

Case Study – Support for new business growth in the Semiconductor Sector and learnings for other high value-added sectors of the UK economy such as HealthTech

The semiconductor sector has a successful model to incubate, accelerate, commercialize, scale and support export growth led by Silicon Catalyst.

Silicon Catalyst was created in 2015 by a few VC players to support the creation of new hardware to drive future software cases. It has grown today into a network of more than 400 VC, Corporate VC, Angel and Private Office investors, alongside Strategic Partner companies such as Bosch, NXP, Arm, Sony, SMD Semiconductor, Texas Instruments and Global Foundries to name a few. Silicon Catalyst also has a network of more than 60 In-kind partners such as TSMC, ST Microelectronics, Synopsys, Siemens and ARM who provide in-kind services to new venture companies that can amount to more than \$150 million. Silicon Catalyst also has an international network of more than 350 industry experts to match the specific needs of the new venture companies. Interestingly, Silicon Catalyst was not created and driven by an industry body such as the Semiconductor Industry Association (SIA) for example in the US, it was business venture driven. Silicon Catalyst very effectively connects start-ups to their international customers and provides the financing and supply chain connections to deliver and scale their businesses worldwide. Silicon Catalyst also has a sole focus on semiconductor hardware and has retained this mission since its origins over 10-years ago ⁽¹⁾.

To date Silicon Catalyst has led to the creation of 46 Alumni companies and it currently has 26 current companies in its portfolio. Silicon Catalyst has a branch in the UK, and in 2023 it received UK government support from DSIT of £1.3 million to create a start-up incubator called Chip Start UK ⁽²⁾ to grow new semiconductor start-ups in the UK. Silicon Catalyst also has a 2-year duration follow on program in the form of an “accelerator” to scale these start-ups once they have proven successful in their early stages. Current UK companies in the accelerator program are Vyper Core, Weetiq, and QPT, and Salience Labs is an alumnus of the program in the UK.

Silicon Catalyst provides a full range of support to the new venture companies that it decides to fund, supporting them to design, build supply chains, fabricate, and market semiconductor solutions ⁽³⁾. As Vayesh Keweda, CEO of Salience Labs in the UK explains, “Silicon Catalyst provides start-ups with more than in-kind services, it facilitates deep connections into the semiconductor industry through its advisors who have spent time getting to know the company well and then introduce and facilitate business-critical relationships”. Fares Mubarak, CEO of Spark Microsystems adds that Silicon Catalyst “....reduces barriers to entry and has got it right” furthermore he adds that “Silicon Catalyst allowed us to execute quicker and at lower cost”. Silicon Catalyst also fulfils another key role in supporting customer access both in local and international markets. Frederic Nabki, CTO of Spark Microsystems explains how Silicon Catalyst helped them “gain access to customers and financial networks”, and Martin MacDonald, COO of Weetiq in the UK advised that “Silicon Catalyst’s industry experts were great at connecting us to

customers”⁽⁴⁾ he further pointed out that many of Silicon Catalyst Strategic Partners and in-kind partners are also customers. For Weeteq NXP is such a key customer in the automotive semiconductor space.

Silicon Catalyst has created a successful and powerful ecosystem to create and grow leading new technologies and turn them into successful international businesses. What can we learn from Silicon Catalyst that we could apply to other promising high value sectors of the UK economy such as HealthTech?

What is the Silicon Catalyst experience like? – The case of Weeteq

An interview with Taner Dosluoglu (Founder) and Martin Macdonald (COO) of Weeteq yielded the following observations regarding the experience and benefits of working with Silicon Catalyst⁽⁴⁾

- **Participation**

Silicon Catalyst has a very demanding and stringent selection process, involving around 60 of Silicon Catalyst’s partners, and it chooses only the companies that it feels will be the most successful. Silicon Catalyst is industry/business led and has a good reputation and is highly credible to investors, meaning that access to capital flows more readily from the investment community once a company is selected to be part of the Silicon Catalyst program. VC’s came to see Weeteq as soon as they were selected by Silicon Catalyst. Silicon Catalyst executes a warrant for equity in the chosen company. Silicon Catalyst was not well-known outside of the UK but since the creation of ChipStartUK in 2023 in which DSIT invested, it has become better known to the UK semiconductor community.

- **Financing**

Weeteq was an industry-created start-up and as such it could not attract pre-seed capital in the UK. Only university start-ups can access pre-seed capital, and then VC’s follow once the pre-seed capital has been obtained. Silicon Catalyst is unique in providing pre-seed support to industry-created start-ups like Weeteq.

- **Acceleration Support**

The portfolio of partners in the Silicon Catalyst ecosystem are eager to work with the start-ups as they represent potential routes for growth for them. The more than 300 advisors are all seasoned experts (20-30 years of experience) and retired and highly enthusiastic about the sector and are passionately “giving back”. The interaction between the portfolio of partners and the start-ups is maintained through a gathering of everyone in the ecosystem that is held twice a year, and this maintains the interactions between all the interested players internationally; the advisors, the designers, the supply chain manufacturers, finance community and customers.

Silicon Catalyst has salaried, dedicated leads in different geographies around the World. Weeteq is supported through a UK lead through which Weeteq channels all its requests. The country leads find the best advisors for Weeteq depending on the nature of the request. The UK lead also arranges meetings with customers and suppliers abroad leveraging the Silicon Catalyst local contacts and the broader ecosystem. Unlike Innovate

UK missions in which Weeteq has participated where you meet the same people and companies during a country trade mission, Silicon Catalyst gets you to see exactly the people that you need to see abroad when you need it, furthermore the advisors that take you on the visits are Business-Technical people with industry networks in the geographies that are being targeted. The network also introduced Weeteq to a supporter that had not previously been known to them in the form of SMD in Sarawak, who have been instrumental in co-creating and accelerating Weeteq's delivery of prototype devices.

Silicon Catalyst also has in-kind partners in its ecosystem and the ecosystem could not function without them. They play a critical role in accelerating early-stage product developmental and scale up. Weeteq benefitted from £1.5 million of in-kind benefits during its early product development phases.

Silicon Catalyst's UK lead in Sean Redmond is a seasoned expert in the semiconductor field, and he is passionate and giving back to the semiconductor industry in the UK. Sean has been a key link for Weeteq to governments in the UK and the EU.

The UK does have excellent support organizations for the semiconductor industry, but none of them have the geographic reach of Silicon Catalyst.

Learnings for Health Tech in the UK

The UK has a very strong and successful HealthTech Industry that contributes £13 billion of GVA to the UK economy, and that since 2016 has been experiencing a very strong CAGR of 19% ^(1,2). The UK's HealthTech sector can grow significantly outside of the UK by accessing the much larger US and EU markets for HealthTech. Exports are therefore key to the growth of the UK's HealthTech companies.

Silicon Catalyst provides Incubator and Accelerator programs for the new ventures that it funds, and in the process, it connects new ventures to future customers internationally thereby providing export support early in the company's development. Silicon Catalyst does 6 things that makes it successful;

1. It is **focused** on just one sector
2. It is **international** from the start with its strategic and in-kind industry partners being world leaders
3. It has large numbers (>400) of **Finance partners**, and indeed it was created by Venture Capitalists to source opportunities to fund as well as addressing the need to invest in hardware to advance the latest software developments. They also fund Silicon Catalyst operations.
4. It has 14 **Strategic Partners** internationally that fund Silicon Catalyst and actively participate in the semiconductor business and who are often leading customers in the industry.
5. It has 81 **In-Kind Partners** internationally who provide in-kind services and access, again who are customers or supply chain players.
6. It has many (>350) **Industry Advisors** who are seasoned experts in the semiconductor business

Silicon Catalyst has created a large, international and comprehensive ecosystem with all the key players present and in large number to drive for global business success. Many of the testimonials above from new venture companies attest to the strong supportive ecosystem that Silicon Catalyst provides.

In the HealthTech Sector, the sector has access to Incubators and Accelerators. A web-search for the Top Incubators and Accelerators in HealthTech delivers a list of 30 with only 6 covering Healthcare and Medical, and none of them are sector focused ⁽⁵⁾. Most of the UK's incubators and accelerators are software, fintech, AI/ML, SaaS, blockchain and financial services focused. Furthermore, none of them provides the scale, international scope and quality of Silicon Catalyst ecosystem. Three HealthTech focused accelerators can be found; the NHS Innovation Accelerator⁽⁶⁾, The MedTech Accelerator⁽⁷⁾ and the ABHI accelerator⁽⁸⁾. The NHS and Medtech Accelerators certainly provide access to their respective key customers, the NHS and the Anglian Health Authorities respectively. The NHS Accelerators provides nearly 100 advisors and access to the key NHS Stakeholders, patients and decision makers, however, it does not cover exports explicitly. The UK Government via DBT has recently funded a US Accelerator (Texas Medical Center Innovation (TMCi)) to take qualifying UK HealthTech Companies through an accelerator program to support them in growing exports to the US ⁽⁹⁾. TCMi was founded in 2015 and has impressive facilities to create and develop new HealthTech technologies and then trial them through the US hospital networks. TCMi claims to be conducting 20% of all US trials. TCSMI has 49 members comprised of Hospitals, regional departments of health, and charities. It also has 3 corporate partners in Johnson & Johnson, ABB, and the Center for Device Innovation (CDI) which is part of TMC. TCMi is certainly focused, and can support US market development for UK companies, and has an in-house technology creation and prototype building capability, but it does not have the depth of ecosystem provide by Silicon Catalyst. In the UK, the ABHI Accelerator is the closest comparison to Silicon Catalyst, in that it addresses exports and is expanding into the US and Middle Eastern markets. Comparison to Silicon Catalyst also points to opportunities to grow and enhance the ABHI Accelerator by bringing in more Strategic Partners and Finance Partners to not only fund the accelerator but also to add important members to the Accelerator Ecosystem that are not present today. During a recent conversation with a US VC Managing partner in another sector who had previously investigated HealthTech an interesting insight about the US HealthCare market was shared. A key stakeholder to bring into to any accelerator ecosystem in HealthTech would be the Health Insurers. Apparently, a new HealthTech technology will not be adopted in the US unless it is shown to make money for the Health Insurers, and ABHI should consider the Health Insurers as potential partners in their accelerator as they grow it. An enhanced ABHI Accelerator might also attract UK Government support to the growth of UK exports in the important HealthTech sector of the country.

Figure 1 – A Comparison of the Ecosystems of selected Technology Accelerators

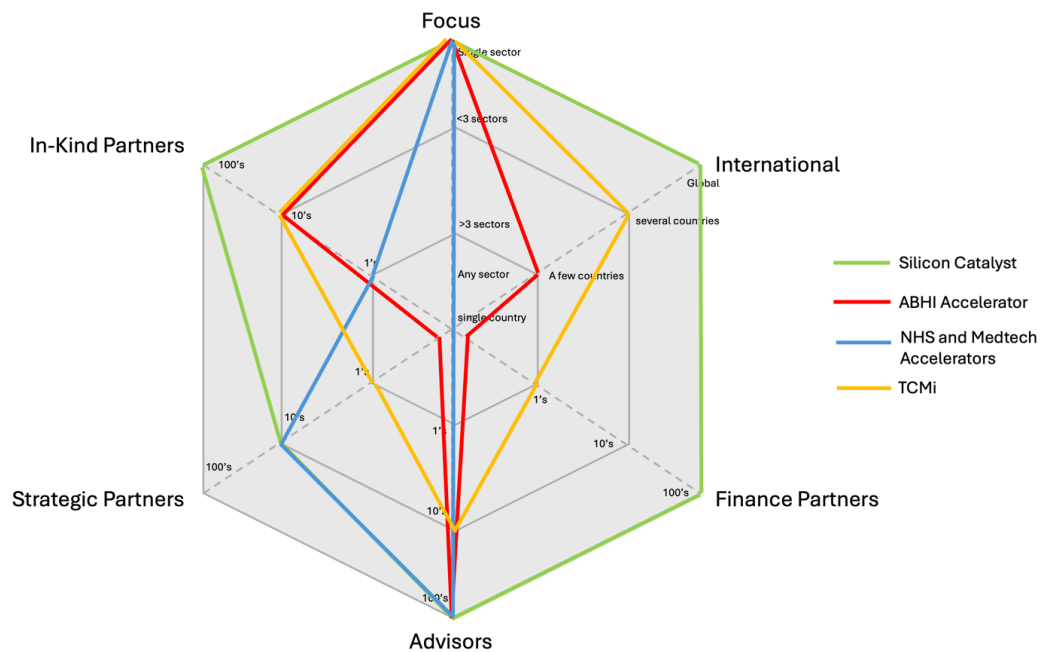
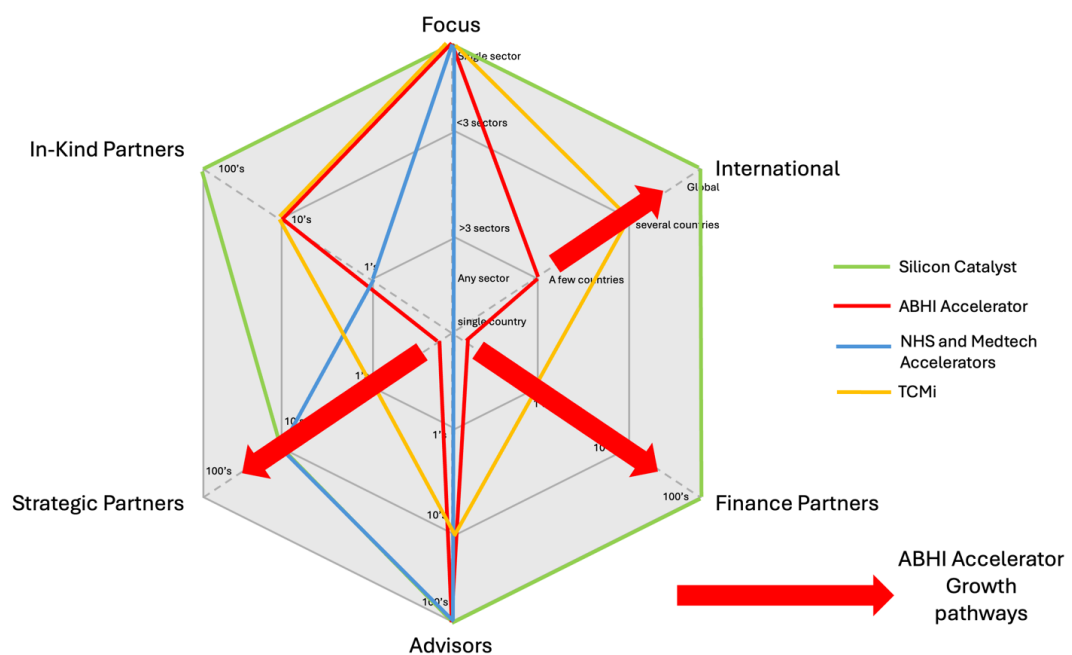


Figure 2 – ABHI Accelerator growth pathways to enhance their Accelerator ecosystem



References

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