



Digitalized industrial communities

- LAB at SMS conference in Milan 17.6.2022 –

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17.6.2022

Digitalized industrial communities– Milan LAB agenda

09:00 The objectives of the LAB (Cultural contexts, Collaboration models, Information sharing)

- The background of industrial communities
- The nature of digitalized industrial communities
- The objectives of the Digitalized Industrial Communities LAB: key questions to be addressed

09:15 Three cases – Early birds of community driven collaboration

- Case Nautor; presented by Dr. Johan Wallin, Synocus Group (cultural context)
- Case Alessi; presented by Professor Carlo Salvato, Bocconi (collaboration model)
- Case Wärtsilä, presented by Mr. Christian Sundman, Innovation Manager, Wärtsilä (information sharing)

10:15 Three breakout sessions, part one: cultural contexts and collaboration models (including coffee)

12:00 Reporting on the findings from the breakout sessions

12:30 Lunch

14:00 Three breakout sessions, part two: information sharing and community formation (including coffee)

16:00 Presentation of results from breakout sessions

16:30 Concluding discussions

17:00 End of lab

The background of industrial communities

- The notion of “industrial district”, originating from Italy, describes how individuals and firms related to one another to foster the accumulation of knowledge and skills to shape an industry*.
- Industrial districts originally focused purely on local engagement. The boat building in Ostrobothnia, on the west coast of Finland, illustrates the coupling of industrial districts internationally. This was made possible by Leonardo Ferragamo’s acquisition of Nautor, the producer of the world-famous Swan yachts, in 1998.
- The collaboration in a community can support both efficiency and creativity as shown by Alessi in the 1990s developing separate practices for the “Efficient Factory” and the “Dream Factory” **.
- During the 2000s the Italian industrial districts have been transformed. The Belluno eyewear district has become dominated by Luxottica and Safilo, which now form an oligopoly with strong own global ecosystems, while still benefitting from their artisan tradition***.
- The Brenta footwear district in turn is now a subcontracting hub for footwear for leading fashion firms such as LVMH, Gucci and Prada****.

* Sforzi, F. (2015). Rethinking the industrial district: 35 years later.

** Salvato, C., & Rerup, C. (2018). Routine regulation: Balancing conflicting goals in organizational routines. *Administrative Science Quarterly*, 63(1), 170-209.

*** Camuffo, A. (2003). Transforming industrial districts: large firms and small business networks in the Italian eyewear industry. *Industry and Innovation*, 10(4), 377-401.

**** Amighini, A., & Rabellotti, R. (2006). How do Italian footwear industrial districts face globalization?. *European Planning Studies*, 14(4), 485-502.

The nature of digitalized industrial communities

- Digitalization offers new and additional flexibility to “glue an industry” illustrated by the emergent global 3D printing community, whereby innovators in 3D printing have spontaneously engaged in community building with strong support of digitalization*.
- The most successful Finnish gaming companies have internalized the community spirit in their own culture, and some of them actively create communities with their customers. Supercell, the most successful Finnish gaming company, has stated that the community of players drives the games forward. This suggests that innovation communities based on social relationships, strengthening the learning and capability building within the community, can also bolster firm-centered ecosystems**.
- The Open Smart Manufacturing Ecosystem, spearheaded by the Sustainable Technology Hub of Wärtsilä, located in Ostrobothnia, builds on these experiences to establish a digitalized industrial community increasing openness in the manufacturing sector. The goal is to speed up the transformation of European manufacturing towards increased productivity and shortened lead times with the help of innovative sustainable technology.

* Bouncken, R., & Barwinski, R. (2021). Shared digital identity and rich knowledge ties in global 3D printing —A drizzle in the clouds?. *Global Strategy Journal*, 11(1), 81-108.

** Wallin, G. (2019). Drivers and mechanisms for ecosystem evolution around social relationships – the case of the Finnish gaming industry. Master's Thesis. Aalto University, School of Science, Master's Programme in Industrial Engineering and Management.

Digitalized industrial communities – OSME Milan LAB, questions

- The main question to be addressed by the lab is as follows:
 - How can **partners in an industrial community** integrate creativity and efficiency through joint capability building for improved resilience and competitiveness ?
- The main question will be more specifically addressed by three underlying problem-oriented questions:
 - How does the **cultural context** influence the possibilities to establish favorable conditions for a sense of community to emerge among the individuals engaged in the formation of an industrial community?
 - What types of tools, practices, and **collaboration models** will help managers institutionalize a digitalized industrial community aiming to contribute to the economic success of the participating companies while also pursuing the broader societal mission of sustainable manufacturing?
 - How can digitalization enable more effective ways to **share information** and data to strengthen the collaboration among the participants and secure that both shorter-term commercial objectives and longer-term community building ambitions can be simultaneously pursued?

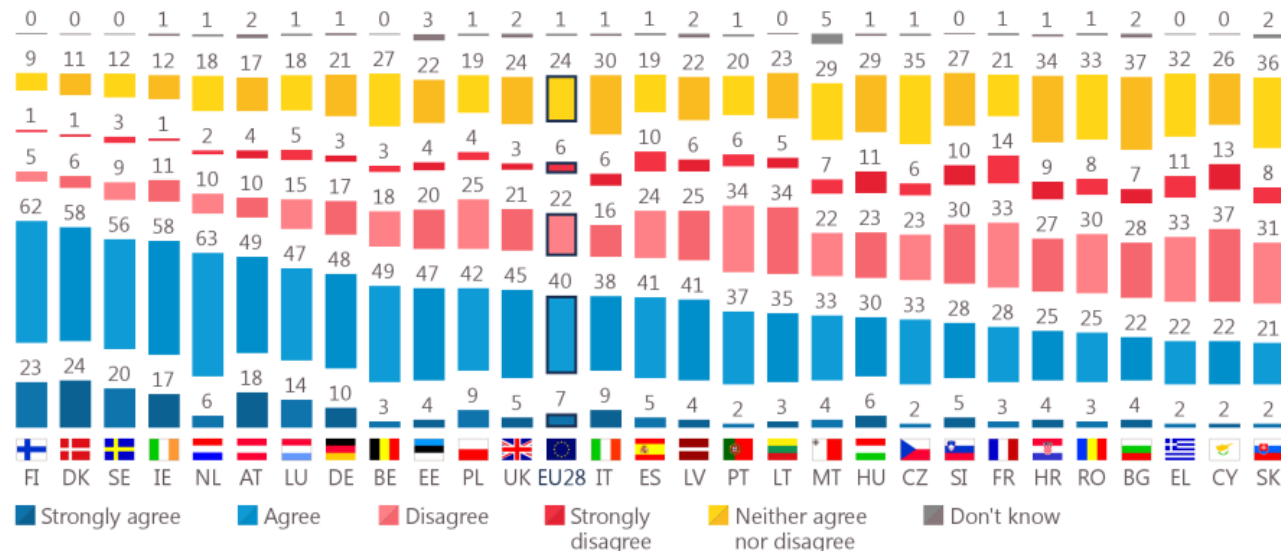
Digitalized industrial communities – cultural context

How does the **cultural context** influence the possibilities to establish favorable conditions for a sense of community to emerge among the individuals engaged in the formation of an industrial community? In today's new geopolitical situation, the role of trust is increasingly important. How will different national cultures (see below*) influence the industrial reconfiguration due to the war in Ukraine?

There is a wide range of opinion across Member States. In 12 countries, at least half of respondents agree that generally most people in their country can be trusted, with those in Finland (85%), Denmark (82%) and Sweden (76%) the most likely to agree. At the other end of the scale, just 23% in Slovakia and 24% in Cyprus and Greece also agree.

QA1.10 Please tell me to what extent you personally agree or disagree with the following statements.

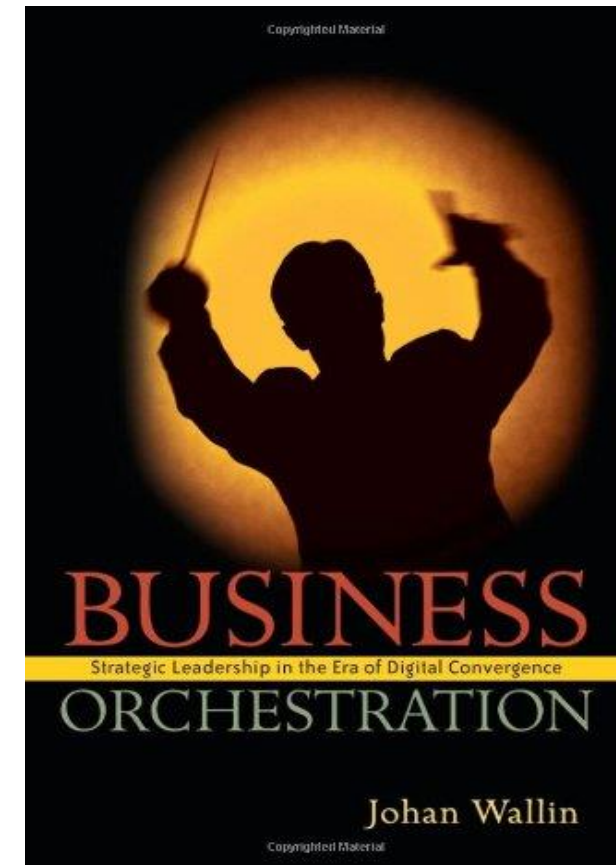
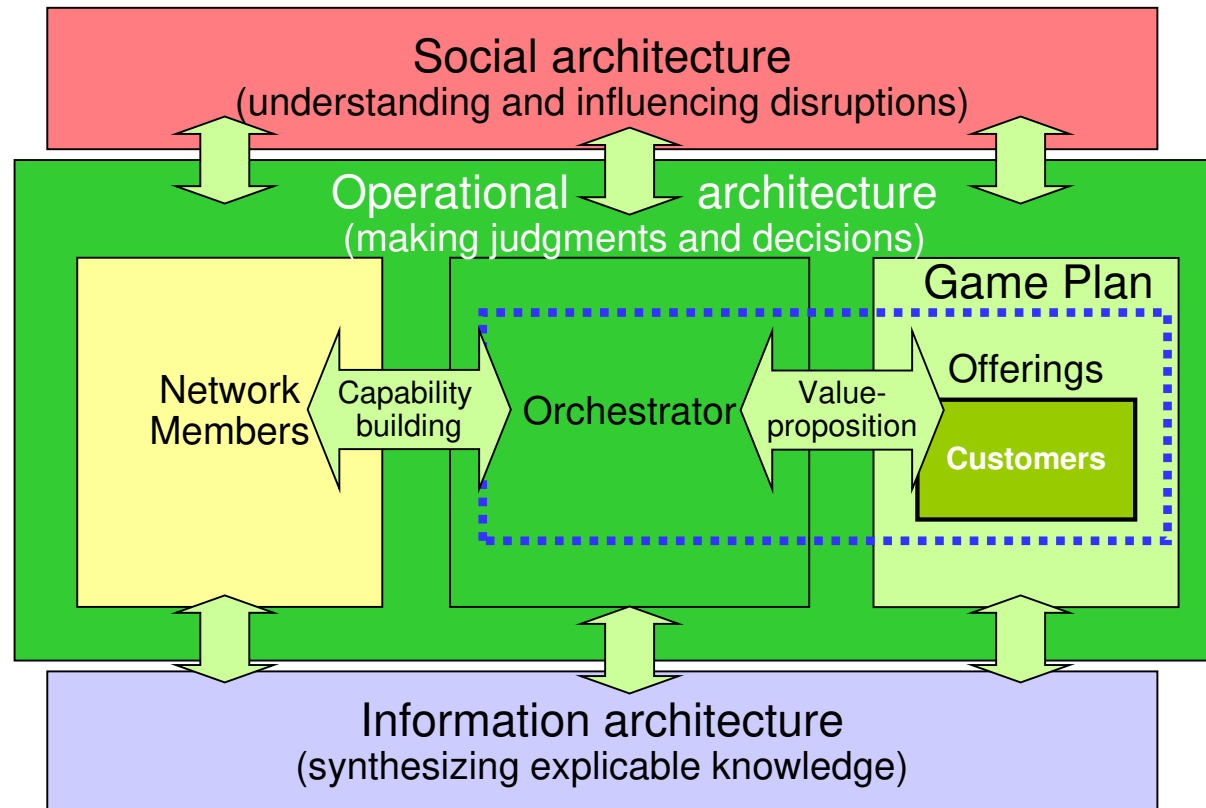
Generally speaking, most people in (OUR COUNTRY) can be trusted (%)



*<https://europa.eu/eurobarometer/surveys/detail/2166>

Digitalized industrial communities – collaboration models

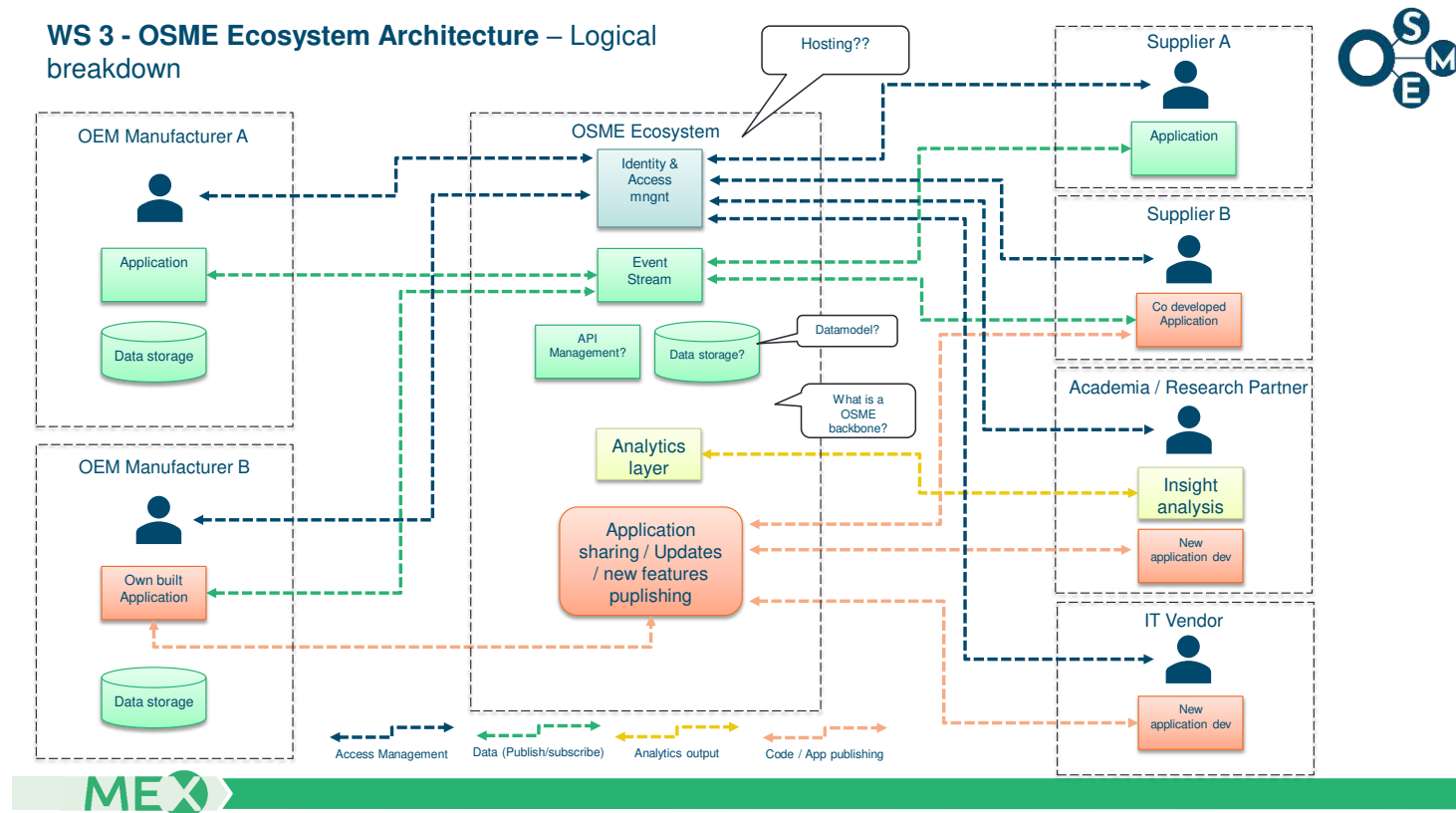
What types of tools, practices, and **collaboration models** will help managers institutionalize a digitalized industrial community aiming to contribute to the economic success of the participating companies while also pursuing the broader societal mission of sustainable manufacturing? Here the architectural conditions of the collaboration will be discussed*.



*Wallin, J. (2006:325). Business orchestration. Wiley

Digitalized industrial communities – information sharing

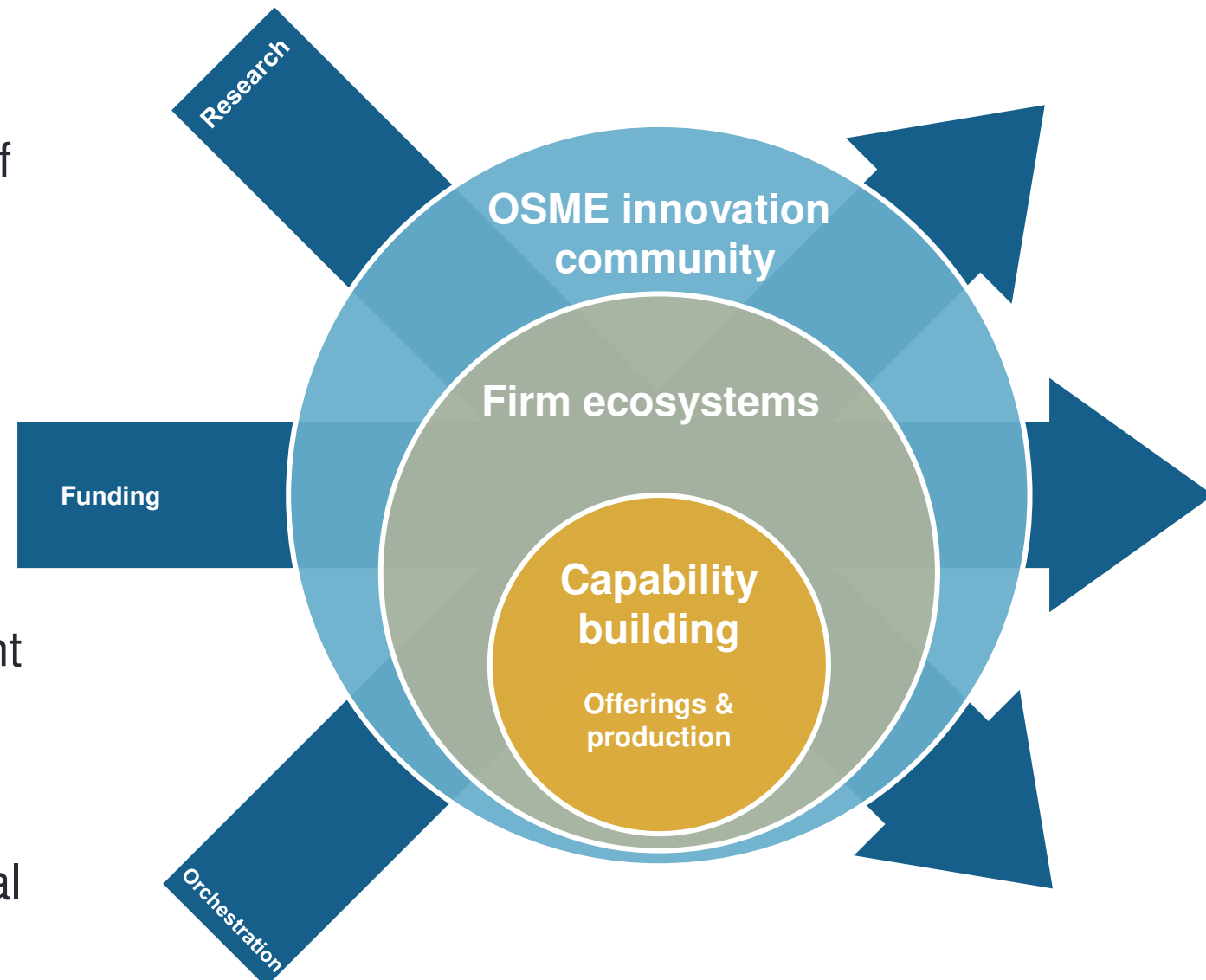
How can digitalization enable more effective ways to **share information** and data to strengthen the collaboration among the participants and secure that both shorter-term commercial objectives and longer-term community building ambitions can be simultaneously pursued? Wärtsilä will guide this discussion based upon its own evolving information architecture (see below*).



*OSME Steering Committee Meeting 15.2.2022

OSME becoming a new organizational field?

- The foundation of the OSME collaboration is finding complementary partners to be competitive in respect of offerings and production; this asks for continuous capability building.
- Companies increasingly perceive themselves as orchestrators of their own ecosystems, whereby the ecosystem partners contribute both operationally and “transformationally”.
- Providing that there will be commitment and engagement around collaboration for transformation, then OSME may evolve into a transformational innovation community beyond the initial project phase ending in 2023.



Conclusions

- OSME was enabled by the financial support from Business Finland, making its development path influenced by both the financial incentive through Business Finland and the capability building benefits from the collaboration.
- This far three phases:
 - Agreeing on principles; 1H2021, 14 organizations involved in the grant application 8.6.2021
 - Forging relationships; 2H2021; grant application approved 26.11.2021
 - Learning by doing; 11.2021-06.2022; continuous adaptation to changing internal and external conditions, increasingly extending the discussion to deal with the impact of the Ukraine war
- Theoretical contributions by integrating capabilities (Teece et al., 1997; Fujimoto, 1999), ecosystems (Moore, 1993; Jacobides et al., 2018), communities (Beccatini, 1990; Lynn et al., 1996), organizational fields (DiMaggio and Powell, 1983; Bouncken and Barwinski, 2021), and industrial infrastructures (Van de Ven, 1993; Woolley, 2021).
- OSME offers a unique opportunity for action learning (Ramírez, 1983; Marquardt & Waddill, 2004) and action research (Stringer, 1996; Avison et al., 1999).
- The impact of this effort will be fully visible in 2024 and beyond.

Takeaways from the Lab discussion

- Innovation is increasingly about capability building, which requires long-term relationships among the key individuals engaged in the collaboration.
- The example of Nautor Swan yachts shows that the concept of collaborative industrial communities can be transferred from one location to another (e.g., from Italy to Finland), if there are individuals that are motivated to initiate a new way of working.
- Capability building communities represent a complementary networking effort in addition to offering development through firm-centric ecosystems.
- Originally industrial collaboration in communities was more geared towards longer term capability building for value creating, whereas ecosystems tend to be more focused on shorter term offering development and value capturing.
- The increasing demand for sustainability suggests that the community perspective may have an increasing role in the network portfolio of progressive companies.
- Digitalization enables the use of common data both within value proposition centric ecosystems and capability building communities. Such enabling platforms represent an interesting new area for research and experimentation.

The logo for MEX, featuring the letters 'MEX' in a bold, white, sans-serif font. The 'X' is partially enclosed by a white circle. The logo is set against a dark blue background that transitions into a light green arrow pointing to the right.The logo for OSME, featuring the letters 'O', 'S', 'M', and 'E' in a bold, blue, sans-serif font. Each letter is enclosed in a white circle. The circles are arranged in a cluster, with 'O' on the left, 'S' at the top, 'M' on the right, and 'E' at the bottom. The logo is set against a dark blue background.

Thank you for your attention!

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