

Hellenic Technology Clusters Initiative (HTCI)

Coordinated by

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Definition of a Cluster and Cluster Initiative



Cluster: *“a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities, where enough resources and competences amass and reach a critical threshold, giving it a key position in a given economic branch or activity, with a decisive sustainable competitive advantage over other places, or even a world supremacy in that field”*

Michael E. Porter

Cluster Initiatives (CI) are organised efforts to increase growth and competitiveness of clusters within a region, involving cluster firms, government and/or the research community. Cluster initiatives have become a central feature in improving growth and competitiveness of clusters.

Clustering as a tool for economic development



- it captures economic relationships among specific industry sub-sectors
- it provides a set of tools to help define economic development strategies
- can improve short-term industry attraction efforts through identification of industry gaps and definition of specific advantages
- can help define medium-term strategies for retaining, establishing, and growing regional industry,
- can aid the devising of long-term strategies to sustain industrial growth within a region.

Recently in the press



22 JULY 2005 – FRANCE

France may soon have its own Silicon Valley--or, more likely, 67 miniversions of that icon of American innovation. Last week, Prime Minister Dominique de Villepin announced a list of 67 regional partnerships across the country that his government hopes to nurture into cutting-edge science and technology engines designed to create new jobs and kick-start the economy.

The decision to create "Competitiveness Clusters," as the new regional hubs are called, was taken last year by the previous government, led by Jean-Pierre Raffarin. But it has been embraced by Villepin, who made fighting France's double-digit unemployment his number one priority when he took over last month. Flanked by four cabinet ministers and citing Silicon Valley as a "historic example," Villepin called the plan a "choice for ambition" when he presented it last week.

12 APRIL 2005 - INDIA

"Intel Corp. will locate a production facility in India according to a news report Monday (April 11) quoting India's union minister for communications and information technology, Dayanidhi Maran. It quoted the minister as saying: "They [Intel] are waiting for the special economic zone policy to be announced". The minister had assured Intel Chairman Craig Barrett when they met last year that the project would be put on a fast track arrangement.

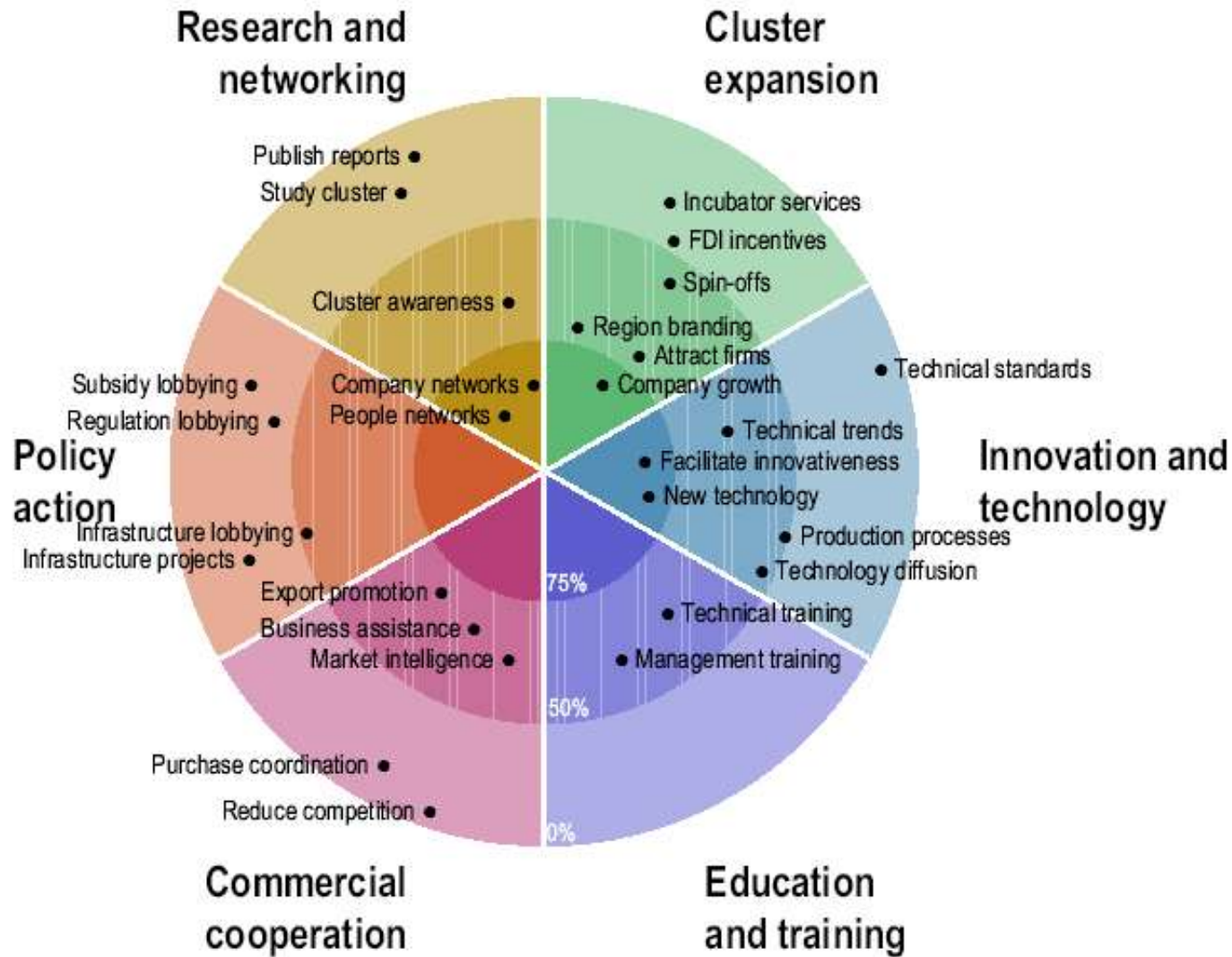
The minister was also quoted as saying that the federal government had formed an interministerial task force from the telecoms, commerce and finance ministers to coordinate all issues regarding the Nokia manufacturing plant to make mobile devices announced last week. Nokia's plant is also coming up in the state of Tamil Nadu, though not in Chennai, the state capital. Three more global telecom equipment manufacturers are shaping their India plans, including Motorola and Nortel Networks, it quoted Maran as saying."

Characteristics of Cluster Initiatives



- CIs are most frequent in developed and transition economies.
- CIs tend to focus on technology intensive areas; most CIs are found in: IT, medical devices, production technology, communications equipment, biopharmaceuticals and automotive.
- CIs occur in clusters that often are of national importance and almost always of regional importance.
- CIs are initiated by government (32%), by industry (27%) or equally by both (35%).
- Financing comes primarily from government (54%), from industry (18%) or equally from both (25%).
- CIs tend to have a narrow geographical focus; 50% have most of their members within one hour's travel distance.
- Almost all CIs (89%) have a dedicated facilitator, and many (68%) have some sort of office. Cluster facilitators tend to have an industry background from the cluster.
- The objective of the CI can vary greatly. Some objectives are pursued by most CIs, while others only by a few.

Clusters targets and objectives occurrence*



*The Cluster Initiative Greenbook, Orjan Sövell, Göran Lindqvist, Christian Ketels, Foreword by Michael E. Porter, Ivory Tower,

Successful Cluster Initiatives



- The national social, political, and economic setting within which CIs are implemented is important for the performance.
- CIs for clusters in areas designated by government as attractive perform better in attracting new firms.
- CIs limited to domestic companies perform worse.
- CIs with offices and sufficient budgets to conduct significant projects without seeking separate funding perform better.
- For the facilitator having a broad network of contacts is the most important success factor.
- CIs that build a clear, explicit framework, based on the cluster's own strengths and spend time to share this framework with all parties are clearly more successful in promoting cluster competitiveness.

Greece and Technology Clusters – facts and indicators



- Location
 - Greece is at a strategic intersection between South-Eastern European and Central Asian markets. An existing network of 3,264 Greek companies have initiated direct investment programmes or marketing agreements in these regional markets.
- Competitive R&D
 - Hellenic companies' R&D efforts within through collaborative projects co-funded by EC's dedicated Framework Programmes, exhibit a proposal success ratio that far surpasses that of EU countries of similar population/GDP and compares only to highly-developed western European countries of a much bigger size and industrial growth.
- Human Capital
 - 1500+ students graduate every year from Engineering and Science Schools, many of several pursue Ph.D. and M.Sc. studies. Highly educated and skilled human capital, can be also attracted to Greece from neighboring countries renowned centers of excellence (e.g. Bulgaria, Romania, etc).
- Regulatory framework
 - The Ministry of Economy and Finance, the Ministry of Development and the Ministry of Education are pushing a regulatory and legal framework in order to support business efforts and make the Greek economy outward and export-oriented.
- National strategy
 - The Hellenic state is placing priority on the transformation of the country from “low-cost labour-force market” towards a “high added-value services”-model.

The regional market dimension



- Greece is Europe's strategic link to the sizeable, emerging markets of the Balkan, Black Sea, eastern European and eastern Mediterranean.
- An existing network of 3,264 Greek companies have initiated direct investment programmes or marketing agreements in the regional markets.
- Greek business people possess not only the cultural understanding of the regions but also the practical experience of how to “do business” there.
- Greece is (together with Cyprus since May 2004) the only EU member country in the region and is also considered a point of political and economic stability in the area.



Why HTCI now?



- After the ICT “boom” (1996-2000) and the consequent market correction (2000-2003), the product development approach of major multinationals has taken a sudden turn towards outsourcing
 - specific subsystems/components that require lengthy R&D cycles and highly-sophisticated expertise (like the semiconductor-chip design)
 - successful model of Ireland, Israel, India, etc.
- There have been recent success stories of world-class endeavors with a successful Hellenic presence, e.g.
 - «ATMEL HELLAS» daughter-company of ATMEL USA (NASDAQ).
 - «PHOTRONICS HELLAS» daughter-company of US company (NASDAQ).
 - The Hellenic «THETA MICROELECTRONICS» headquartered in Silicon Valley.
- Blooming of related high-tech start-ups and spin-offs, e.g.
 - 4Plus Technologies, inAccess Networks, Alma Technologies, Global Digital Technologies, Athena Semiconductor, Helic, Globetech, etc.
- Considerable Greek diaspora of Engineers and Managers in the US and Europe desiring to repatriate if business prospects are attractive

- ▶ Strong and talented human capital. Solid graduate and post-graduate education at scientific and engineering disciplines related to Technology sectors.
- ▶ High-quality primary research at Polytechnic and other Academic Institutes.
- ▶ EU member, close proximity to developing regions (e.g. South-East Europe) and technology-advanced non-EU countries (e.g. Israel).
- ▶ Recent success stories of successful technology investments from major multinationals.
- ▶ Strong Greek-American business community.
- ▶ Good command of English and other languages.
- ▶ Outsourcing is becoming very attractive to international corporations, especially in the technology sector, as they try to cut down their operational costs
- ▶ Substantial number of technology companies developing partnerships at European and World-wide level.
- ▶ Significant spread across the globe of highly-skilled Greek engineers and managers that could be convinced to repatriate.
- ▶ The near-proximity Balkan region gives access to a big number of researcher/engineers at very cost-effective salary ranges.
- ▶ Proximity to developing and substantial markets (e.g. Turkey)

- ▶ Public Administration bureaucratic and cumbersome.
- ▶ Tax framework often changing and not technology-supportive.
- ▶ Lack of complete product-development cycles.
- ▶ Practically non-existent domestic industry that could have served as
 - ▶ a first level of product testing and buying
 - ▶ A business partner with foreign investors
- ▶ Time-zone difference and geographical distance to US and Western Europe.
- ▶ Lack of corporate support for R&D.
- ▶ EC-funded R&D programmes, even though popular and successful among Greek R&D communities, lead eventually to disorientation from product-development.

- ▶ Already existing or currently being developed clusters all over EU with several EU members having a head start compared to Greece.
- ▶ EC funds to support Greece being gradually reduced due to the enlarged Europe and Greece's growth.
- ▶ Minor government funding in R&D, either directly or indirectly (e.g. military).
- ▶ Substantial motives to attract investors in neighboring countries (e.g. corporate-tax reduction in Bulgaria, Romania, etc.).
- ▶ Globalization and emerging super-powers in technology (e.g. China, India, Taiwan)

Vision - Target



- HTCI vision: establishment and development of few targeted clusters in areas where Greece has already or can attain in the near future a worldwide competitive advantage.
- Benefits for Greece: set up Centers of Excellence for world-class R&D as well as poles of attraction for foreign and local investors who will seize the opportunity to early capitalize on the anticipated sector growth.
- First cluster in semiconductor/embedded systems is already formed
- Second cluster in Culture and Language technology followed soon after
- Discussions already started for clustering the Biotechnology sector

Conclusion:

A collaborative effort



- Recent successful investments in the Hellenic semiconductor sector indicate that leading investors are interested to venture into an emerging and highly-rewarding market
- Business partners and collaborators are sought that will contribute to HTCI project operations/execution, and be first to capitalize on clusters' expected growth.
- The window of opportunity for investment in South-East Europe is now open and can be exploited through the HTCI initiative not only for the Hellenic but for the regional markets as well.

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Thank you

