Clustering

AN OPPORTUNITY FOR INDUSTRY DEVELOPMENT IN MALTA?

The eSkills Alliance has collected feedback from numerous industry players on the outcomes of the Pooling4Clusters Project. This document provides a set of recommendations for consultation and wider endorsement by the industry on the setting up of clusters.

The eSkills Alliance is a consultative body with representatives from the private industry, academia and Government with a mandate of driving the ICT human capital agenda forward. It seeks to represent the collective voice of different stakeholders with a view to improve the variety, quality and quantity of ICT competences based on the economic needs of Malta. The Alliance was set up in October 2010, and brings together the following stakeholders: IT Business Section within the Chamber of Commerce, Enterprise and Industry Malta Employers Association, Ministry for Education and Employment, University of Malta, Malta College of Arts Science and Technology (MCAST), Malta Council for Science and Technology (MCST), Malta Information Technology Agency (MITA) as well as various industry representatives.

PREAMBLE

One of the main challenges for local firms is tapping into larger and more profitable markets. Inherently the Maltese market is small and growing a business by simply focusing on the local individual consumers and businesses is extremely difficult. Internationalisation requires an innovative and impeccable product or service plus a strong brand promise that can compete with blue chip companies. These companies bring together teams of specialists which are also difficult to find in great quantities in Malta.

Clustering means companies collaborating profitably and synergising their respective strengths. Typically a cluster is facilitated by an economic development entity - usually a government entity - through funding and supportive schemes. Within the group of collaborating partners one also finds universities or other educational institutions that work closely with the industry to research and develop products and services as well as to align the educational programmes to the cluster’s skill requirements.

Clustering can be a business model for the development of the Maltese industries. Clustering can be an opportunity for the indigenous micro and small firms to join up, even with other heavy-weight companies, and strengthen their offering for the bigger markets and the more complex business ventures. Clustering can be the vehicle that enables local start-ups to bolster their innovative ideas with the various resources necessary to penetrate markets and offer sophisticated solutions. Collaborating through a cluster can provide Maltese companies with economies of scale and bargaining power. Clusters of the local and international companies and the educational entities can help build common resilient pools of specialist human resources who would provide the relevant knowledge transfer. Additionally, local clusters could jointly source market data and thus be better positioned for changing market trends.

It does however require a culture shift and a change in mind-sets. Clustering does not take place extensively in Malta. There are already companies who join forces to bid for substantial projects. But clustering goes beyond forming a consortium: it is developing products and services, and the next innovation jointly. Clustering means tech companies joining other vertical industrial groupings and defining new operational efficiencies and the next-generation of offerings through the application of technology. Clustering spawns from establishing common research and development exercises across companies and jointly with the local academics.

JOHN AMBROGIO,
Chairman, eSkills Alliance

1. For more information on the Pooling4Clusters
THE DIFFERENT ROLES IN CLUSTERING

Various materials concerning economic and business development have the concept of clustering as a motor for innovation. Across the globe, successful clusters have been recognised as excellent developmental projects that transform dormant geographical spots into hubs of entrepreneurship and idea generation.

Governments in various jurisdictions have in fact invested in bringing together national and international entrepreneurs, researchers and educational institutions to develop strategic industries. The role of government or a public agency is quite controversial in the debate regarding clusters. There are diverse opinions on the nature of public sector activity that can really and effectively impact the creation and sustainability of a cluster. Truth is that a cluster will naturally thrive when the socio-economic conditions favour the business model and when the business community is pro collaboration.

Clustering therefore requires a well-defined framework that is supported by governments and driven by entrepreneurs and entities that represent the business interests and industries. In addition, according to Bloom2 – a renowned Social Business Consultancy Firm that specialises in social business strategies - the principle behind a successful business cluster is similar to starting a fire i.e.: the “spark” of a business or entrepreneur, the “oxygen” of business conditions such as government grants or venture capitalism, and the “fuel” of talented people.

The support by governments includes facilitating the initial conversations between the key stakeholders that have the potential to form a cluster. Businesses focus their limited resources on the bottom-line so an independent party such as a public agency can facilitate the necessary resources to guide and encourage the formation of a cluster. Often, small businesses given their resource-capacity simply do not find the time to network and identify synergies or longer-term benefits from collaboration. Locally, there are diverse opinions on the nature of public sector activity that can really and effectively impact the creation and sustainability of a cluster. Truth is that a cluster will naturally thrive when the socio-economic conditions favour the business model and when the business community is pro collaboration.

A cluster is at the end of the day a business venture. So the major propeller for clustering is the entrepreneurial spirit of the cluster members that see joint growth as appealing. The aid from the public sector is to oil the wheels for clustering.

A concerted discussion about setting up clusters and their economic potential for Malta has only just started. This discussion has already led to a number of enterprise representative bodies to publicly state their support towards clustering policy. For instance, the Malta Chamber has emphasised the importance of clustering its policies to encourage demand for research and development, entrepreneurship, patents, ICT investment, smart specialisation and clustering.

THE ENTREPRENEURIAL SPIRIT FOR SUCCEEDING IN THE KNOWLEDGE ECONOMY

The increasing competitive pressure at a global level and the establishment of new global value chains have forced businesses to find new ways for companies to operate today. The development of certain technologies, such as the cloud, apps and tablets, and the significant changes that are occurring across industry sectors and functions within companies are also shifting established commercial models. All this must also be viewed within the context of the economic crisis and the diverse impacts that the turmoil has left on various sectors. The global crisis has widened the divide between those businesses and sectors which were innovative and those which found it difficult to adapt. Emerging countries which are prioritising innovation policy are also adding to the competitive pressures.

Future economic performance depends on the mobilisation of human capital, knowledge capital and creativity. Countries need to move up the value chain and engage in specialist productions and servicing. Innovation takes therefore centre-stage. Innovation is supported through a mix of policies that encourage demand for research and development, entrepreneurship, patents, ICT investment, smart specialisation and clustering.

The bio/pharma cluster in Ireland is commencing a new phase of development triggered by the multi-euro investment that the Irish Government is making in basic research in biotechnology and ICT. This investment is being co-ordinated by the Science Foundation Ireland which has set up initiatives to forge closer links between Ireland’s higher education institutions and industry.

Ireland’s Bio/pharma cluster at a glance:

The bio/pharma cluster incorporates a number of important sub-sectors including pharmaceuticals, pharma, biotechnology and medical devices. The first foreign direct investment in the Irish bio/pharma sector began almost 40 years ago when Seiboth (now Bristol-Myers Squibb) became the first overseas pharmaceutical company to locate in Ireland. Since then Ireland has become a key global location for the bio/pharma industry. Currently thirteen of the top fifteen bio/pharma companies in the world have substantial operations in Ireland. In total, there are eighty-three facilities employing in excess of 17,000 people in Ireland. The Pharmaceutical sub-cluster in Ireland is supported by established infrastructure of serviced sites, public utilities as well as specialist support companies and services.

There is a significant geographical congregation of pharmaceutical facilities in Cork City. In this way specialists and significant linkages have been established with the two main higher education institutions in Cork, University College Cork and Institute of Technology, Cork. Additionally, the Cork pharmaceutical cluster is supported by a range of business services in areas such as plant design, construction, supply chain, accounting and distribution services.

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I "am a firm believer in synergy, and hence I surely feel that clustering is viable. It does make business sense. However, a cultural change is required for an entity to feel comfortable allowing other players within the same industry to step into its inner circle. Nonetheless, if all parties share a common objective, it will allow interdependence. The bottom line is that clustering is the next business model. Today more than ever business clusters are operating at the forefront in grouping together other companies, especially SMEs within our industry, hence I feel that Playmobil would naturally consider a proactive approach to clustering."

A STOCK-TAKE EXERCISE

Recently, we have held various conversations amongst industry members of diverse sectors in the local economy. We have discussed the make-up of a cluster and the opportunities arising from the single market.

Of relevance to this publication is the outcome of the research conducted by Advantage West Midlands Cluster. The report highlights that the ICT sector is the most significant in terms of growth within the West Midlands and demonstrates the potential of the sector.

The outcome of these discussions with circa 300 companies across the industry led us to unearth concerns that currently hinder the development of clusters. On the basis of these concerns we propose a series of actions to be undertaken by Government and by industry-representative bodies.

A summary of the main highlights of the discussion is as follows:

- The current market size limits businesses to operate with economies of scale which is affecting their competitiveness in international markets.
- Access to EU funding needs to be facilitated further in order for it to make easier for companies to utilise such funds without obstacles or excessive bureaucracy.
- There is a lack of awareness of the benefits of clusters by the industry, the public and the public entities, including the educational institutions; and hence a lack of funding.
- The current networking fiscal schemes need to be prioritised and these support schemes must be flexible so that clusters can mould their activities depending on their size.
- Clusters have to be driven and managed by the industry with sufficient autonomy to react to opportunities and threats in a timely manner;
- Government needs to provide a framework within which clusters can operate with minimal bureaucracy;
- Clusters should promote and focus on the potential return arising from collaboration on industrial and research projects possibly promoting Malta as a technology living lab.
- The currently underused lack of wide technology absorption by non-ICT sectors, and therefore leaving substantial capitalisations in the local cluster.
- Support will be required for potential clusters to strengthen in order to act as an effective meeting hub for its members;
- Favourable co-financing rates as well as pre-financing schemes for clusters and the delivery of the local clusters framework and the corresponding funding and programmes that can further strengthen the cluster;
- The size of the local businesses limits economies of scale and therefore potentially clusters can offer an opportunity for members to share the right costs related to staff training and industry accreditation;
- Clusters would be able to formulate plans and leverage the strength of coalition that could in turn lead to the establishment of new local facilities that support cluster operation. For example, collective bargaining is required to improve the appreciation of Intellectual Property as an acceptable collateral by the local financial institutions;
- Clusters can improve the level and intensity of provision of sectoral skill requirements with education institutions and students in order to attract and retain talent;
- The current research is not geared towards specific common goals adds a lot of value. That being said, we believe that more needs to be done to encourage companies to cluster.

In more practical terms, we recommend to positively assist those companies coming together in a cluster. This could be influenced through public procurement which is a specific tool for SMEs, public tenders, and the availability of tax breaks, access to finance and/or risk-sharing arrangements. Direct assistance towards clustering can indirectly supporting the research spearheaded by innovative projects through multi-sectoral initiatives providing guidance on applications;

Networking and collaboration can be a means to increase business awareness and information pertaining to EU legislation and procedures. This will provide a stumbling block for businesses that would need to adapt their practices accordingly.

FROM THE DRAWING BOARD TO PRACTICE

Establishing a more vibrant pre-clustering ecosystem in Malta will require the necessary dedicated funding, human resources, awareness campaigns, ongoing support and establishment of appreciation opportunities. All of these elements must be demonstrated in order for effective clustering to take place.

What we are therefore proposing is to allocate efforts towards the crafting of a dedicated set of funding instruments, initiatives and吸收the foundational funding instruments will be set on the basis of industry demands and not built in isolation using private sector.

From the consultations it is becoming more evident that greater value is being placed by the private sector to the notion of competitive synergies. For some economic operators it is becoming clearer that there are instances where pooling industry energy towards specific common goals adds a lot of value. That being said, we believe that more needs to be done to encourage companies to cluster.

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We can only differentiate ourselves through value-added knowledge and specialist products and services. Clustering is a business model that can lead us to this differentiation position. Yet, clustering requires knowledgeable individuals from different industries actively pursuing the integration and collaboration. These benefits must also be starkly evident and easily linked to those companies that aspire to go-global and internationalise cross-sectoral products and services. In this way, prioritisation of funds and awareness will be addressed in a smart way, focusing on the more active sectors contributing to local industry growth.

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According to a study conducted by the OECD in 2005, “Clusters” are local concentrations of horizontally or vertically linked firms that specialise in related lines of business together with supporting organisations. Since the publication in 1990 of Michael Porter’s book, “The Competitive Advantage of Nations”, OECD note that clusters have grasped the imagination of both policy makers and entrepreneurs. In a globalising world where small and medium-sized firms increasingly have to compete internationally, clusters play an important role in supporting firm competitiveness by increasing productivity, innovation and firm formation.

Cluster Navigators (2001) make reference to Silicon Valley, a typical cluster example which has become home to over 7,000 high tech companies. The authors also mention Hollywood as a typical cluster as the world’s entertainment capital. According to the Practical Guide to Clusters for Competitiveness prepared by the World Bank in 2009, clusters can contribute to the foundation of knowledge and help stimulate technological innovation, as is seen in the ICT clusters Silicon Valley and Bangalore. They may also spur creative innovation, as in the fashion designing clusters in Paris and Mumbai. Clusters can facilitate commercialisation and new business formation through spinoffs and start-ups.

The World Bank further describes clusters as an agglomeration of companies, suppliers, service providers, and associated institutions in a particular field. For example, as depicted in the above diagram, all vertical sectors can join forces with the ICT sector to provide cutting edge products and services. This industrial collaboration is powered by the skills produced by the education institutions whilst the inventions and innovations arise from cooperation with researchers. This clustering is supported by Government structures and is influenced by associated parties, such as industry group representatives.

Taking a closer look for example at the interactions and activities within an ICT-enabled multimedia cluster, there are various actors in the value-chain and manifold institutions involved within the cluster. For example, within the multimedia production chain, the suppliers of hardware, software, broadband and skills are a prerequisite. The multimedia content is influenced by the legal context of copyrights and developed through interactions with entertainment providers and specialised software developers and media producers. The media distributors – both traditional and those tech-savvy – collaborate to deliver the products and services. The diagram also illustrates how new technology develops, the demand for multimedia in isolation is inevitably linked with other and to the overall economy (Clusters for competitiveness – World Bank, 2009).

The relevance of clusters was brought about due to the significant implications brought about by the wide-economic competitiveness, which is a proxy for the productivity of an economy. However according to the World Bank, excellence in productivity is not something firms can acquire in isolation; they need to work with surrounding institutions and agendas whose undertakings have large impacts on how firms operate. Clusters can increase productivity and operational efficiency through linkages, spillovers, and synergies across firms and associated institutions and through efficient access to public goods, better coordination, and the diffusion of best practices.

In essence, according to a journal on Clusters and Entrepreneurship (Delgado, Porter & Starr, 2000), clusters:
- Facilitate new business formation and the growth of successful start-ups by lowering the costs of entry e.g. by providing ready access to suppliers or low-cost access to specialised inputs, offering an environment in which the costs of failure may be lower;
- Enhance opportunities for innovation-based entry, in view that a stronger cluster environment will allow local entrepreneurs to develop and commercialise new technologies more rapidly;
- Allow start-up firms to leverage local resources to expand new businesses more rapidly.

Knowledge spillovers, pressure for higher performance in head-to-head competition, etc. Moreover, through these linkages, one cluster is inevitably linked with other and to the overall economy (Clusters for competitiveness – World Bank, 2009).
MITA together with six other European member States signed a partnership agreement with the Joint Technical Secretariat (JTS) within the European Commission to jointly participate in a regional initiative project – namely the Pooling4Clusters Project (P4C).

The P4C Project aims to share best practices between the P4C Project partners and to analyse these with a view to developing policy recommendations to improve the effectiveness of local support to clusters. Through the identification and analysis of good practices in the partner countries / regions, the project aims to assist authorities in finding the best ways to improve their support frameworks to clusters.

The overarching European objectives of the project include:
- Creation of leverage effects in cluster support policy and innovation support;
- Fostering improvement of regional cluster support policy and innovation support;
- Contribution to cohesion and competitiveness in Europe by bridging the gap between more and less advanced regions within the project consortium through exchange of experience and transferability assessment;
- Demonstration of the importance of cluster support policy of regional competitiveness in all partner regions, particularly in the less developed.

In order to deliver on the above objectives, MITA engaged with a number of stakeholders to deliver on the project’s deliverable i.e.: the submission of a local recommendation plan for clusters. The stakeholders which were chosen purposely in view of their remit and responsibilities in the local industrial market included: Malta Enterprise, the Malta Chamber and Malta Council for Science and Technology.

The efforts highlighted in this paper were partly funded by the Interreg IVC, Pooling4Clusters Project. For more information, visit www.mita.gov.mt/eskillssalliance

Interreg IVC Programme - Cohesion Policy 2007 - 2013
Innovation & Environmental Regions of Europe Sharing Solutions
This project is part-financed by the European Union European Regional Development Fund (ERDF)
Co-financing rate: 85% EU Funds; 15% National Funds
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