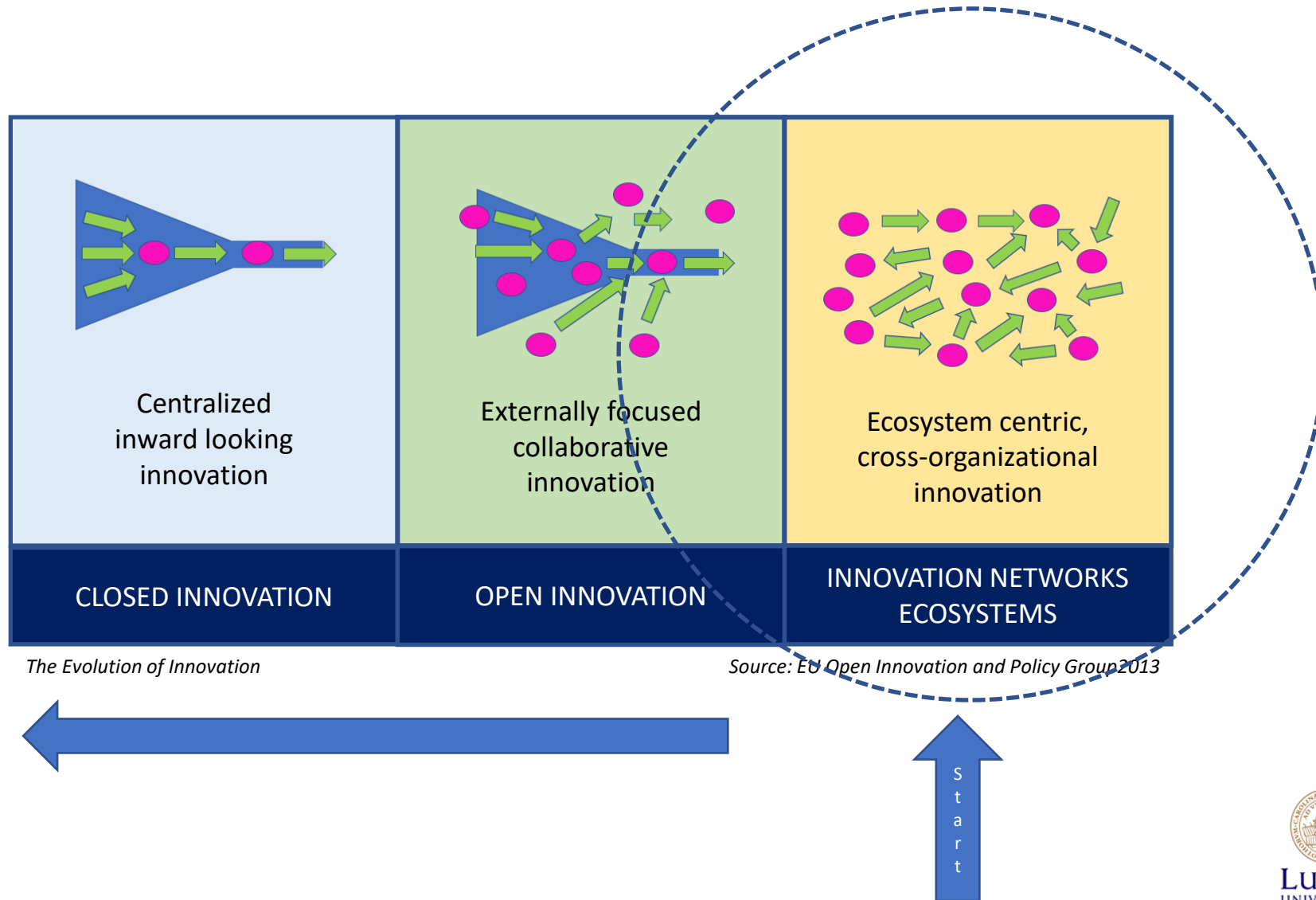
In complex areas of innovation and development, growth emerges not from a single point but from interactions across many actors in an ecosystem.

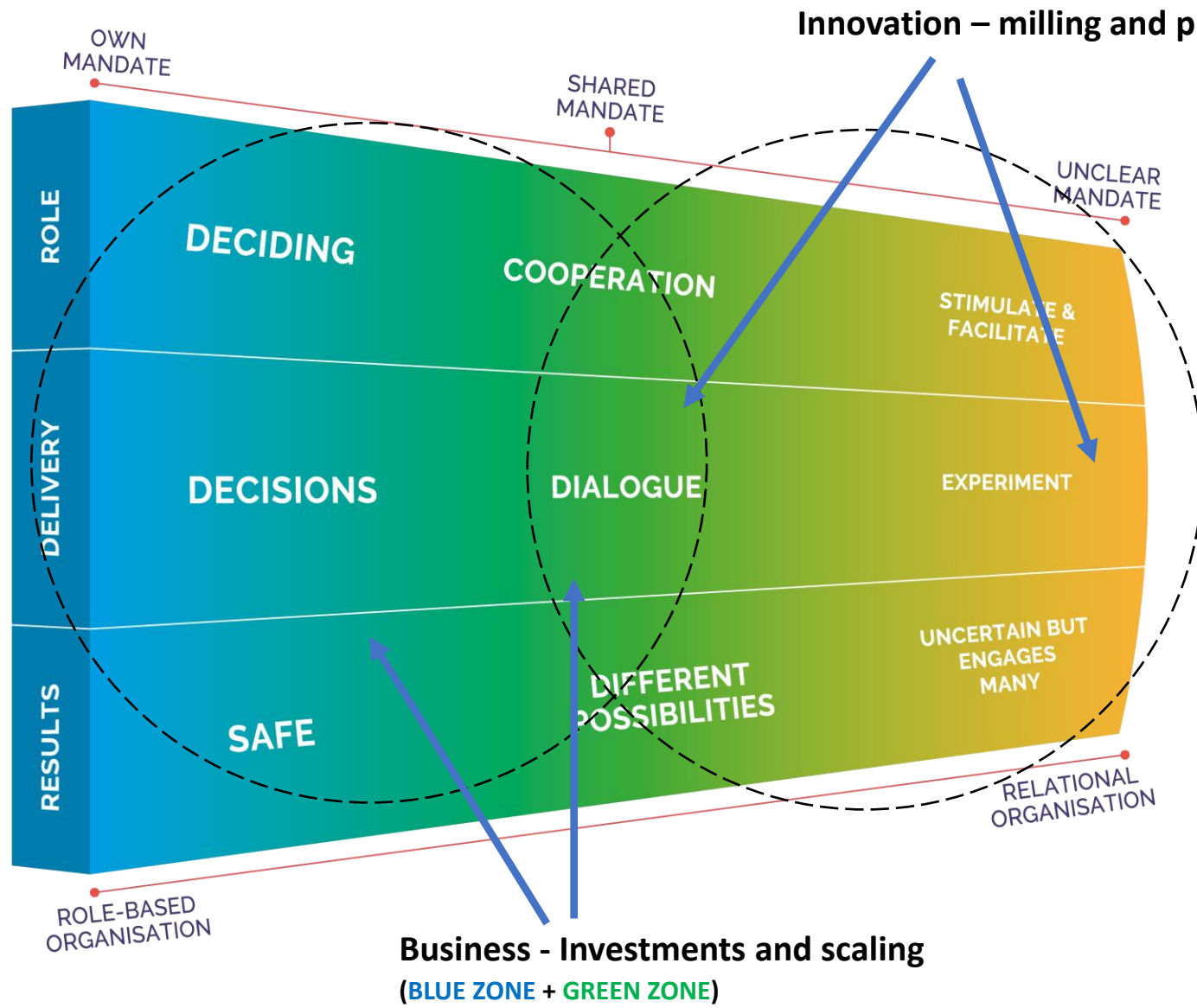
- How do we initiate this?
- How do we follow development over time?
- Where and when do we invest in different ways?

A need for...

- Building strategic competence and partnerships for scaling
- Working with innovation portfolios as an approach for developing the ecosystem's growth area(s)

Innovation in a multistakeholder environment





(YELLOW ZONE - Multistakeholder)

Mission, shared space, neutrality, transparency and creating relations for coming partnerships. Open and exploring, testing, creating experiments. Seeding.

(GREEN ZONE) - Partnership

Conceptualisation and consortia's in connection to interests - specific projects and partnerships. Project funding, start-ups

(BLUE ZONE) – Own organisation

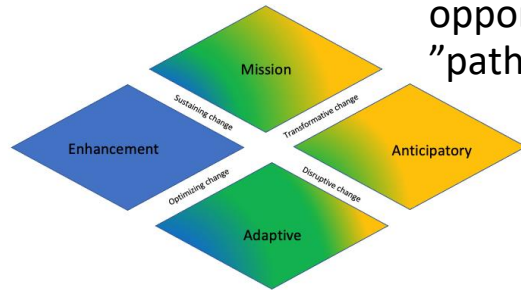
Investments and scaling. Business driven or internal organisational development. Investment logic and scaling

Why this model?

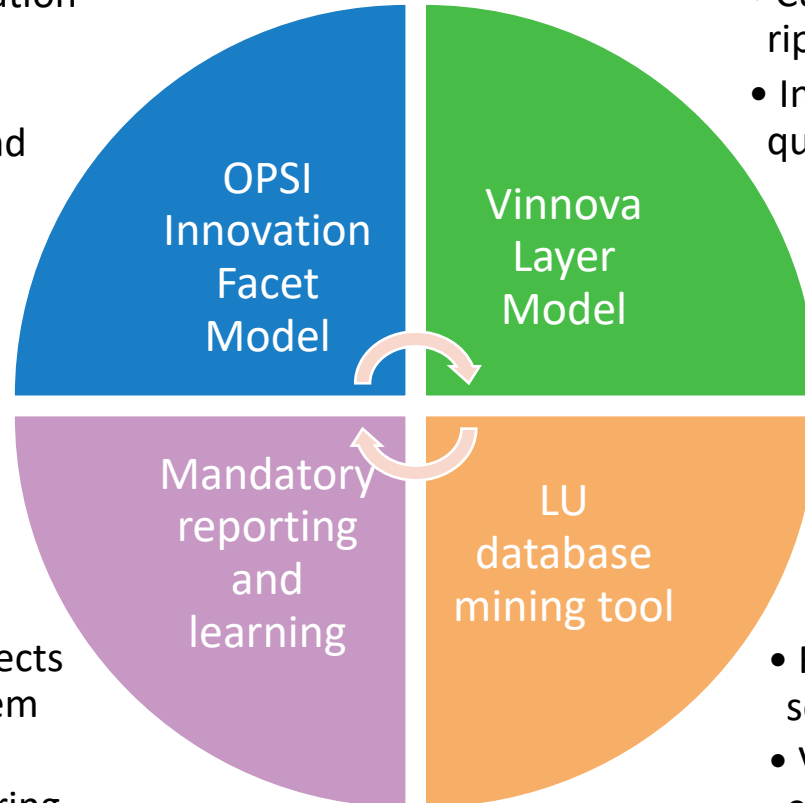
Enables innovation ecosystem governance and development:

- Provides stakeholders and investors with strategic insights about the ecosystem's portfolios
- Enables identification of opportunities for collaboration to solve complex challenges
- Tracks the accumulated projects and activities across organisations, building innovation portfolios
- Visualises the strength of the innovation ecosystem, its development and collective impact

The Lund model merges models and practices

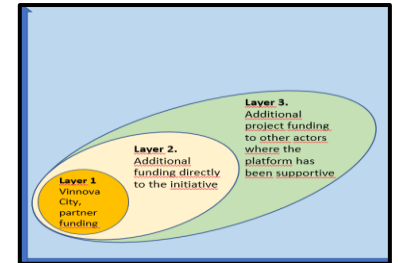


- Mapping innovation activities
- Highlighting opportunities and "paths"



- Reporting for projects and other ecosystem KPIs
- Reflective monitoring and learning

- Cumulative results and ripple effects
- Including quantitative and qualitative data



FutureByLund Data Visualisation

Year	Phase	Phase	Phase	Phase	Phase	Phase	Phase	Phase	Phase	Phase
2015	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10
2016	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10
2017	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10
2018	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10
2019	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10
2020	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10
2021	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10
2022	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10

- Funding data from multiple sources
- Visualising portfolio and ecosystem development over time



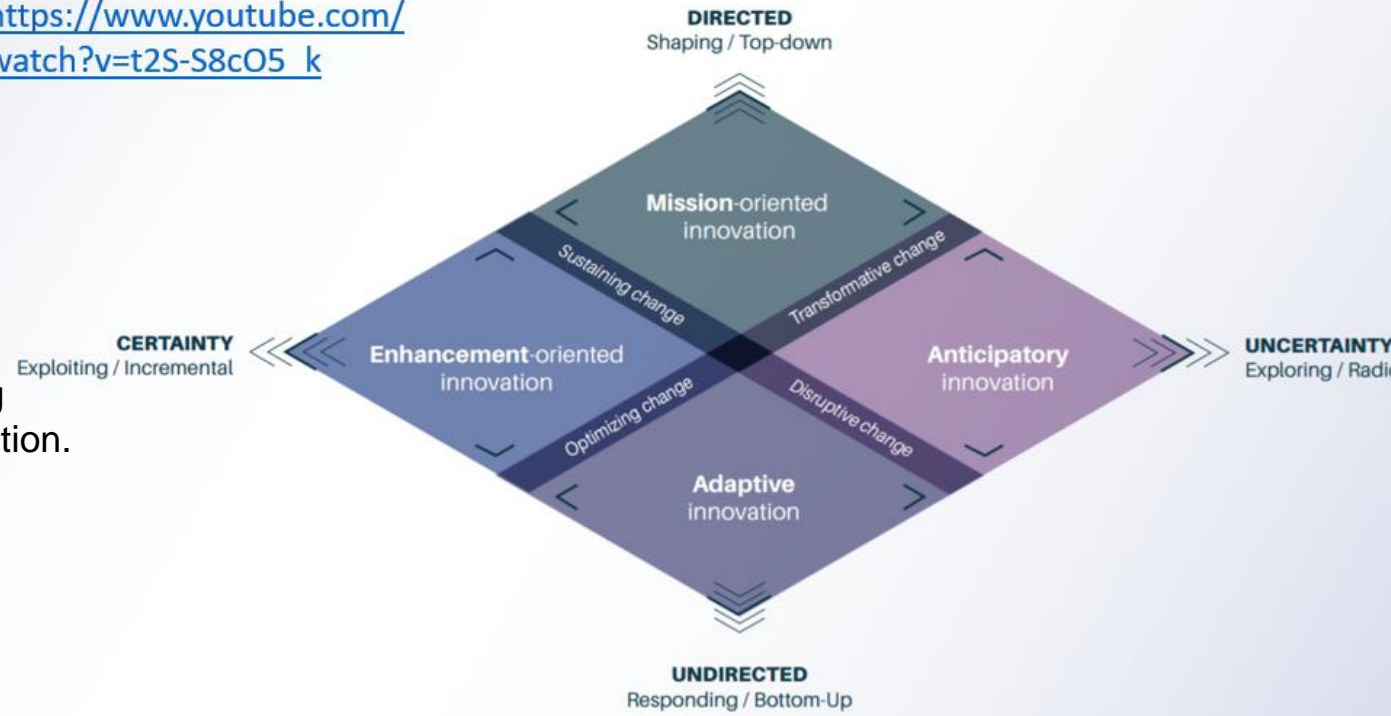
Observatory of
Public Sector Innovation

OPSI has developed a framework and portfolio exploration tool for clarifying the strategic intent and purpose behind innovation, helping governments to better understand and manage multi-faceted innovation.

Building clarity of purpose for innovation

Linking Ambition to Action: Creating a framework to build innovative capacity

https://www.youtube.com/watch?v=t2S-S8cO5_k



CORE RESEARCH TEAM



Joint Research Centre



Department
for International
Development



INSTITUTE FOR THE FUTURE

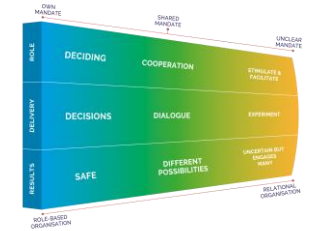


DIRECTED

Shaping / Top-Down

Reaching goals for Big Impact

Example: Climate goals, KIC CCSI, New European Bauhaus, Erasmus +,
National + Regional + Local



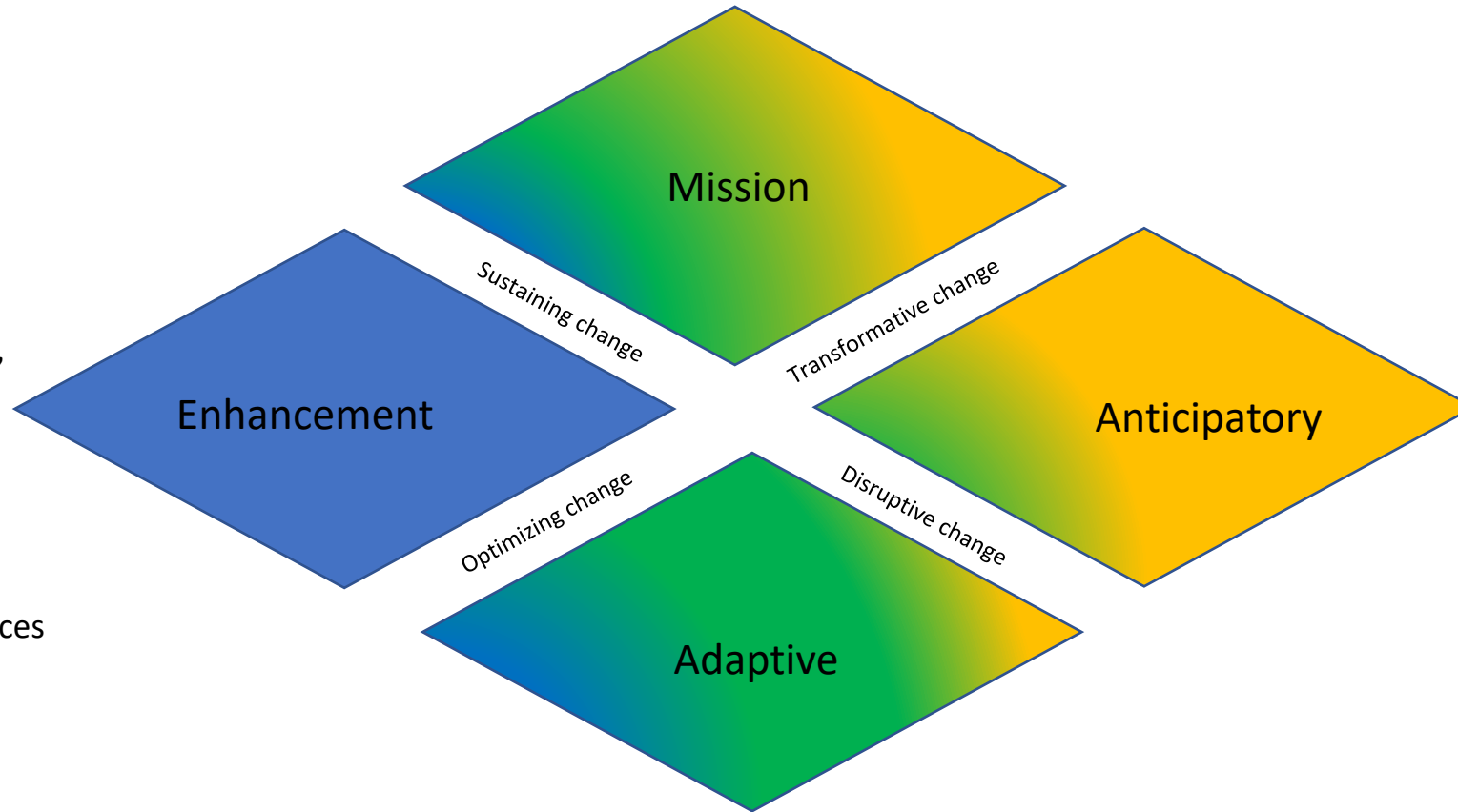
CERTAINTY

Exploiting /
Incremental

Same but better, scaling,
implementing, growth

Example:

- Sharing infrastructure
- City planning, culture
- Business improvement
- Better, faster, less resources



UNCERTAINTY

Exploring / Radical

Emerging questions
shaping the future.
Possible radical changes.

Example:

- Climate change
- Development sensors & IOT
- Business modelling
- New stories
- Sharing platforms

UNDIRECTED

Responding / Bottom-Up

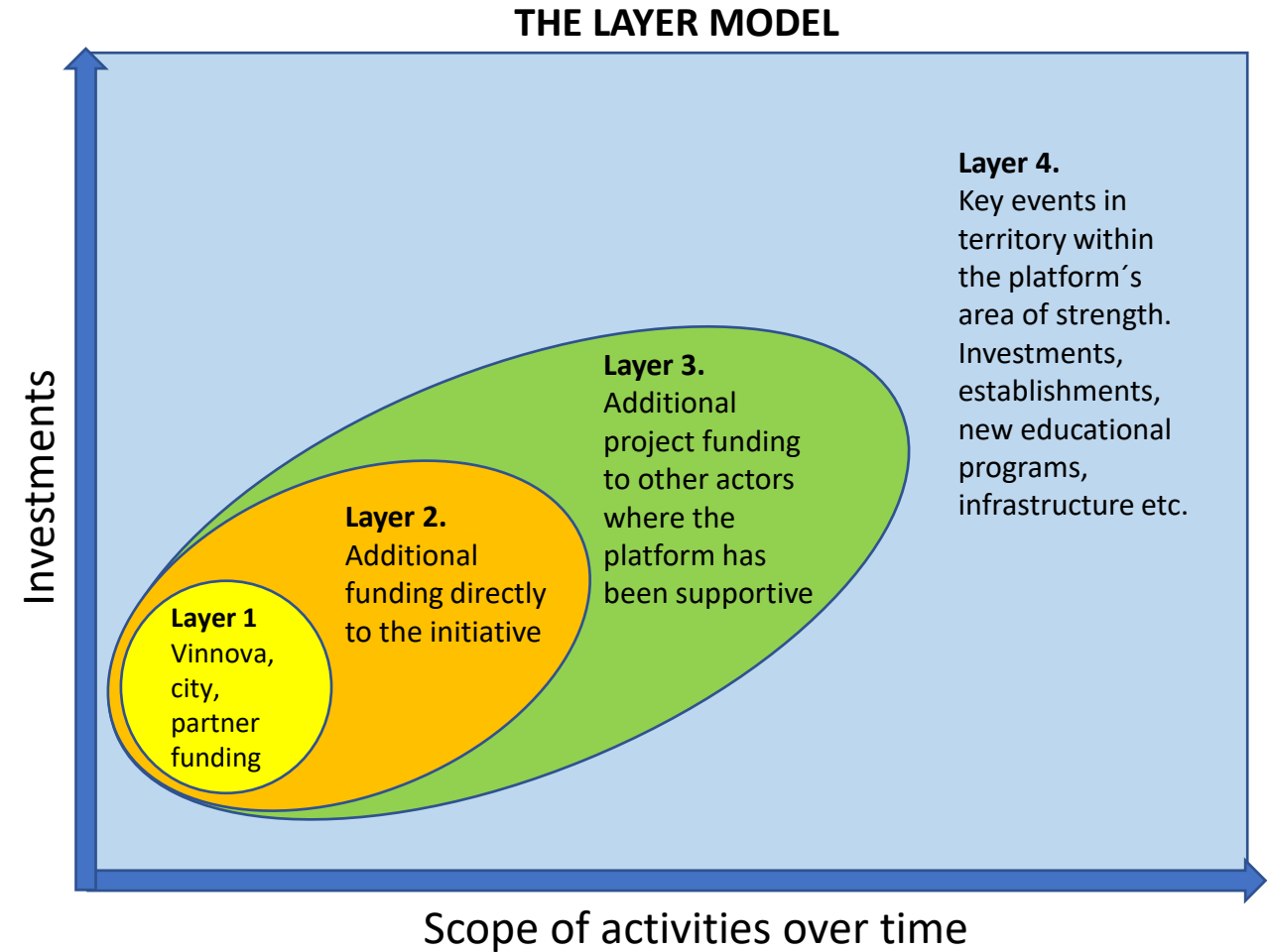
Driven by external changes, small, big and sometimes unexpected

Example: Digitalisation, Electricity shortage, material, New logistics patterns, Covid, Ukraine



How to evidence system transformation

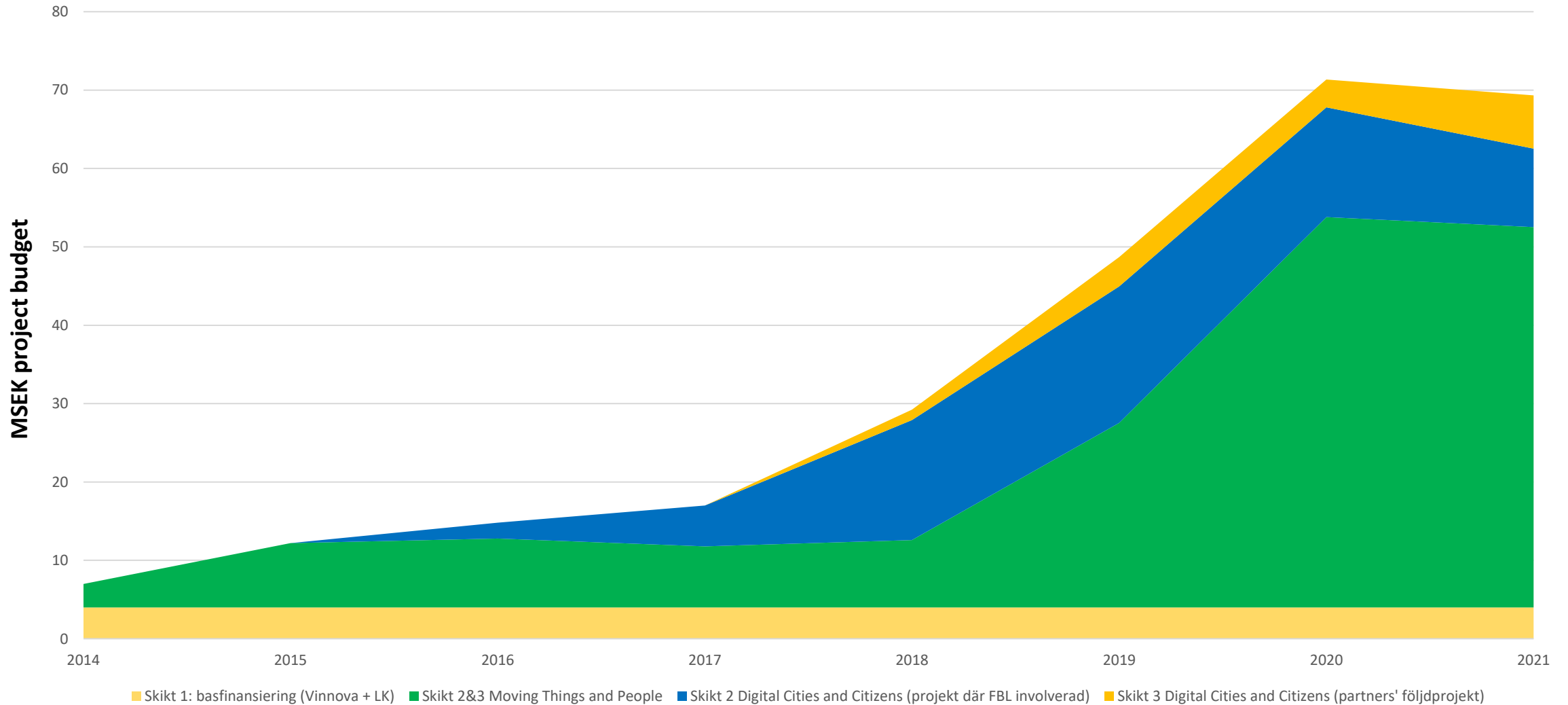
- The "layer model" (from Vinnväxt annual reporting) is a way to track leverage and "ripple effects" of collaborative action in an innovation ecosystem
 - **Project investments** of collaboration partners are a proxy for innovation investments more broadly
 - Documentation of **important events** is a way of evidencing the ripple effects of project activities and how the collaborative initiative has contributed to system change
- Following this information over time shows...
 - The main funders and actors involved in innovation projects – a sign of collective action and development of the innovation ecosystem
 - Accumulated investments and events/ripple effects over time provides a story of how the collaborative initiative has contributed to system-level transformation



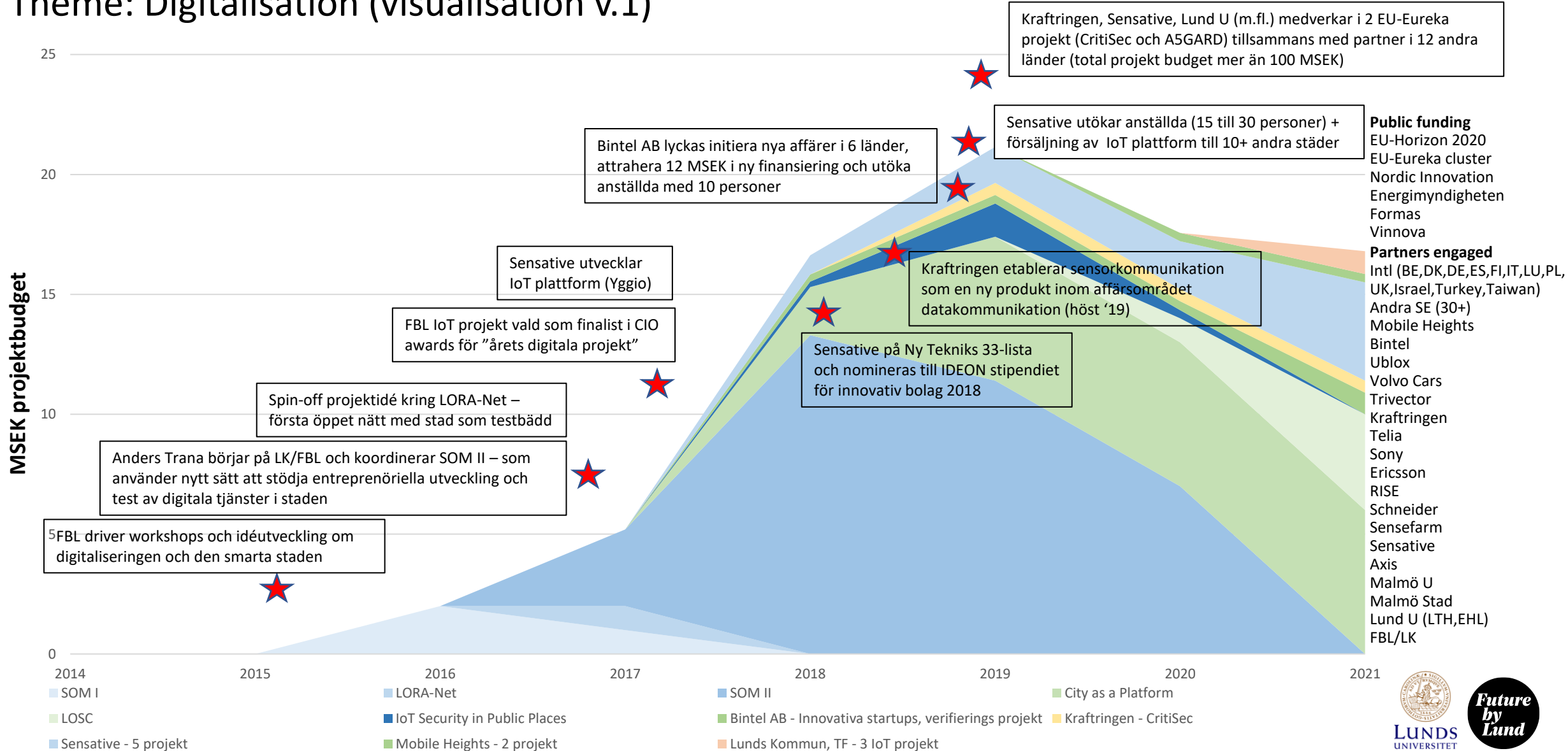
System effect categories for innovation ecosystems

Category abbreviation		Description	Examples
System Resources	KD	Knowledge Development and Dissemination: affecting how knowledge is developed, spread between actors and combined/applied in the system	new university courses, new research networks, programmes or institutional establishments/ expansions within the thematic area, attraction of talent
	EE-N or EE-I	Experimentation and Entrepreneurship: fostering test of new technologies, applications or markets; new company establishments	experimentation within existing companies, new companies or spin-outs, foreign companies establishing in the region
	INV-N or INV-I	Investments: new investment	expansionary investments in existing companies, FDI/purchase of companies in the region
	INF	Infrastructure: development of physical research and innovation infrastructure and environments	test/demo facilities, accelerators
System Leadership	POS-N or POS-I	Position: acting as the “voice of the ecosystem”; development of national or international reputation, position or visibility	national coordination responsibility, engagement in international RDI projects
	SP/ISS	Strategic partnership or business/innovation support system: development of collaborative culture, new strategic/longer-term partnerships and more efficient innovation support system	new cross-sectorial connections, improved structures/working practices among innovation support actors
	POL/ST	Policy or strategy: informing and influencing policy or strategy related to thematic area	public procurement, regulations, company or regional development strategy, resource mobilisation and financial allocations

Future by Lund project portfolios over time



Theme: Digitalisation (visualisation v.1)



Lund University - Data mining and visualisation

A new digital tool under development

FutureByLund Data Visualisation

Model | Data | Streamgraph | Data import

Current model: Model name: FutureByLund

Layers: Layer 1 Layer 2 Layer 3

Portfolio:

- Base Platform
- Digital Cities and Citizens
- Smart Sustainable Cities - Moving Things and People
- Smart Sustainable Cities - Future Living and Spaces
- Creative and Cultural Sectors - Smart Fashion
- Ideas for society

Phase: Phase 1 Phase 2 Phase 3

Partners: + - import

Copy CSV Excel PDF

Name	OrgNumber
Lunds kommun	212000-1132
Lunds universitet	202100-3211
Alfa Laval Lund AB	556016-8642
Tetra Pak AB	556054-4735
Axis Communications Aktiebolag	556253-6143

Load Save
Filename: FutureByLund_model.rds

Flexibility to establish own model(s) for each ecosystem

Models with different portfolios, partners, and other aspects to "tag"

Adding of "own" data and adm. reports (EIT reporting?)

Base data on publicly-funded projects collected from public sources; data can be further elaborated and crowd-sourced

FutureByLund Data Visualisation

Model | **Data** | Streamgraph | Data import

Database name: Layer Portfolio Phase Partners Events

Selected:

Stored in file: FutureByLund_database.rds

Show entries

ProjectId	Layer	Portfolio	Phase	Partners	Events	YearlyBudget
<input type="text" value="All"/>	<input type="text" value=""/>	<input type="text" value="All"/>	<input type="text" value=""/>	<input type="text" value="All"/>	<input type="text" value="All"/>	<input type="text" value="All"/>
FBL2018_03951_Vinnova_2020_00001	Layer 1	Base Platform	Phase 1	{"212000-1132":["Lunds kommun"]}	[{"2015-01-01":["FBL driver workshops och idéutve...]	{"2014":[4000000],"2015
2020-03731_Vinnova	Layer 2	Technology Driven	Phase 1	{"212000-1132":["Lunds kommun"],"202100-3211":["L...		{"2020":[354070.5],"2021
2015-04320_Vinnova	Layer 2	Mobility as a Service	Phase 1			{"2015":[95160],"2016":[3
2018-03951_Vinnova	Layer 2	Digital Cities and Citizens	Phase 1			{"2018":[230703.5294],"2
2018-04500_Vinnova	Layer 2	Digital Cities and Citizens	Phase 1		[{"2015-01-01":["FBL driver workshopoch ideutvek...]	{"2018":[571428.5714],"2
P40369-1_Energi	Layer 2	Technology Driven	Phase 1		[{"2014-09-01":["Elonroad grundas Sept 2014 (1 an...]	{"2015":[1757941.1765],'
P42020-1_Energi	Layer 2	Technology Driven	Phase 1		[{"2016-01-01":["Testbädd Örtofta"]}]	{"2016":[10000000],"201
2018-02010_Vinnova	Layer 2	Technology Driven	Phase 1	{"212000-1132":["Lunds kommun"],"202100-3211":["L...	[{"2016-01-01":["Per Löfberg anställd på FBL att ...]	{"2018":[907236.8421],"2
20204778_ETS_TV	Layer 2	Technology Driven	Phase 1			{"2020":[8126970],"2021



Visualisation matching layer model (version 2)

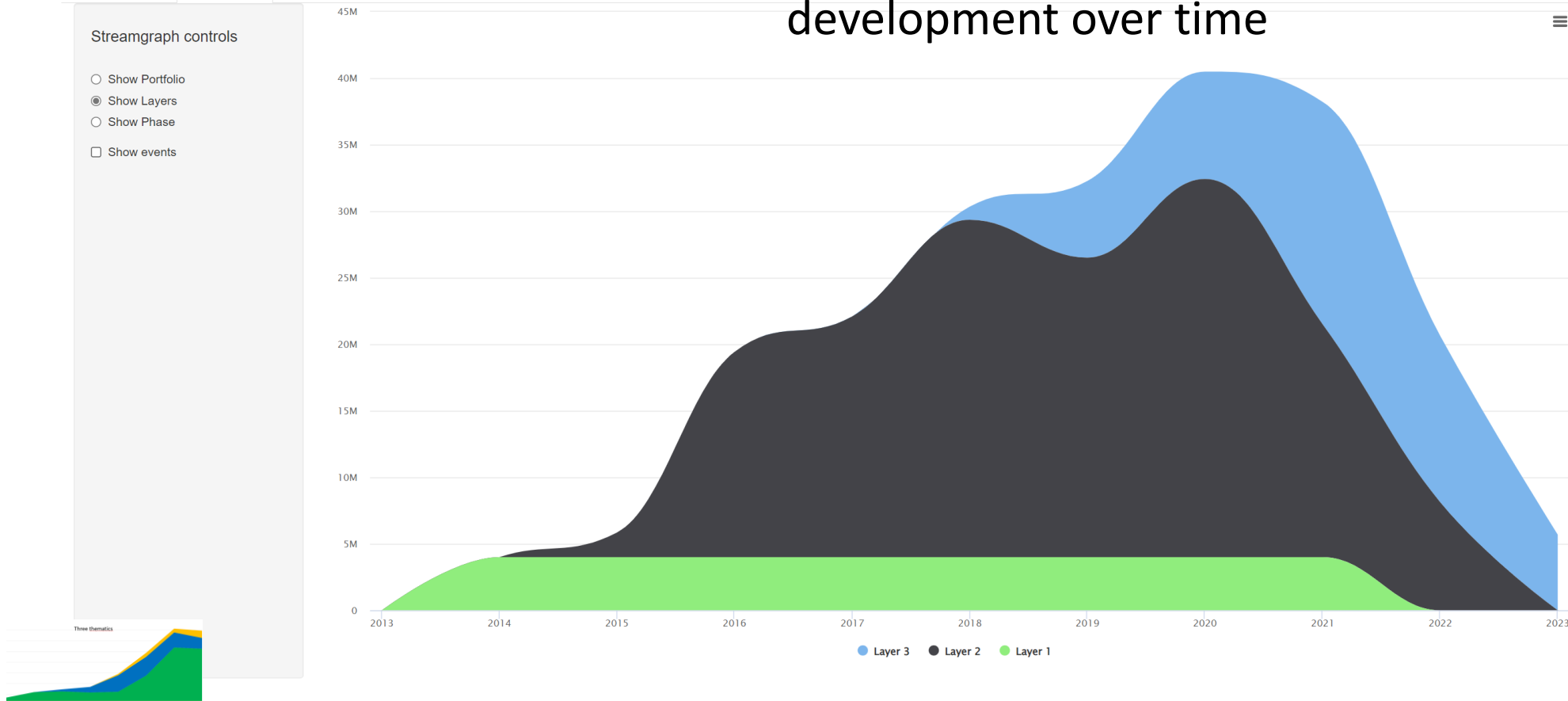
FutureByLund Data Visualisation

Model Data Streamgraph Data import

Streamgraph controls

- Show Portfolio
- Show Layers
- Show Phase
- Show events

Possibility for various visualisations of ecosystem development over time



Including 'critical events' that have contributed to development over time

FutureByLund Data Visualisation

Model Data Streamgraph Data import

Streamgraph controls

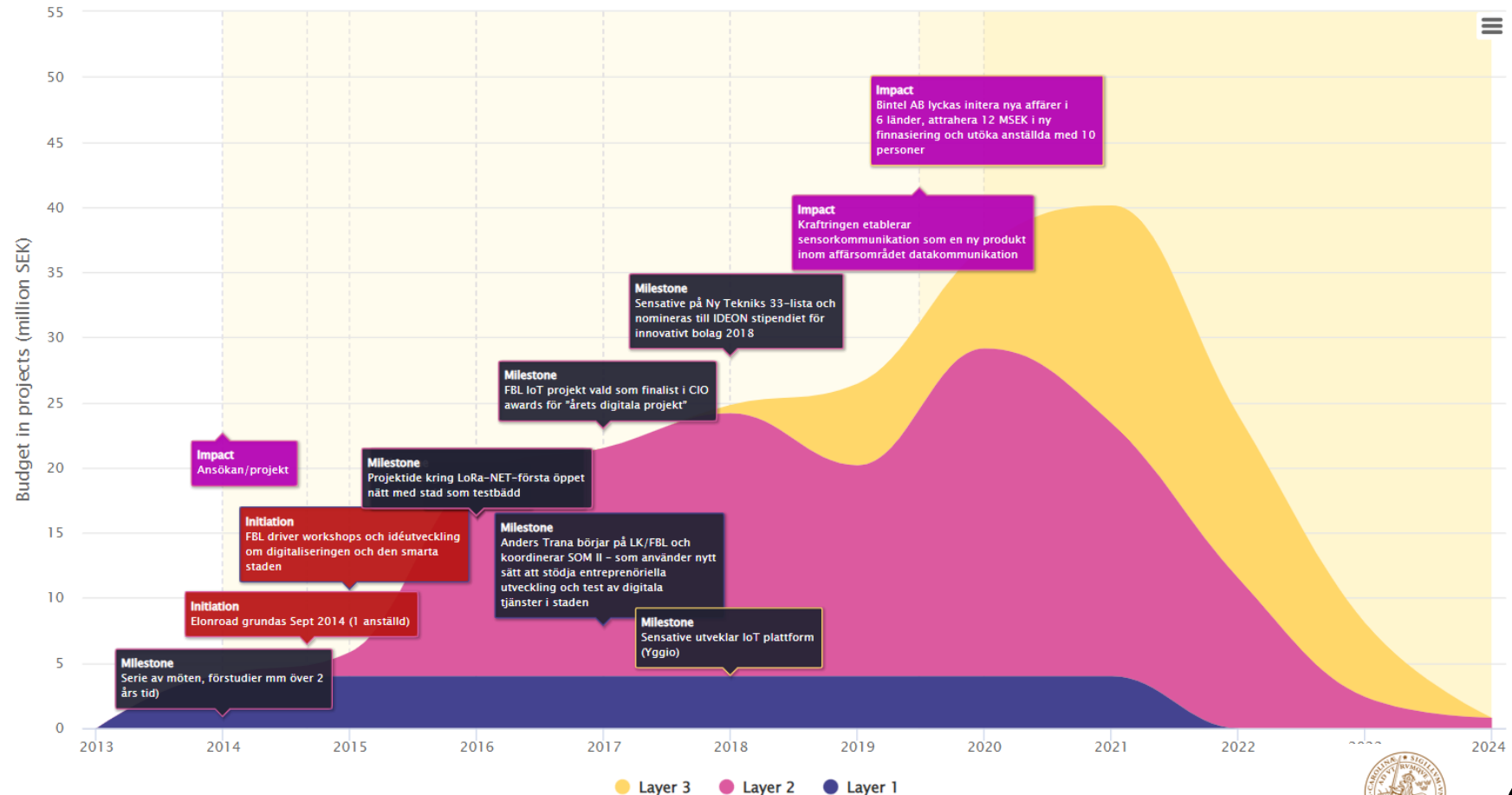
- Show Portfolio
- Show Layers
- Show Phase

Layer

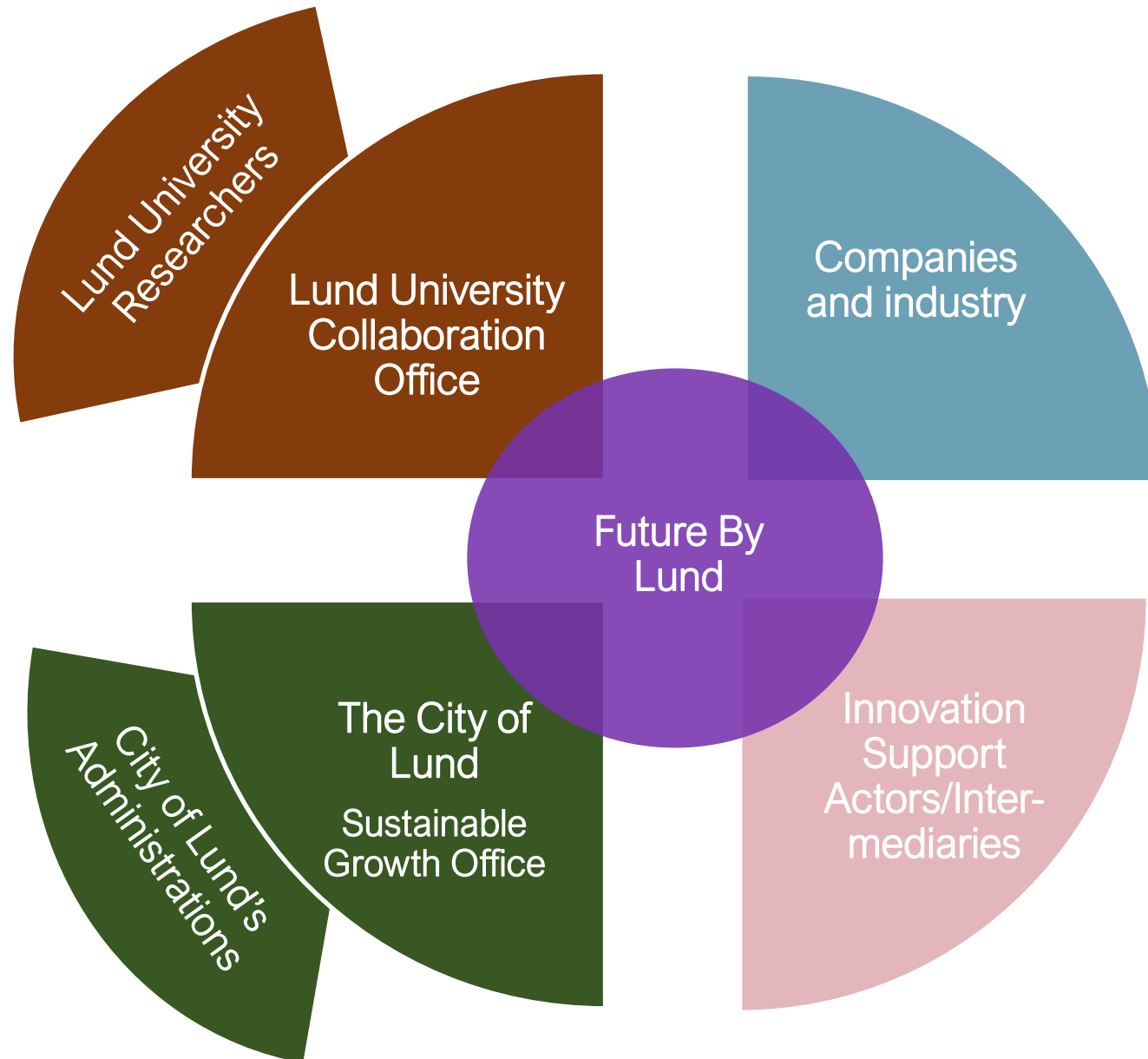
Layer 1 Layer 2

Layer 3

- Show events



Partners for good governance of the ecosystem



The method only has value in its application.

The innovation platform Future By Lund is the orchestrator responsible for:

- Applying the model
- Driving processes and strategic dialogue
- Identifying cross innovation opportunities
- Mobilising and matchmaking actors
- Following progress and curating development
- Identifying investors and opportunities to scale-up