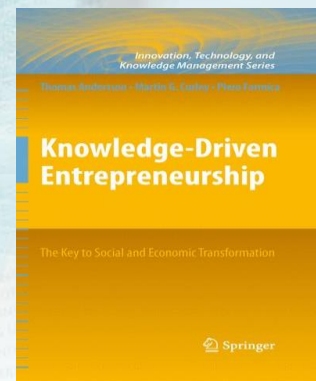


from intention to action

International Competitiveness, Sustainability and Innovation; Lessons from Sweden in an International context

Thomas Andersson
Geneva, September 2, 2015





Disposition

- Competitiveness and Sustainability Performances
- Some Observations on the Swedish Approach
- Innovation Eco-system
- Governance and Stakeholder Engagement



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Competitiveness and Sustainability Performances

Sweden in the Competitiveness Ranking – and the Countries ahead

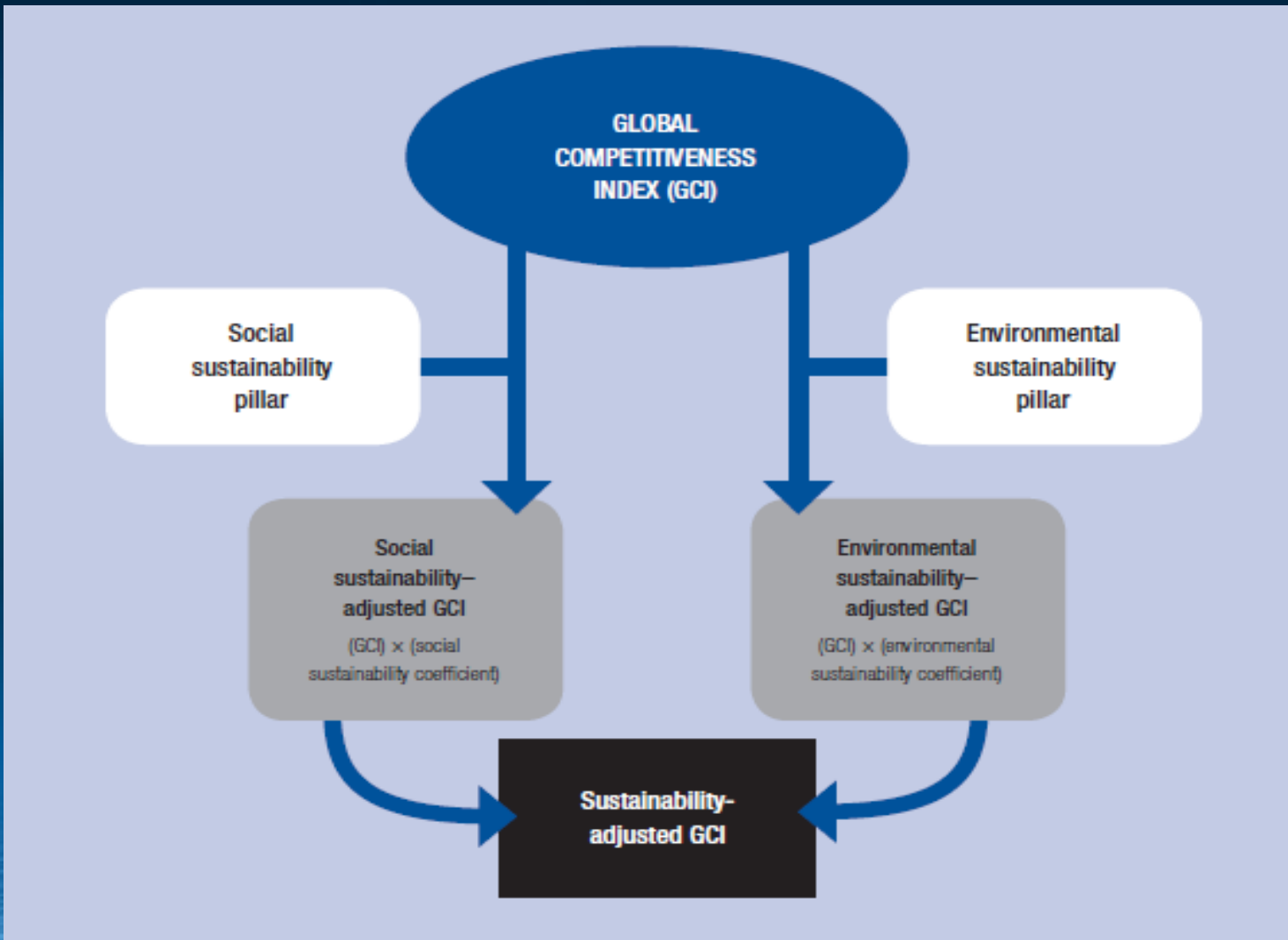


Deloitte.





When Weighing in Sustainability indicators





Adjustment in the GCI Scores with Sustainability Indicators

	GCI 2014/15		Social sustainability-adjusted GCI		Environmental sustainability-adjusted GCI		Sustainability-adjusted GCI		
	rank	score	score	+ / -	score	+ / -	score	rank	+ / -
Switzerland	1	5.70	6.75	↑	6.84	↑	6.80	1	→
Singapore	2	5.65	n/i						
USA	3	5.54	5.97	↑	5.24	↓	5.61	17	↓
Finland	4	5.50	6.48	↑	5.98	↑	6.18	3	↑
Germany	5	5.49	6.36	↑	6.00	↑	6.18	4	↑
Japan	6	5.47	6.29	↑	5.83	↑	6.06	6	→
Hong Kong SAR	7	5.46	n/i						
Netherlands	8	5.45	6.39	↑	5.88	↑	6.13	5	↑
UK	9	5.41	5.95	↑	5.75	↑	5.85	11	↓
Sweden	10	5.41	6.05	↑	5.95	↑	6.00	7	↑
Other selected countries									
Norway	11	5.35	6.43	↑	6.14	↑	6.28	2	↑
Denmark	13	5.29	6.14	↑	5.69	↑	5.91	10	↑
China	28	4.89	4.96	→	4.28	↓	4.62	25	↑

Source: The Global Competitiveness Report 2014-15



Environmental Performance Index, 2014

	<i>World Rank</i>	<i>Air Quality</i>	<i>Water and Sanitation</i>	<i>Water Resources</i>	<i>Biodiversity and Habitat</i>	<i>Climate and energy</i>
<i>Sweden</i>	9	33	1	12	89	8
<i>Denmark</i>	13	52	1	7	73	16
<i>Iceland</i>	14	15	1	39	46	13
<i>Finland</i>	18	15	1	16	91	32
<i>Norway</i>	10	15	1	23	65	10
<i>Germany</i>	6	94	1	5	1	31
<i>Switzerland</i>	1	103	1	4	1	7
<i>UK</i>	12	45	1	3	70	56
<i>Spain</i>	7	32	23	8	101	4

Source: The Yale Center for Environmental Law & Policy (YCELP) (2014)



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Some observations on the Swedish Approach

Management & Core Values





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Swedish Success Stories



Swedish Success Stories

- *Bleaching, paper and pulp industry*
- *Recycling of beverage packaging*
- Eco-food demand
- Waste collection-treatment-recycling
incl. electrical waste and batteries (“el-retur”)

Division of Responsibilities



Municipalities

Collection, treatment of household waste

- The Environmental Code, Chapter 15
- The Local Government Act
- Law on Public Procurement Act
- The Competition Act



Producers

Handling waste with producers responsibility



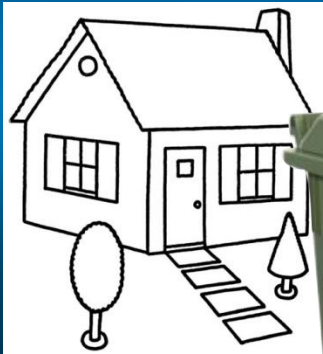
Enterprises

Handling other waste than household waste,
waste with prod. responsibility



Role of Municipalities

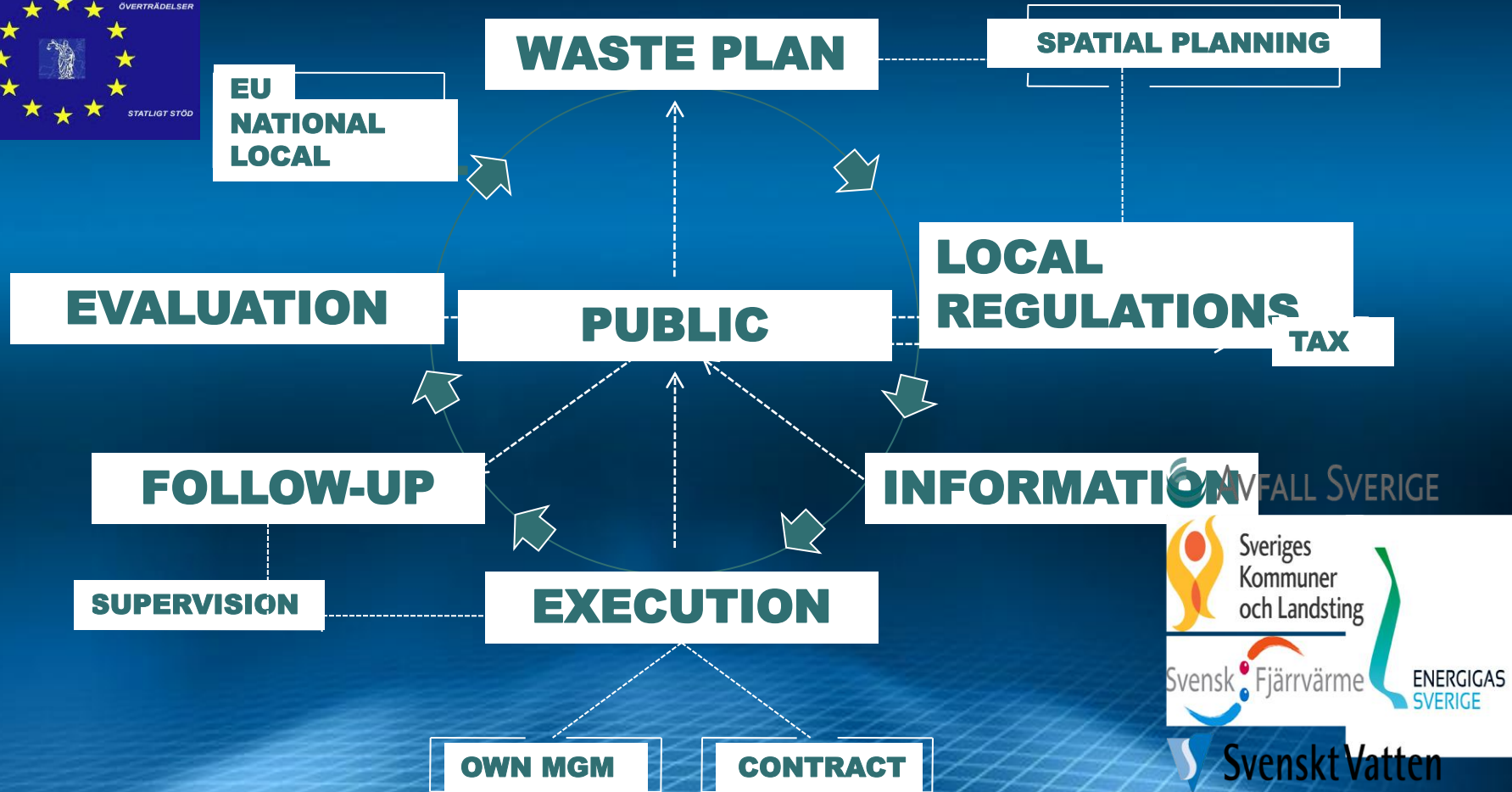
What municipalities should
do



What municipalities could
do



Complexity Facing Municipalities



Source: Avfall Sverige



Necessary Ingredients

- *Coordination and initiative “to do more”*
- *Investment in new infrastructure*
- *Risk-taking in developing and trying new solutions*
- *Exchange of experience and collective learning*
- *Follow-through of evaluation and standardisation*
- *Buy-in broadly in society*



Swedish Strengths

- *Education, awareness-building*
- *Objectives*
- *Environmental policies mainstreamed*
- *Economic Instruments (European trading system)*
- *Information management (labeling, green certificates, ISO 9001:2015 and ISO 14001:2015...)*
- *R&D and innovation*
- *Organisation*



Regulatory Principles in Sweden

- i) Decentralisation
- ii) Delegated responsibility
- iii) From agencies “taking care” to courts moving into action
- iv) Cooperative relations
- v) Consultative approach – stakeholder relations



Issues

- Implementation/dealing with the issues
- Policy Integration
- International Cooperation
- Element of incumbent domination,
conformity



Remaining Challenges for Sweden

- i) Achieving more sustainable product life-cycles, incl. recycling.
- ii) Systemic improvement production and consumption patterns, including through consumer engagement in transport, durables, food, etc.
- iii) Reducing toxic waste use of pesticides, chemicals, etc.
- iv) Addressing regional environmental problems such as the status of the Baltic Sea and acidification and cross-border pollution, including from Russia and Eastern Europe.



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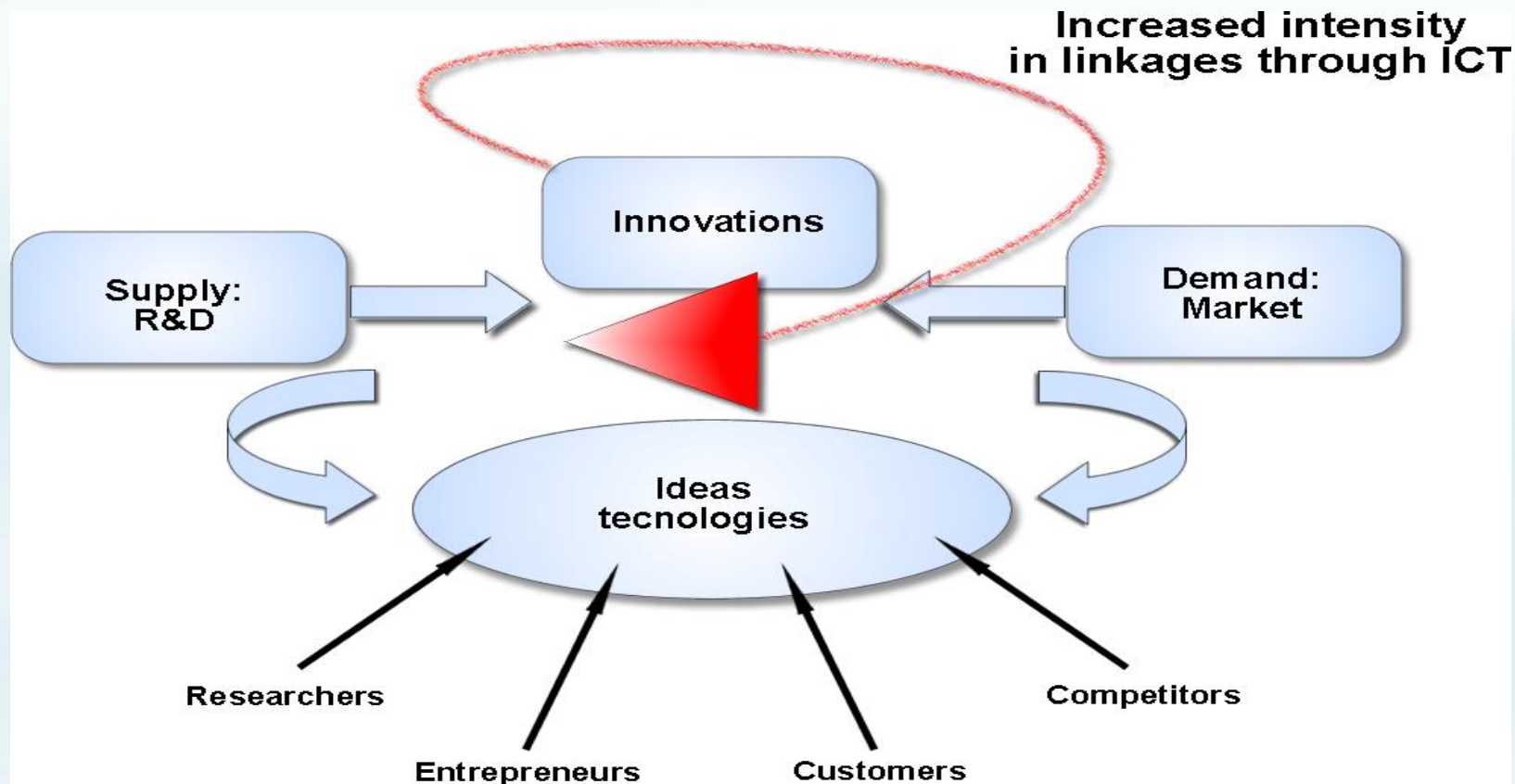
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Innovation Ecosystem

-

Abandoning the Linear Model

from intention to action



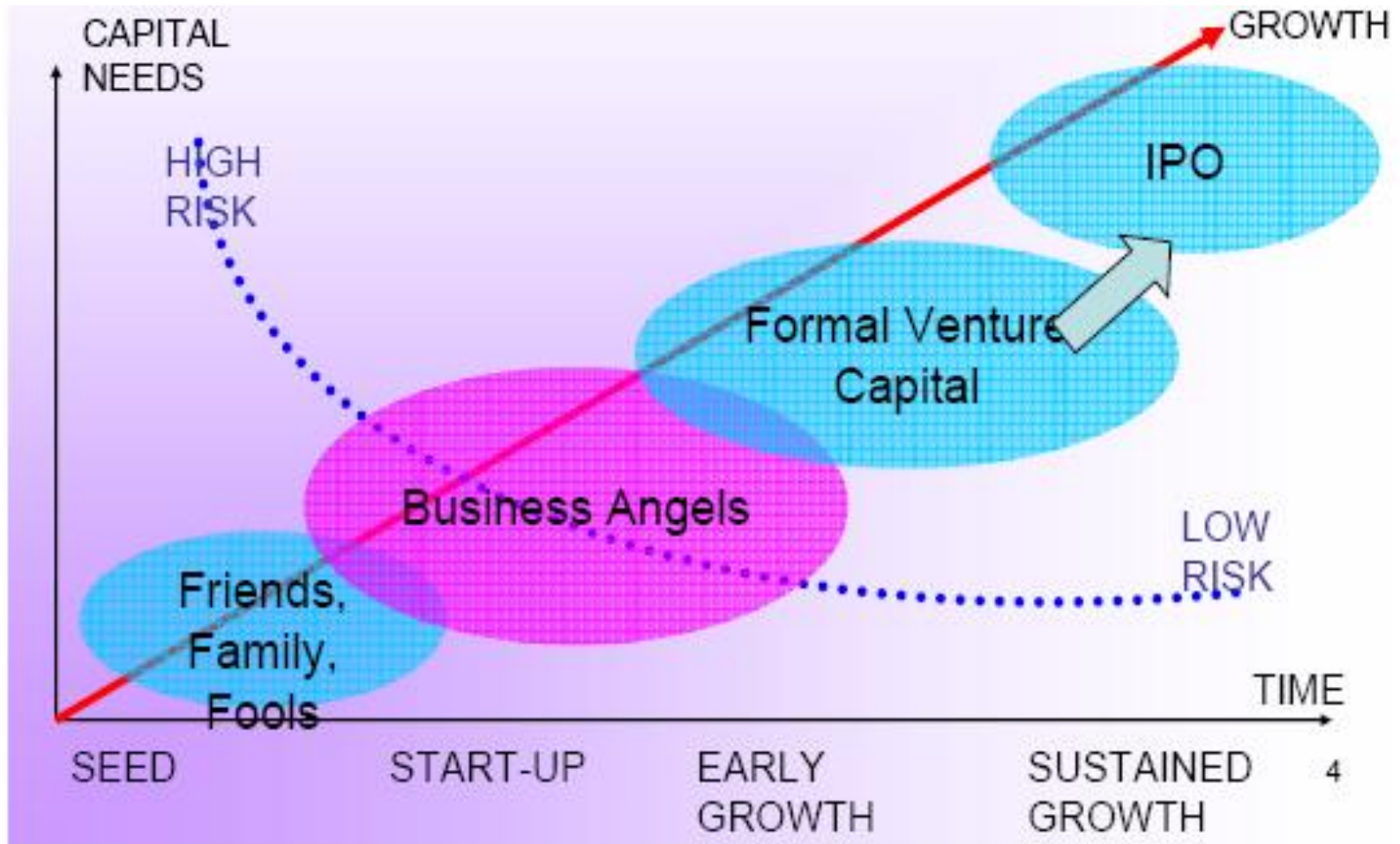


Stages

- End-of-pipe
- Products
- Life-cycles
- Ecosystems/Holistic

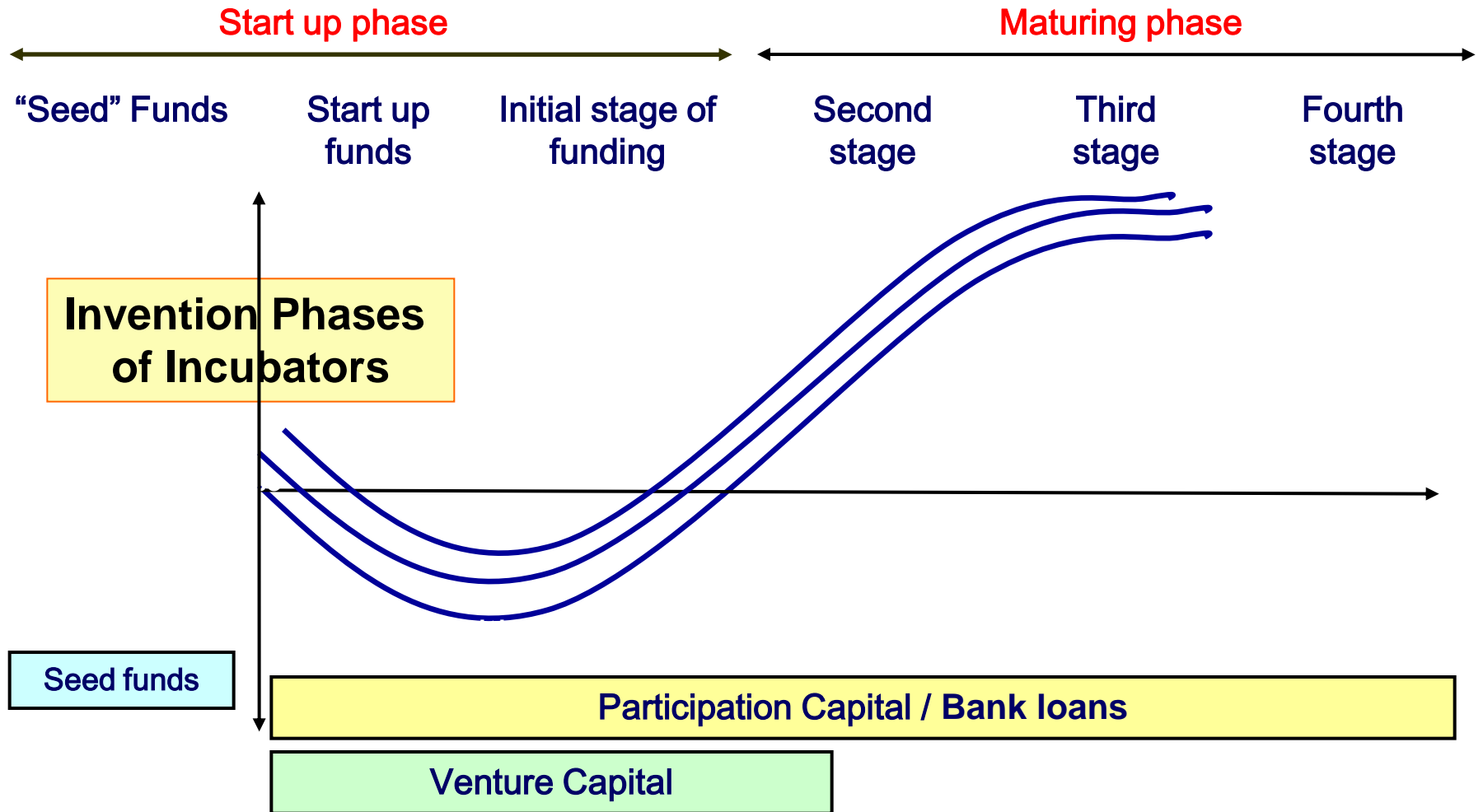


Diversified roles in Funding

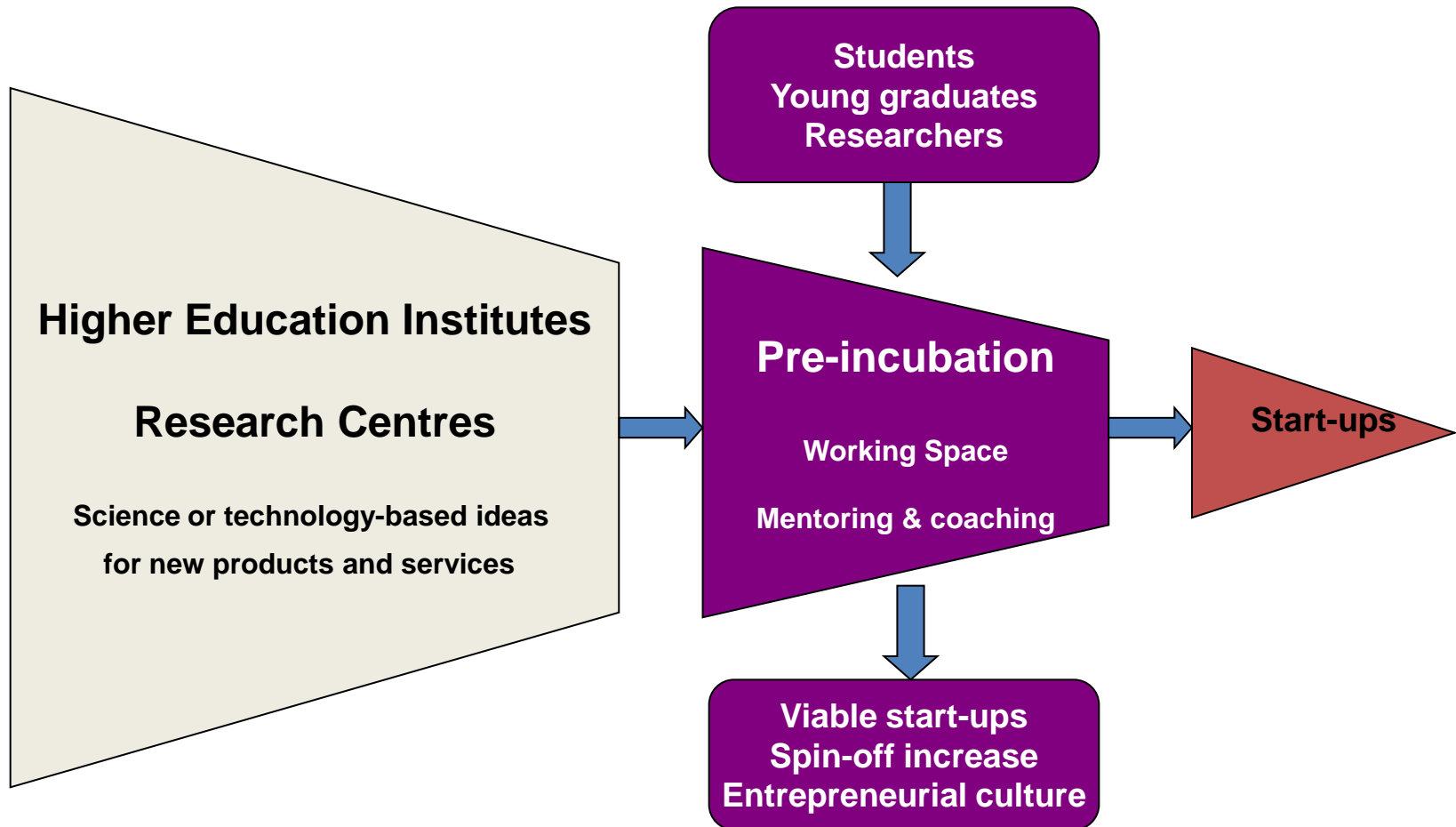


Source: Business Angel Networks

Phases of Business Development and Funding Tools



The Pre-incubation Concept



Encubator model

Innovation partner

Innovation / Idea

CHALMERS



GÖTEBORGS UNIVERSITET



COMPETENCE CENTRE FOR CANCER RESEARCH

SAAB

VOLVO

ABB

smith&nephew



TecNet Nordic AB

Joint venture

business development
(~10 months)

Company formation

Business developers
(M.Sc. Students)

Business development

Incubator

encubator
IDEAS REALISED

Legal expertise
Business coaching

Seed financing
Facilities / infrastructure



Key to Value-Creation

- Specialisation; A sharp portfolio of strengths, permeating research, graduate education and innovation
- Critical mass; Sufficient own and networked resources and capabilities to create a unique platform
- Bridging; Academia engaged with society; businesses and entrepreneurs that engage with academia; medical research, hospitals and care centres linked with society
- Environment; A living, green and smart city, or rural areas that are “alive” - conducive to active life and sustainable development
- Wellness; Healthy lifestyle and a vibrant medical & health sector
- Governance; Quality control, efficiency, inclusion



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Governance and Stakeholder Engagement

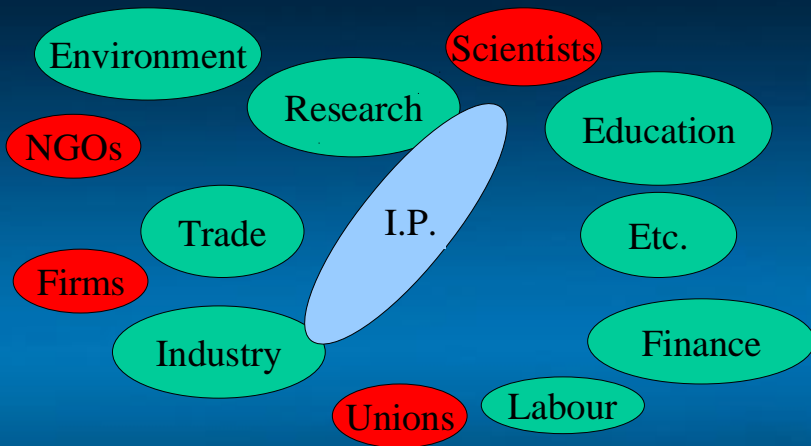
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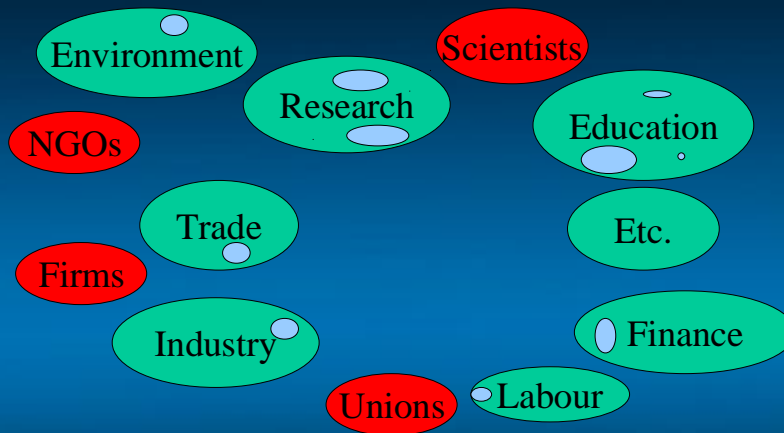
Governance & the Environment

- Market/Systems failures identified and addressed efficiently
- Local variation
- Dynamic of responses – FMA or waiting mood
- Moral hazard/strategic behavior

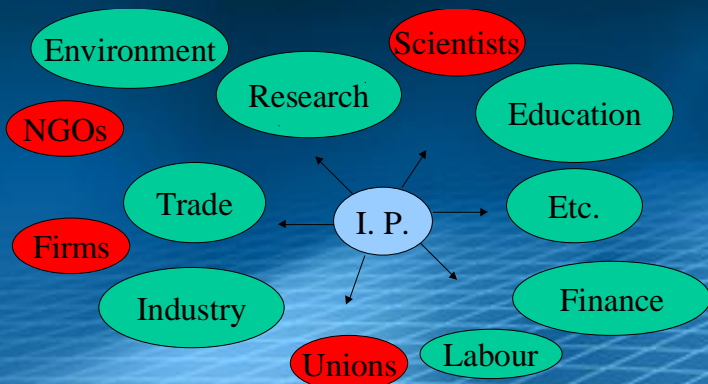
Traditional positioning of innovation policy



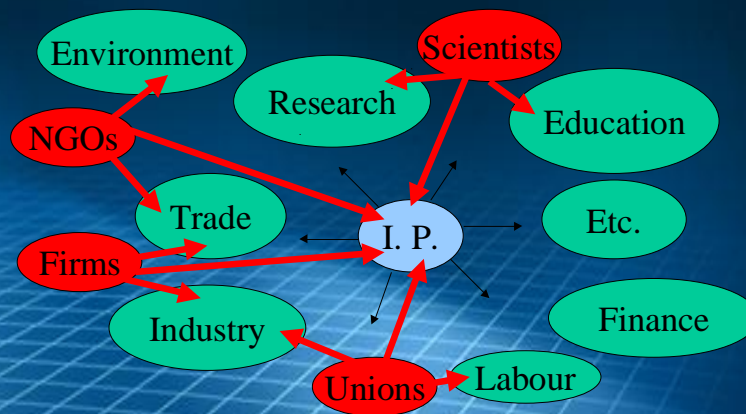
Implicit positioning of innovation policy



Explicit positioning of innovation policy



Explicit positioning of innovation policy with interactions



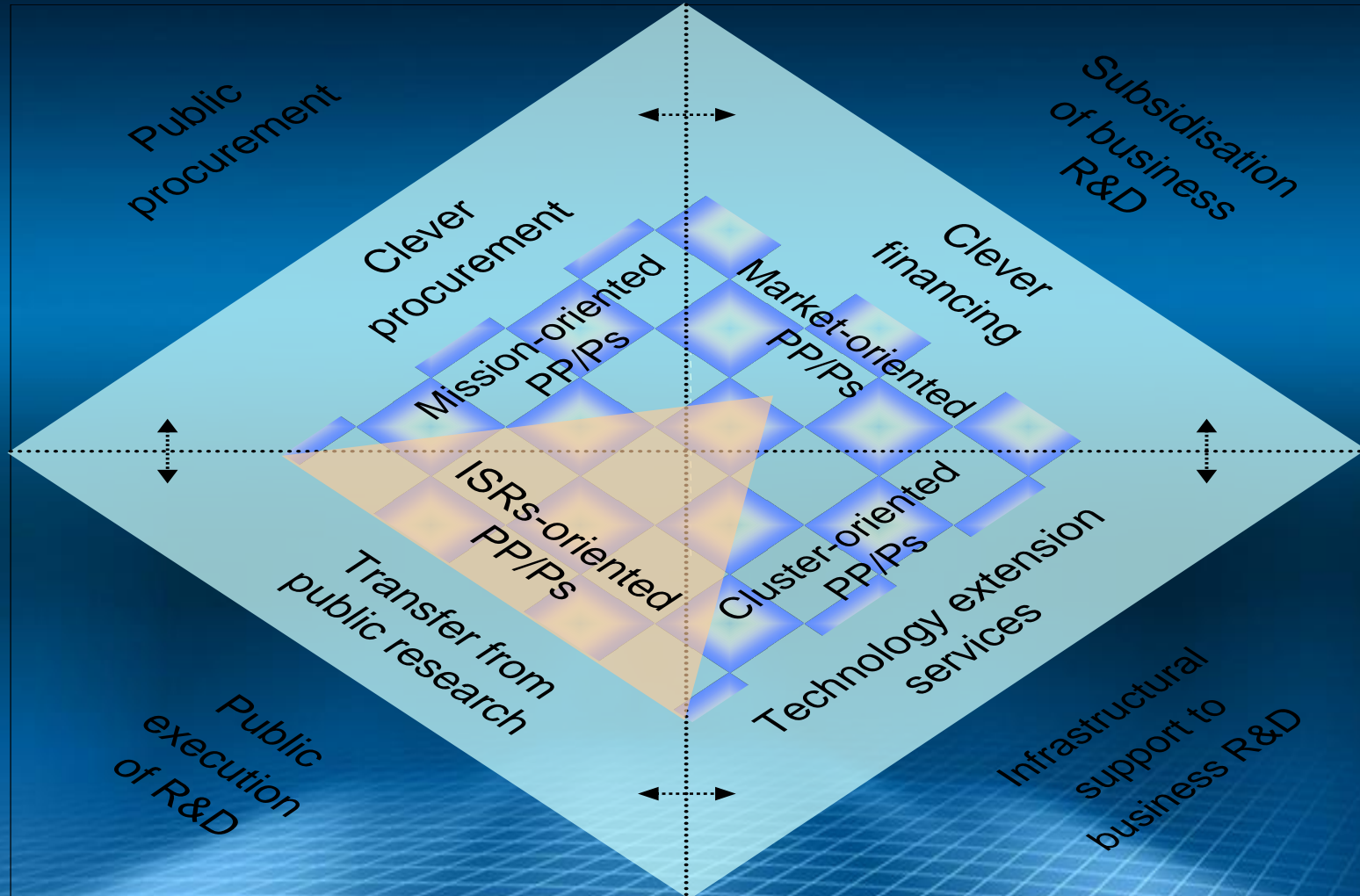


PPPs

- *Complementary and inter-dependent*
- *Fill gaps in innovation systems*
- *Require sustainable cooperation*
- *Require adjustment (speed/acceptance)*
- *Optimizing investment*
- *Embedding in innovation system*
- *SMEs*
- *International linkages*
- *Evaluation*



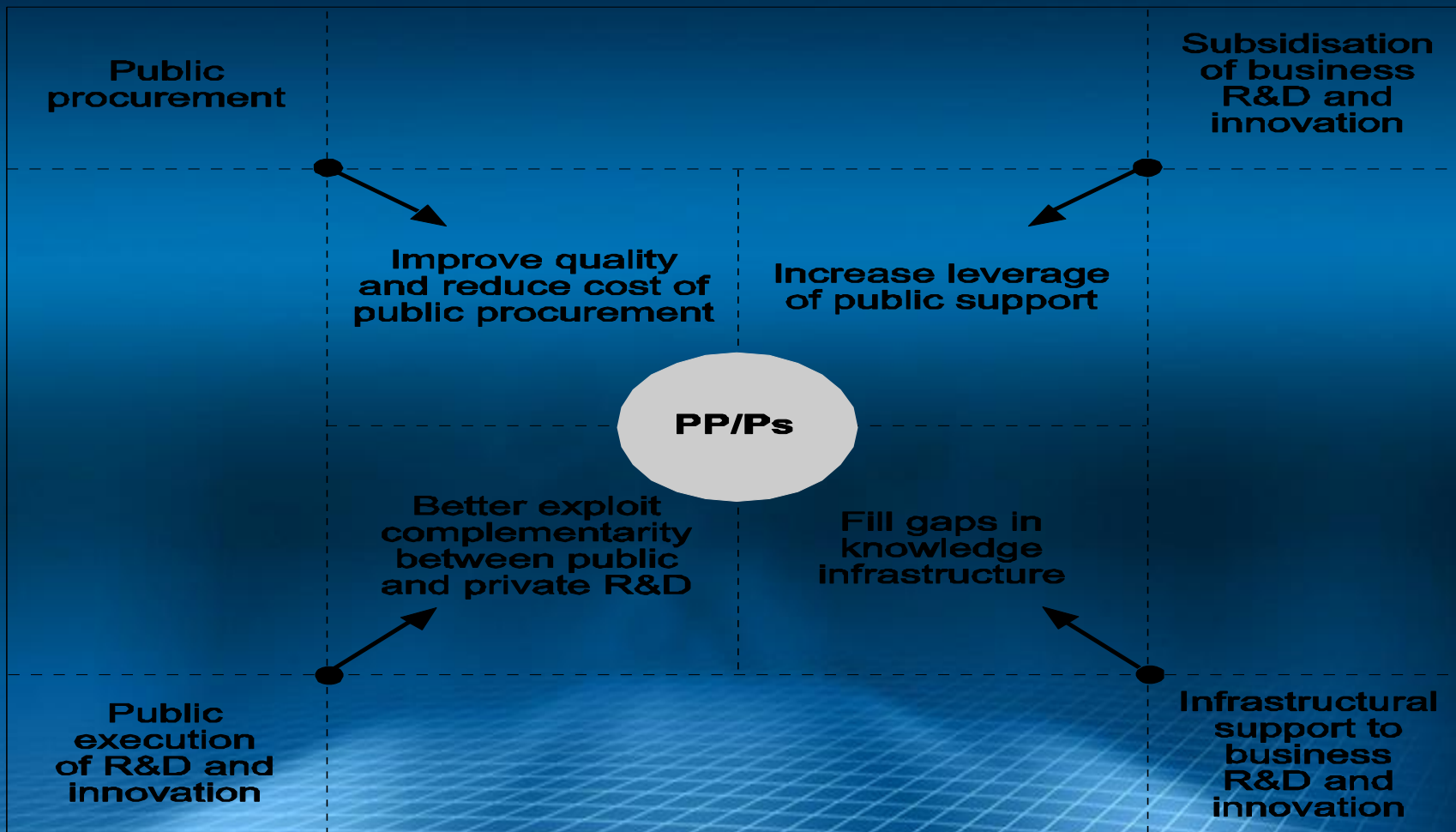
Typology of PP/Ps



Source: OECD (2007)

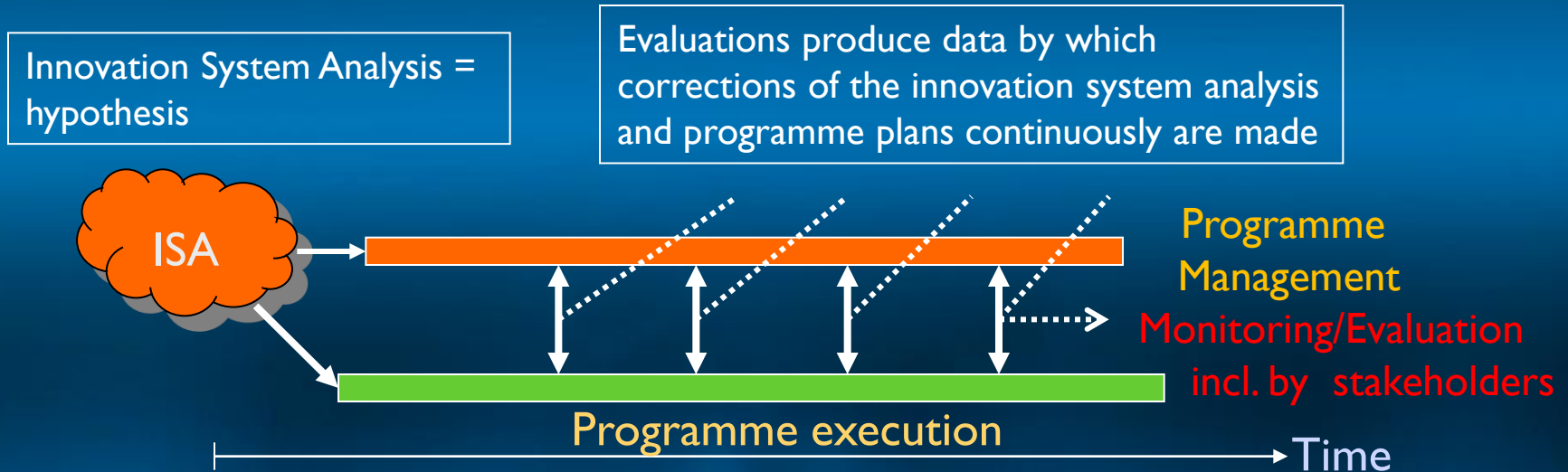


Expected benefits of an PPP approach to Innovation



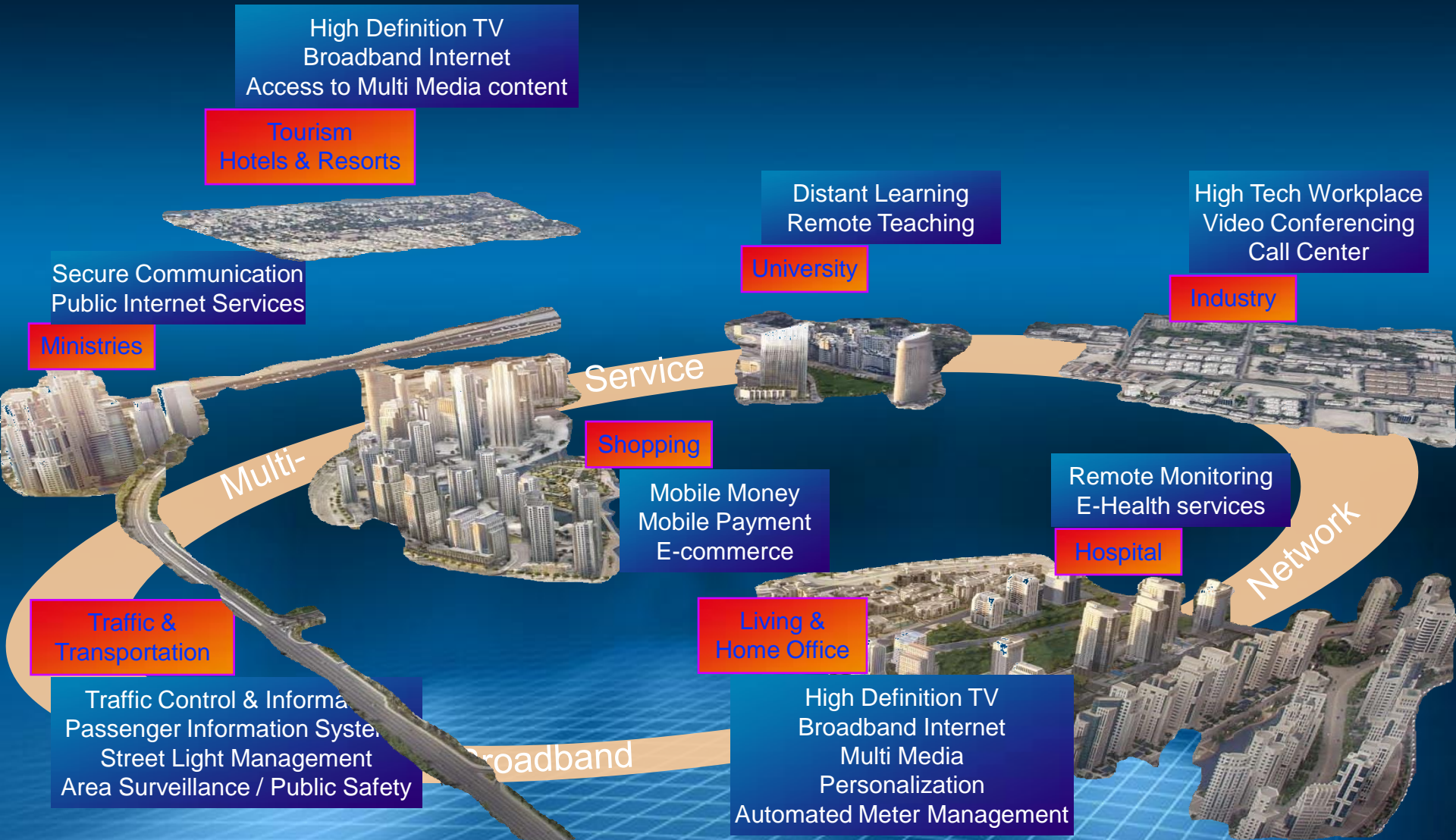
Source: OECD (2007)

From Evaluations as Events to Learning Processes

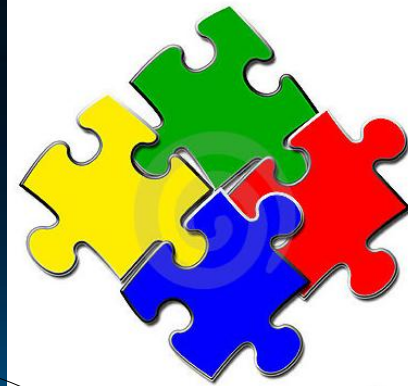


”Timing matters”

Digital City: Overview



Smart City Framework



General purpose technologies, infrastructure and services

GOVERNANCE AND MANAGEMENT

TECHNOLOGY

DIGITAL CITY [Williams, 2010]
INTELLIGENT CITY [Komninos, 2009]
UBIQUITOUS CITY [Lee, 2008]
HYBRID CITY [Streitz, 2009]

SOCIAL INFRASTRUCTURE

LEARNING CITY [Plumb, 2007]
CREATIVE CITY [Hall, 2000]
HUMANE CITY [Streitz, 2009]
KNOWLEDGE CITY [Dirks, 2009]

Smart
CITY

OPEN INNOVATION ECOSYSTEM [Schaffers, 2012]
LIVING LABS [Pallot, 2009]

PEOPLE-PUBLIC-PRIVATE
PARTNERSHIP



Practice Fields for Social Innovation

- ii) Re-use (“myrorna”)
- i) Sharing economy (“kollaborativ ekonomi”)
- iii) Urban Gardening (bybi)
- iv) Sustainable food production and distribution
(happy pig, reduce thrash in the bin)
- v) Animal Welfare (Djurens rätt)
- vi) Smart City (Hyllie, Alternativ Stad)
- v) Protecting ecosystems (Kristianstad Vätterrike)