Remarks on the Canadian Supercluster program

Nick Kadysh – GE

Founding member of the Digital Supercluster

The Canadian Supercluster program is a unique opportunity, both for small companies and large multinationals. The announcement of this program has generated a flurry of conversations in a number of industries. GE Canada participated in a total of 3 supercluster proposals, in the Digital Development, Aviation, and Life Sciences sectors. In addressing the scale-up challenge and the applicability of the Supercluster program in addressing those challenges, we must examine the program structure and the incentives it creates for the mid-size companies that are at its heart.

Early on, GE made a decision to participate only in those areas of the program where we saw true potential for collaborative contribution and lasting partnerships, ones which leveraged our unique strengths. At the end of the day, we must be frank about acknowledging that there is significant government financial support for the Clusters and that there was an element of rent-seeking in some of the proponents and their motivations. The Supercluster program, due to its nature as a government-directed program, also had a number of features that drove decision making. These features are the inherent incentives of the program, the IP provisions and their implications, and finally the leveraging and de-leveraging of risk for companies participating in the program.

Firstly, incentives. Because it was a government program and did not come into being on its own, it involves less of the traditional profit motive as an organizational principle. Partners working together on a supercluster proposal required intimate trust in one another to put the interests of a group above narrow corporate self-interest, or the proposals would quickly unravel. At the digital supercluster, we worked to create not only a spirit of goodwill within the Cluster and an alignment of all partners, but also to create internal rules to ensure that partners who do not live up to this spirit of goodwill are removed from the cluster.

However, this incentive to work together was reversed as soon as the award of Federal dollars occurred about one month ago. As the 5 clusters are set up nationwide, there is an inherent desire within each to maintain the relatively narrow confines of the existing partnership, in order to maximize the subsidy of existing programs with federal dollars. This subsidy, and the profit motive it represents (especially for large corporations) lies at the heart of the potential issues in the supercluster model and why it may not perfectly align with the needs of smaller scale-ups. How each individual cluster deals with this reversal of incentives will determine the individual success of each.

Secondly, requirements around the sharing of intellectual property generated by the clusters present unique challenges. In some sectors where intellectual property has outsize importance, I believe these provisions made proposals untenable. GE's strategy in dealing with these provisions were twofold:

1. In the case of Life Sciences and Aviation, to bring together one vertical chain of suppliers and producers, which the cluster would then "integrate" into one entity for the purposes of IP, but all of which would retain their production niches.

2. In the case of the Digital Technology Supercluster, leverage the opportunities of an open digital platform to get around the issue of IP entirely.

The Digital Supercluster will focus on 3 major priorities, with a number of projects within those priorities already in the pipeline. For GE, the Digital Supercluster was attractive because it viewed digital technologies as a horizontal, not a vertical. The Digital Cluster's initiative is to create opportunities and efficiencies in multiple industries, not just one, and to share the learnings of these different industries across sectors while growing the BC Digital Development community. It also brought together a significant number of scale-up companies which were willing to play within the GE Predix sandbox, leveraging our platform for industrial applications.

GE Digital also has significant experience in some of the key priorities of the Cluster. GE has a functioning Learning Factory model, for instance – one of our BrilliantFactories is going to be operational in Welland, Ontario, before the end of the year, producing Waukesha Reciprocating Gas Engines. Last year's TIP attendees heard about Ryerson's work with Zone Startup; the GE ZoneStartup in Calgary has attracted several leading-edge companies focused on Visual Inspection and Maintenance in Construction – notably Veerum, which has pioneered visualization techniques for large capital projects, and is itself a scale-up. In all of these applications, we saw an ability to utilize Predix, our industrial software platform. There was also a unique proposition for GE's participation in Cybersecurity. GE is one of the leading producers of cybersecurity solutions for the Industrial IoT, and regardless of the specific projects, the supercluster would have significant need of our capabilities in this regard.

Finally, there is the question of risk. Generally, the government's role in combatting the challenges of the of scale-ups has been by lowering the risk for venture investors through tangible financial and intangible regulatory support. From an outside perspective, it seems clear that the Supercluster program lowers capital investment risk for member companies: by forcing companies of different sizes together, and by supporting their work with a Federal subsidy, you significantly decrease risk. But taking a broader view the program also introduces new elements of risk which investors are less skilled in assessing.

What is the risk level associated with a company's core IP being accessible to all supercluster partners, lowering the company's brand proposition? How does a VC assess a scale-up which currently exists within a subsidized environment through the Cluster program, but with no certainty that its program has continuity without that subsidy? How complex is the bureaucratic structure of the Clusters themselves, and how does a potential investor assess the risks of this additional layer of drag on business? In dealing with scale-ups through the Supercluster program, potential investors (whether they are Multinationals or VCs) must rapidly become fluent in their understanding.

In the long run, we see the Cluster as being a vehicle for a number of interesting programs. The major question from is whether this work will be enough to maintain the cluster as an ongoing concern once the Federal subsidy funding expires at the conclusion of the 5-year program timeline. The Cluster development process did spur a large number of intriguing conversations, and it will have a lasting impact on the Canadian economy for years to come.