

European Alliance Against Coronavirus

Wednesday 3rd June 2020 at 8:30

Analysis of disruptions in the electronics ecosystem

Working format is based on “Gilles Rules”:

1. conception framework
2. needs and disruptions
3. solutions

Speakers:

- Hervè Ribot, Minalogic
- Emir Demircan, SEMI Europe
- Mikel Idirin, System-on-chip Engineering

[Link to session's recording](#)

CONCEPTUAL FRAMEWORK

Hervè Ribot, [Minalogic](#)

Hervè started his speech with the presentation of Minalogic, the cluster ecosystem that was established in 2005 in the Auvergne Rhone Alpes. This cluster develops products and technologies for all industries and covers the entire digital technology value chain.

In March and April 2020 he extended a survey with the aim of **identify the coronavirus pandemic impact on people, companies, research & development, commercial activities and on the financial side**. Even though 80% of the people had some issue with their internet connection, overall they seemed satisfied by their new smart-working arrangements. The R&D projects could continue and many companies have already resumed publicly funded projects. On the commercial side there was an estimated 20% impact on companies turnover and executives are very worried about the next quarter outlook. On the financial side the financial tools were digitized and most of the financial processes could run smoothly.

The business uncertainty will continue and the key milestone in September/ October will be to assess markets recovery dynamics. Minalogic thinks that in order to help companies it is possible to increase the support of the cluster pillars with **networking, innovation and business growth** by instituting open-innovation days and business conventions.

Emir Demircan, [SEMI Europe](#)

SEMI Europe is the global industry association serving the product design and manufacturing chain for the electronics industry. Seven regional SEMICON expositions and a comprehensive lineup of SEMI conferences and forums give you more access to industry breakthroughs, trends, leaders, and partners. Throughout out the year in every major semiconductor design and manufacturing hubs around the world, SEMI's industry-leading events connect key industry players for opportunities to collaborate, innovate and drive the future of microelectronics.

Emir underlines not only the importance of a **global network** but also the practical aspects of the **cross-border mobility** necessary to work together. The UE developed guidelines in order to enable the mobility in its territory and also to travel to the US and to China.

Security is one of the key elements in order to make workforce mobility and communication with strategic partners possible.

Mikel Idirin, [System-on-Chip Engineering](#)

Mikel's speech was focused on the effects of COVID on the electronics sector. It was a clear **breakdown of the current supply chain for electronics components** and all the relative subcontracting services. In order to overcome the disruption in the local supply chain it is important to **reduce the level of dependence to the global supply chain** because for the future there is a risk line associated to the supplying of key competences.



GAIA SoC e

Regarding the **EFFECTS** that have been seen in the electronics sector after the COVID:

- **Breakdown of the current supply chain** of electronic parts/components, and all associated subcontracting services, let's say EMS-Electronic Manufacturing Services-, mainly sourced from Asia (China).
- The risk line associated to the **supplying of key components** in future
- EU is not well positioned as **key-component provider**

NEEDS:

- **Boost capacities** in terms of **electronic components manufacturer**
- To build-up more **capacity** in terms of **EMS**
- **Reinforce** its role as **key component design**

SOLUTIONS:

- Identify the **key electronics components** for the european E/E offering
- Identify the **key services** that play a relevant role in the growth and competitiveness of companies
- Develop the **smart-working** concept

IDENTIFICATION OF DISRUPTIONS

Disruption of supply chain of electronic parts

Source: Mikel Idirin, System-on-chip Engineering, ES

Evidence: European supply chain of electronic ecosystem strongly depends on China, US, India and Japan suppliers for components and electronic manufacturing services: EU is not well positioned as chipmaker and key component provider.

It is crucial to change business model, boost capacities in terms of electronic component manufacturing and reinforce European role as key component design. In addition, during the pandemic, supplying in short time was difficult: the elements take, at least, three weeks to be transported in countries, slowing down all production processes.

Geographical impact: EU

Stage of value chain: inbound logistics (importation of key components and strong dependence on China)

Character of the disruption: lack of input

Time frame: medium – long term

Recommendation:

- Identify key electronic components
- Identify key services that play a relevant role in growth and competitiveness of companies
- Develop smart working components
- Reduce global dependency
- The ecosystem needs to be funded in different ways in order to achieve more competitiveness (funding in R&D projects)
- Support from private banks and States
- Increase support on cluster pillars in terms of networking, innovation and business growth
- Use innovation clusters to accelerate recovery of regional ecosystems

Digital disruption

Source: Hervé Ribot, Minalogic, FR

Evidence: Companies need to improve their digital tools and competences in order to enhance their web visibility.

Geographical impact: EU

Stage of value chain: technology

Character of the disruption: lack of input

Time frame: medium

Recommendation:

- Accelerate high speed infrastructure and digital transformation
- Balance with collaboration at European level: digital innovation hub will give access to technologies

Skills gap in STEM

Source: Aurora Baptista, PT, and Mikel Idirin, System-on-chip Engineering, ES

Evidence: The ecosystem shows a relevant gap regarding skills in competences like scientific, technology, electronics and mathematics: more workforce is needed to be engaged into electronic sectors.

Geographical impact: EU

Stage of value chain: HRM

Character of the disruption: lack of skills

Recommendation:

- Improve exchanges programs across Europe for upskilling and in order to identify key competences
 - The ecosystem needs to be funded in different ways in order to achieve more competitiveness (funding in R&D&I projects)
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IDENTIFICATION OF NEEDS

- Build-up more capacity in terms of EMS

Source: Mikel Idirin, System-on-chip Engineering (ES)

- Identify the bottlenecks: if they lie in design, raw materials or both

Source: Dolors Pla

- Implement experimental solutions from lab to fab

Source: Emir Demircan, Semi Europe

- Economic support from private banks and states in order to increase the competitiveness of the sector

