

Finnish Cleantech Cluster in Uusimaa Region

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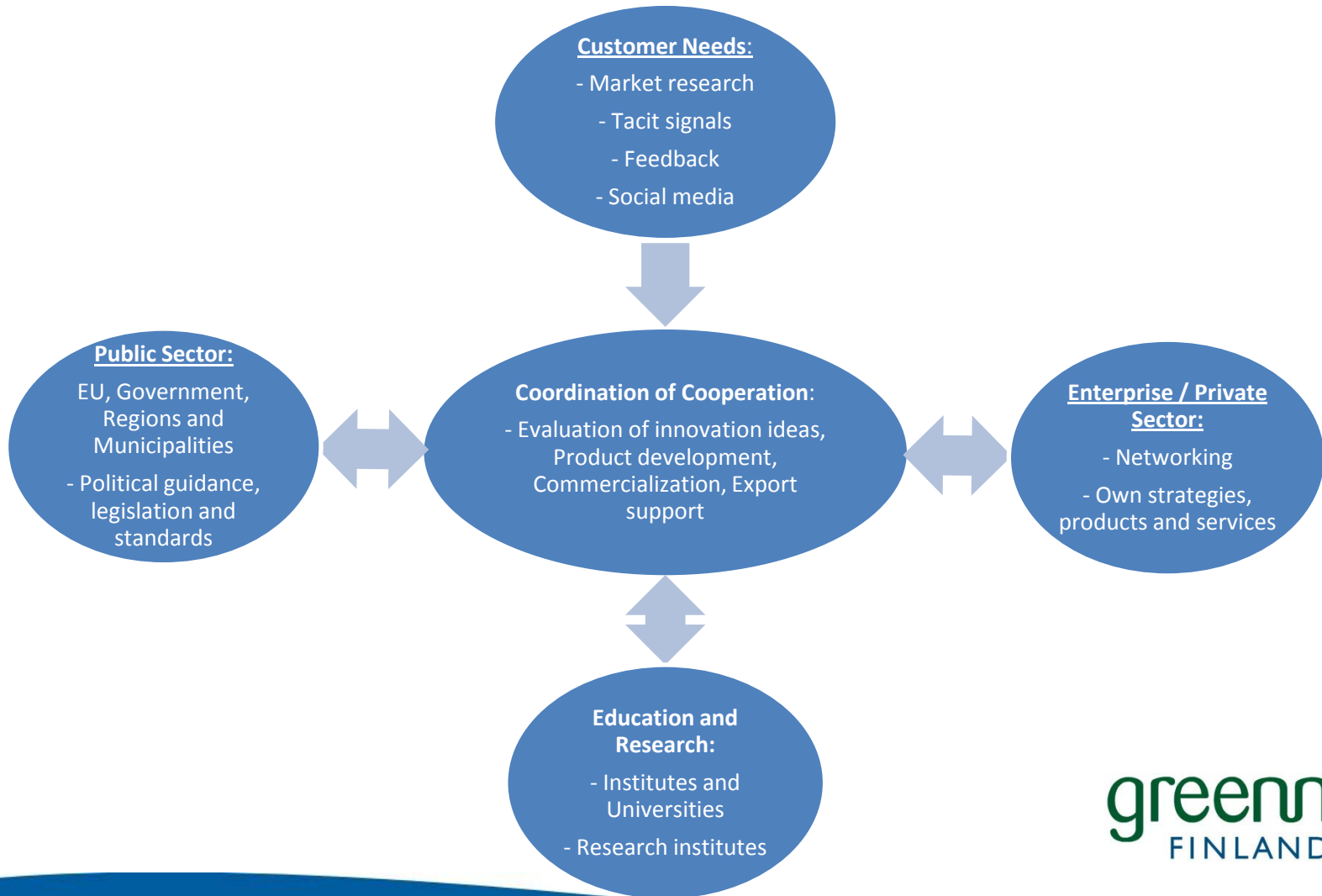
Green Net Finland

Green Net Finland is a network organization of Finnish environmental companies and public sector organizations

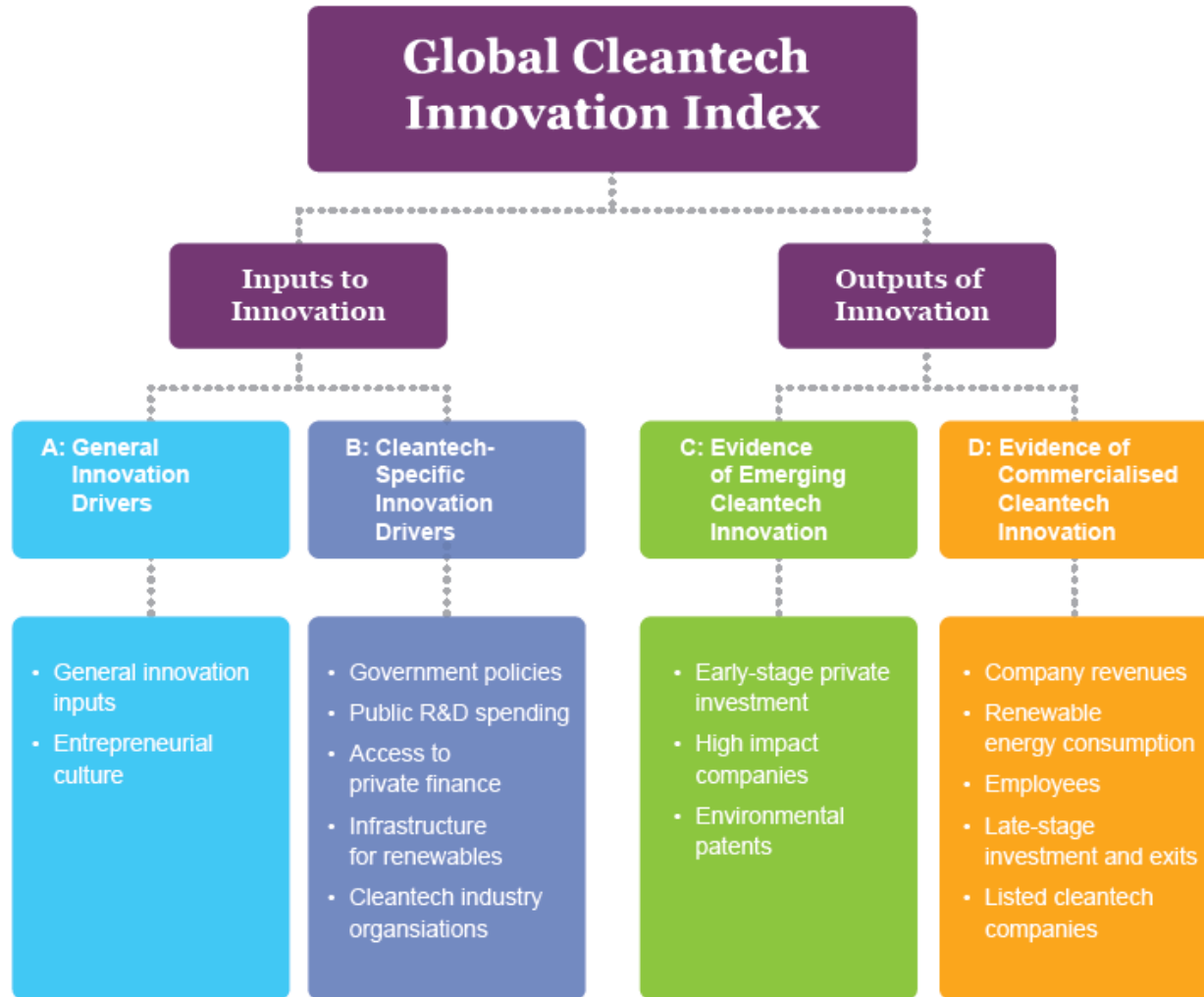
- About 60 member organizations (companies, municipalities, universities, research centers...)
- Triple helix model important on environmental technology
- Center of expertise in environmental technology in Uusimaa Region (= Helsinki metropolitan area)

Purpose is to create new business opportunities by strengthening and expanding network cooperation and by promoting environmental projects and expertise.

Business Development Framework



The Framework of the Global Cleantech Innovation Index

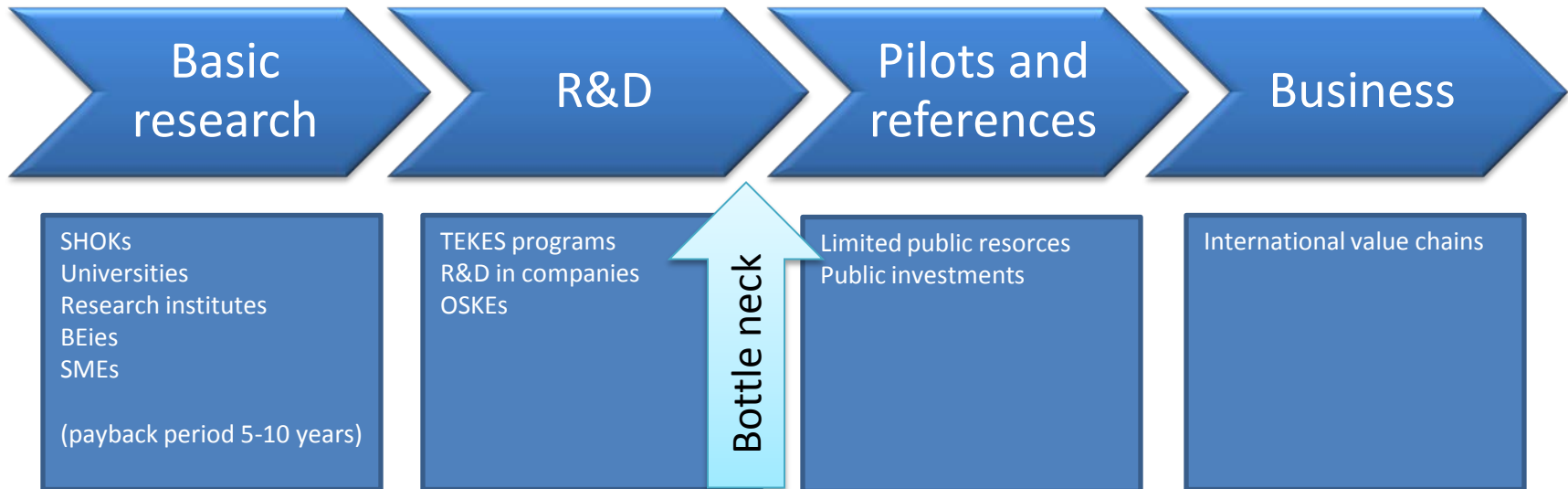


Country	Rank	Cleantech Innovation Index	Inputs to Innovation	Outputs of Innovation	General Innovation Drivers	Cleantech-Specific Innovation Drivers	Evidence of Emerging Cleantech Innovation	Evidence of Commercialised Cleantech Innovation
Denmark	1	4,7	3,5	6,0	2,9	4,1	6,2	5,7
Israel	2	4,1	2,5	5,7	2,9	2,2	8,6	2,7
Sweden	3	4,1	3,3	4,8	3,5	3,2	6,2	3,4
Finland	4	4,0	3,6	4,5	3,5	3,7	5,7	3,2
USA	5	3,8	3,3	4,3	3,5	3,1	6,0	2,6
Germany	6	3,6	3,1	4,1	2,7	3,6	4,9	3,2
Canada	7	3,4	2,8	4,1	3,5	2,1	4,8	3,5
South Korea	8	3,3	3,2	3,5	2,8	3,5	5,0	2,0
Ireland	9	3,2	2,9	3,6	3,5	2,3	3,5	3,7
UK	10	3,2	3,2	3,2	3,3	3,2	4,2	2,3

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Sweden	3	4,1	3,3	4,8	3,5	3,2	6,2	3,4
Finland	4	4,0	3,6	4,5	3,5	3,7	5,7	3,2
USA	5	3,8	3,3	4,3	3,5	3,1	6,0	2,6
Germany	6	3,6	3,1	4,1	2,7	3,6	4,9	3,2
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South Korea	8	3,3	3,2	3,5	2,8	3,5	5,0	2,0
Ireland	9	3,2	2,9	3,6	3,5	2,3	3,5	3,7
UK	10	3,2	3,2	3,2	3,3	3,2	4,2	2,3
Norway	11	3,1	2,6	3,5	3,3	2,0	5,1	2,0
India	12	3,0	2,8	3,1	2,1	3,4	2,2	4,0
China	13	2,9	3,1	2,8	2,7	3,4	1,7	3,8
Netherlands	14	2,8	2,8	2,8	3,3	2,2	4,0	1,5
Switzerland	16	2,7	2,8	2,6	3,4	2,3	2,6	2,7
Australia	15	2,7	3,4	2,0	3,5	3,3	2,0	2,1
Austria	17	2,7	2,4	2,9	2,7	2,1	3,0	2,8
Belgium	18	2,6	2,4	2,8	2,5	2,2	3,6	2,0
France	19	2,6	2,9	2,2	2,5	3,3	2,9	1,5
Japan	20	2,5	2,0	2,9	2,1	2,0	4,6	1,3
Spain	21	2,3	2,5	2,2	2,1	2,9	0,7	3,6
Hungary	22	2,1	2,3	1,8	2,3	2,4	1,4	2,2
Czech Republic	23	2,0	1,8	2,3	2,3	1,2	2,2	2,4
Portugal	24	2,0	2,0	2,0	2,1	1,9	0,7	3,3
Brazil	25	1,9	2,3	1,6	2,6	2,0	0,4	2,7
Argentina	26	1,9	2,5	1,3	2,7	2,3	0,1	2,5
Italy	27	1,8	2,5	1,1	1,6	3,3	0,8	1,5
South Africa	28	1,8	2,0	1,6	2,4	1,7	0,8	2,4
Slovenia	29	1,7	2,4	1,1	2,2	2,6	0,8	1,3
Poland	30	1,5	1,8	1,2	1,7	1,9	0,4	2,0
Indonesia	31	1,5	1,6	1,4	1,3	1,9	0,0	2,8
Mexico	32	1,4	1,8	1,1	1,5	2,0	0,2	2,1
Bulgaria	33	1,4	1,6	1,3	1,6	1,5	0,7	1,8
Romania	34	1,3	1,8	0,8	1,2	2,4	0,2	1,4
Greece	35	1,2	1,7	0,7	1,4	1,9	0,2	1,3
Turkey	36	1,1	1,3	0,9	1,6	1,0	0,2	1,6
Saudi Arabia	37	1,0	1,5	0,6	2,9	0,0	0,1	1,1
Russia	38	0,7	0,7	0,7	1,0	0,3	0,3	1,1

Finnish Business Development



Findings from Finnish Innovation System

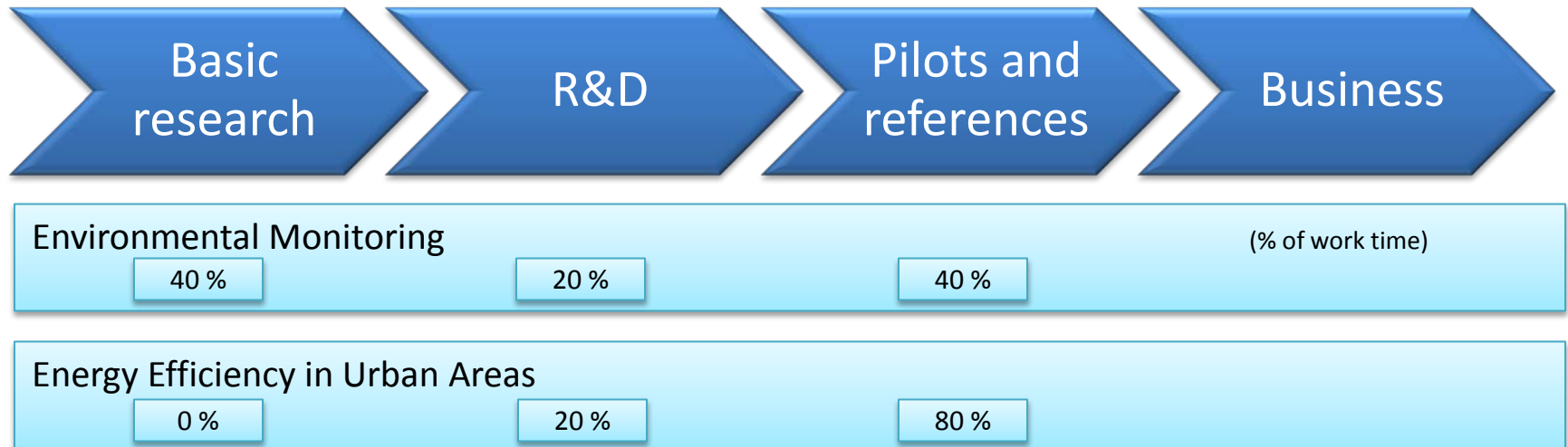
- Finnish education and R&D well arranged and ranked internationally
- Challenges in focusing and commercializing
- In environmental technology bottle neck after R&D step = how SMEs could sell first references and export their products and services
- SMEs hope to get more long term comprehensive aid for business development
- Too few people will plan entrepreneurship as a personal carrier

Global Level Cleantech Areas

Uusimaa Region has three key global level cleantech areas:

1. Bioenergy
 - Biofuels (with organizations like Neste Oil Oyj, Stora Enso Oyj, UPM-Kymmene Oyj)
 - Biomass combustion (MW Power Oy, Metso Oyj, VTT)
2. Clean processes
 - Industrial processes (Outotec Oyj, Metso Oyj, Helsingin Energia)
 - Pure water (Kemira Oyj)
3. Environmental monitoring
 - Weather measurements (Vaisala Oyj)
 - Air quality monitoring (University of Helsinki)

Resource Usage of Green Net Finland



Experiences of Green Net Finland

- 11 years old networking organization of public authorities, universities, research centers and companies
- Since 2007 center of expertise of environmental technology in Uusimaa Region
- Focus in environmental monitoring and urban energy efficiency
- Good capability to formulate business development projects
- ICT know how adding value significantly in many projects
- Even more focus in future in pilots and references for SMEs
- Public procurements and competitions in key role in forming new market
- SMEs need long term comprehensive tailored support for each business sector to develop, commercialize and export their products and services
- Right timing in national legislation is important



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