Laith Altimime
SEMI Europe President

SEMICON® EUROPA

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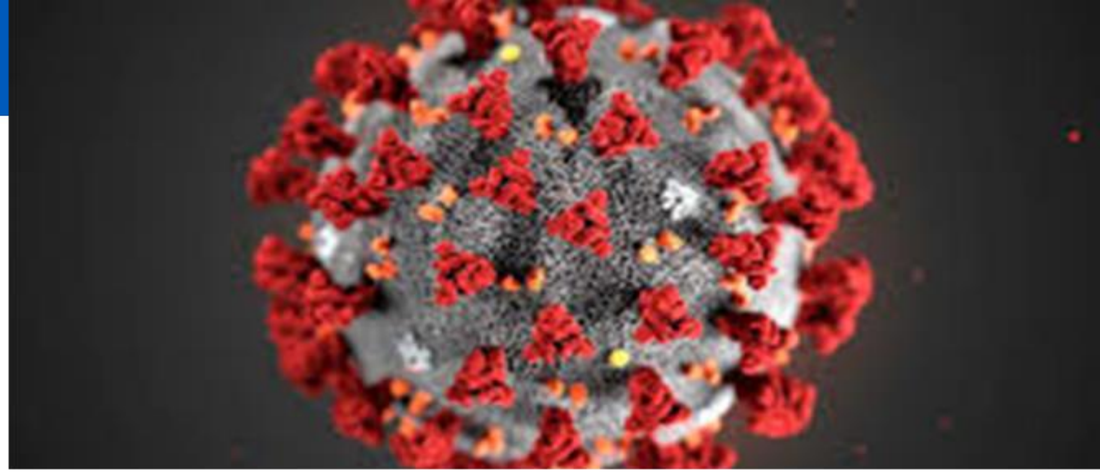
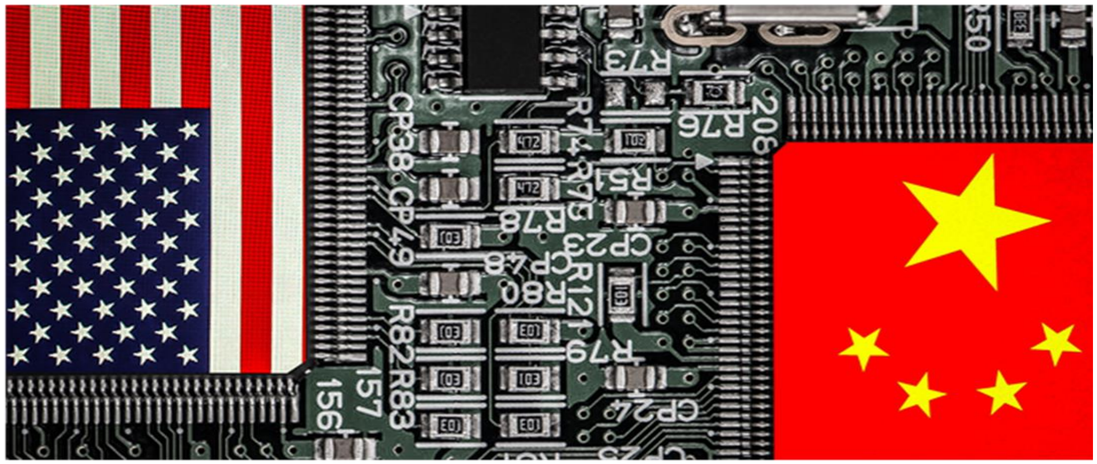
STRATEGIC PARTNERSHIP

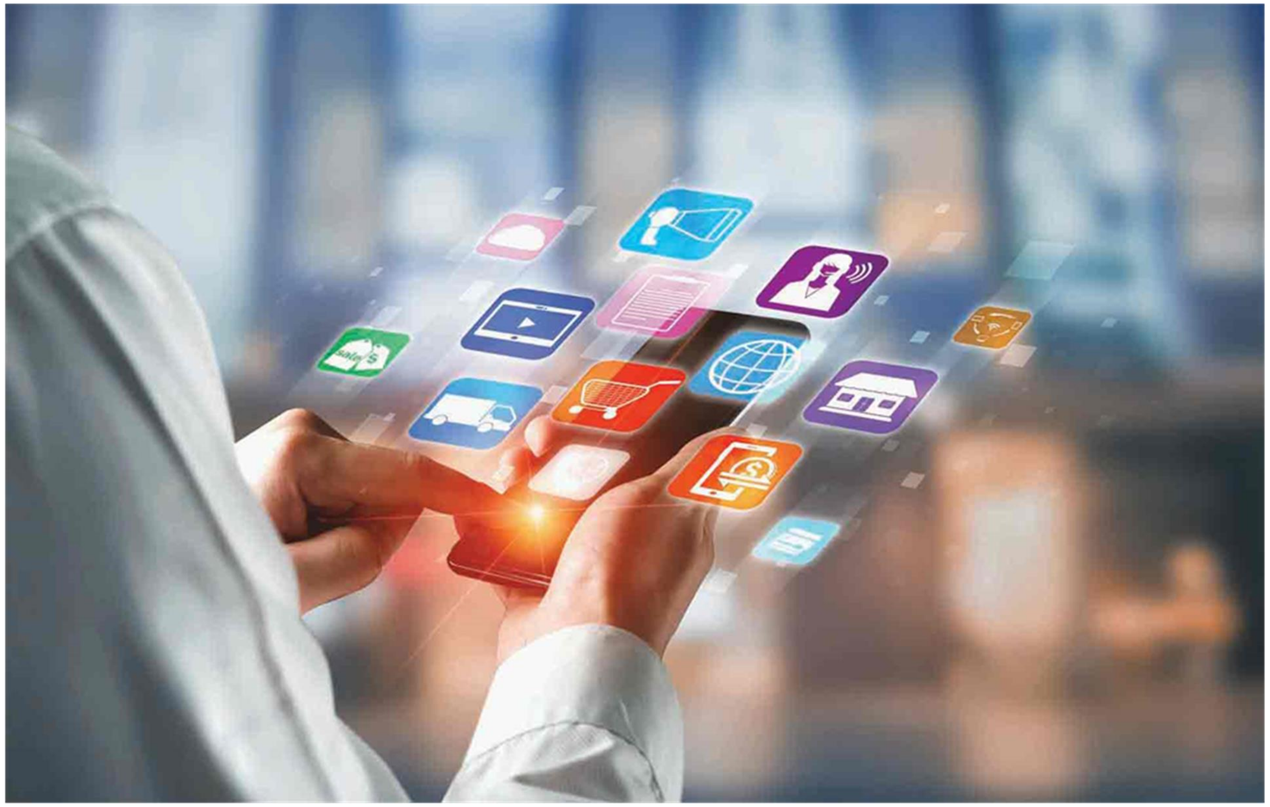
SEMICON® EUROPA | semi™

productronica | Messe München





Work-from-home, e-learning, online shopping, home entertainment, video streaming, VR / AR, ZOOM…



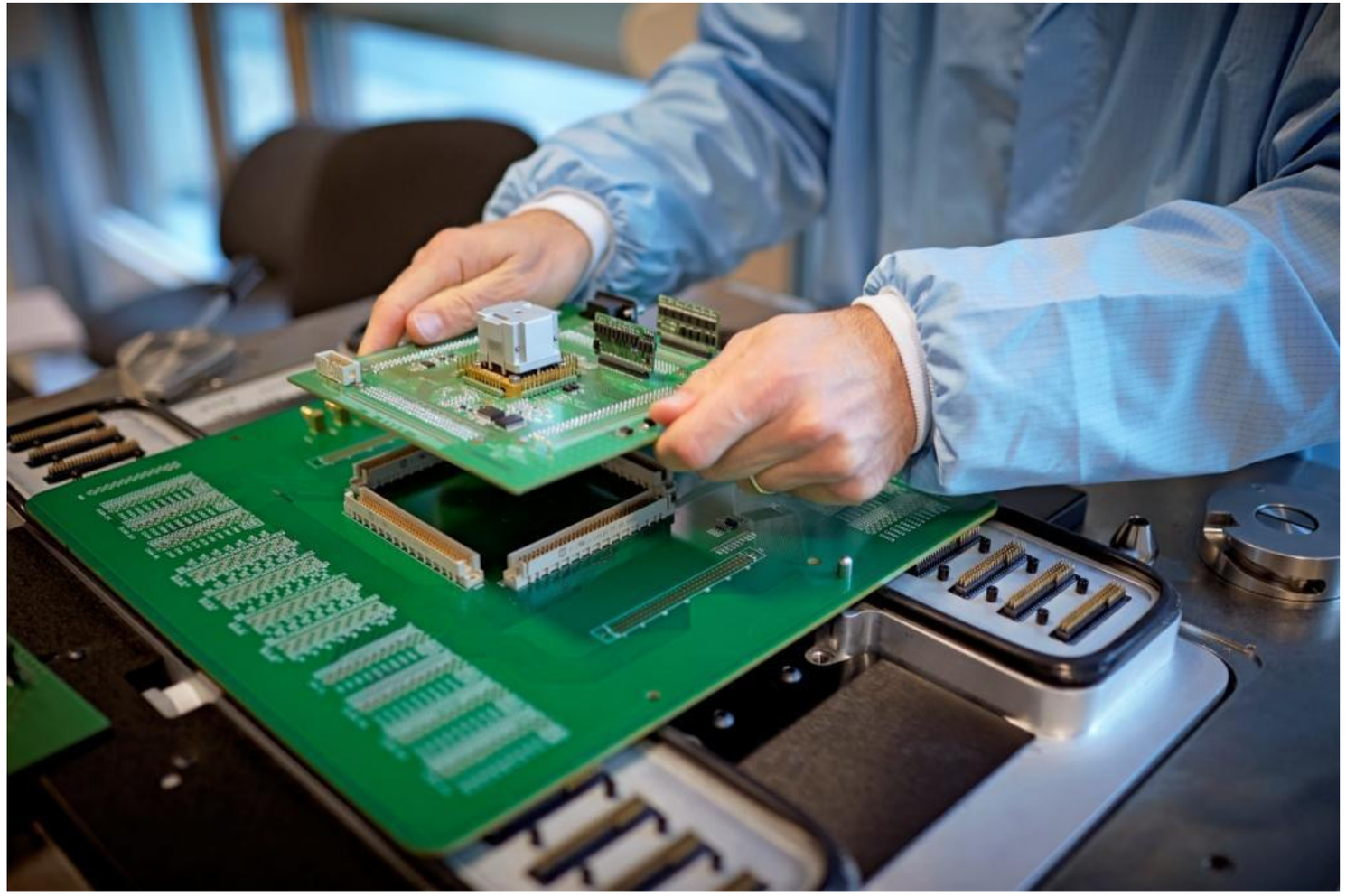
Digital life

- **Accelerated digitization**
  - Increased data use **by 47%**
  - Increased Internet use by **by 70%**
  - Increased video streaming **by 12%**

- **238%** surge in cyberattacks:
  - **"Trusted Electronics"** will be on the rise!

Electronics enabling digital life

The Global Automotive Industry's Chips Crisis



The automotive industry's chip shortage has transitioned from being a seemingly **minor irritation in December 2020, to a global full-blown supply chain crisis** up and down the value chain.

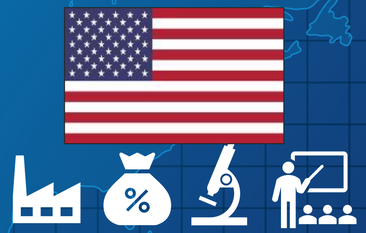

Infineon


BOSCH
BOSCH
invented for life
Built by
#BoschSilicon

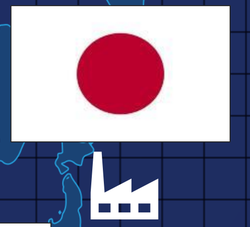
GOVERNMENTS AND COMPANIES INVESTING IN THE FUTURE WITH SEMICONDUCTORS

intel

€16.5B in 2021



infineon BOSCH intel



SAMSUNG

€23B in 2021

tsmc

€82B in 3 years

Countries targeting “chip supremacy” - Global collaboration is a must!!!

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Government Incentives in Consideration:			
	Manufacturing Investment		R&D Investment
	Tax Break		Workforce Development

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2030 vision for Europe's electronics ecosystem

Alliance on Semiconductors and European CHIPS Act

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European Commission's feedback on SEMI recommendations to the EU – US Trade and Technology Council

"Semiconductors were one focal area of the first Trade and Technology Council meeting in Pittsburgh on 29 September 2021.

I take from your letter that the foreseen cooperation areas on technology standards, supply chains security, export controls, investment screening and global trade challenges all resonate well with your expectations.

I would invite SEMI to join any meetings of interest, and contribute with the experience of the semiconductor industry."

VALDIS DOMBROVSKIS
EXECUTIVE VICE-PRESIDENT,EUROPEAN COMMISSION

semi™


Digital Transformation
Europe's Strategic Ecosystem
BMW
Audi
Volkswagen
AIRBUS
BAYER
PHILIPS
ZF
ERICSSON
RENAULT
Passion for life
Continental
The Future in Motion
THALES
Valeo
AVL
NOKIA
Connecting People
orange
RTOs
imec
embracing a better life
leti
cea tech
Fraunhofer
VTT
Suppliers
ASML
SUSS MicroTec
ATOTECH
evatec
process systems
comet
RECIF
Technologies
EVG
VAT
soitec
RIXTRON
Air Liquide
BASF
We create chemistry
Besi
MERCK
Schneider Electric
ZEISS
EDWARDS
ASM
siltronic
perfect silicon solutions
SPTS
A KLA Company
umicore
Design & Manufacturing
Infineon
ARM
SIEMENS
Mentor Graphics
BOSCH
amd
NXP
xfab
intel
GlobalFoundries
Melexis
INSPIRED ENGINEERING

Microelectronics Training, Industry and Skills

….SEMI is fully committed to building and maintain the needed talent pipeline in Europe. I wish you best of luck in your endeavors.

Commissioner Thyssen for Employment on [SEMI Blog]

METIS

Dr. Sabine Herlitschka,
18 November 2019 | Infineon Villach

March 23, 2020

Towards Closing the Skills Gaps in the European Microelectronics Industry

By Nicolas Schmit

Skills are the key to the future. It is thanks to its skilled workforce that Europe will reap the benefits of the green and digital transitions and remain competitive. At the same time, upskilling and reskilling is a clear social policy because it ensures that workers can more easily navigate from one job to another.

Microelectronics is at the crossroads of many sectors, such as the automotive industry, manufacturing, health, and energy. The European electronics industry is facing an acute shortage of skills in all tiers of its value chain, particularly in electronics design, both digital and analog, and in system and software engineering. A sustainable provision of qualified personnel is key to maintain competitiveness and innovation leadership. Yet, companies in this area suffer from a critical shortage of engineers with competence in microelectronics technology and design. The rapid evolution of the electronics industry calls for a continuous update of skills and knowhow.

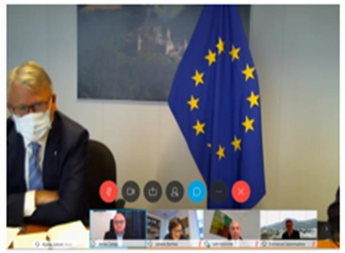
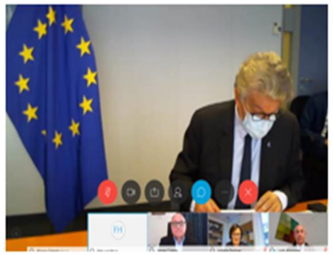
Vocational education and training has an important role to master these challenges. Modern, inclusive and dynamic vocational education and training programmes are a pre-requisite to remain competitive in the digital age. We must support agile partnerships to develop skills for smart industrial specialisation and the green and digital transitions. Everybody must be on board to shape the workforce transformation in Europe: industry, social partners, education and training organisations, as well as policymakers. The *Blueprint for sectoral cooperation on skills* launched in 2016 is an excellent model for strategic collaboration and will be extended.

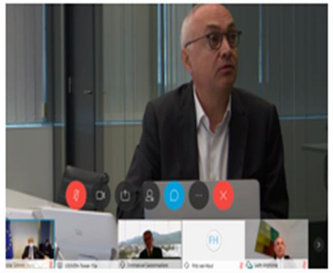
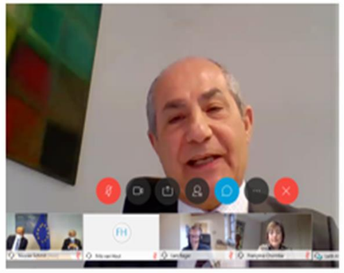
The Commission has recently proposed an update of our successful Skills Agenda for Europe. One key element is the new Pact for Skills, in order for all stakeholders to generate new concrete commitments to invest in upskilling and reskilling. It will help us to respond to the extent and speed of change in the economy and society. I warmly invite the microelectronics industry to participate in the Pact.

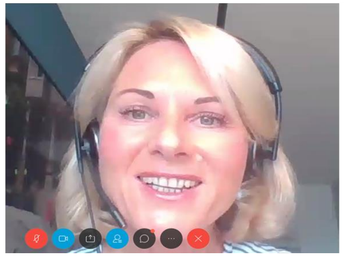
Erasmus+ METIS

Pact for Skills for Microelectronics

High Level Roundtable - Skills for the Microelectronics Sector
October 5th, 2020




Industry, R&D hubs, Education providers and NGOs

"The next Decade will be Europe's Digital Decade. Microelectronics is a key enabler for this vision and the cornerstone for Europe's digital sovereignty. Our ambition is to build the most powerful, cutting edge and sustainable processors in Europe. This requires large investments, know-how, political will, but also and foremost: highly skilled people. Today, the European electronics industry is facing an acute skills shortage in its value chain. The number of open positions for Electronic Engineers is growing at an alarming rate. No industry player can solve this challenge alone. However, together – industry, social partners, education and training providers, and public authorities – we can make a difference. This is the essence of the Pact for Skills: inclusive collaboration, concrete commitments from all partners and urgent action for current and future workers in microelectronics industry in Europe. We must move fast to build foundations for the upcoming Digital Decade."

Thierry Breton, Commissioner for Internal Market

Nicolas Schmit, Commissioner for Jobs and Soc

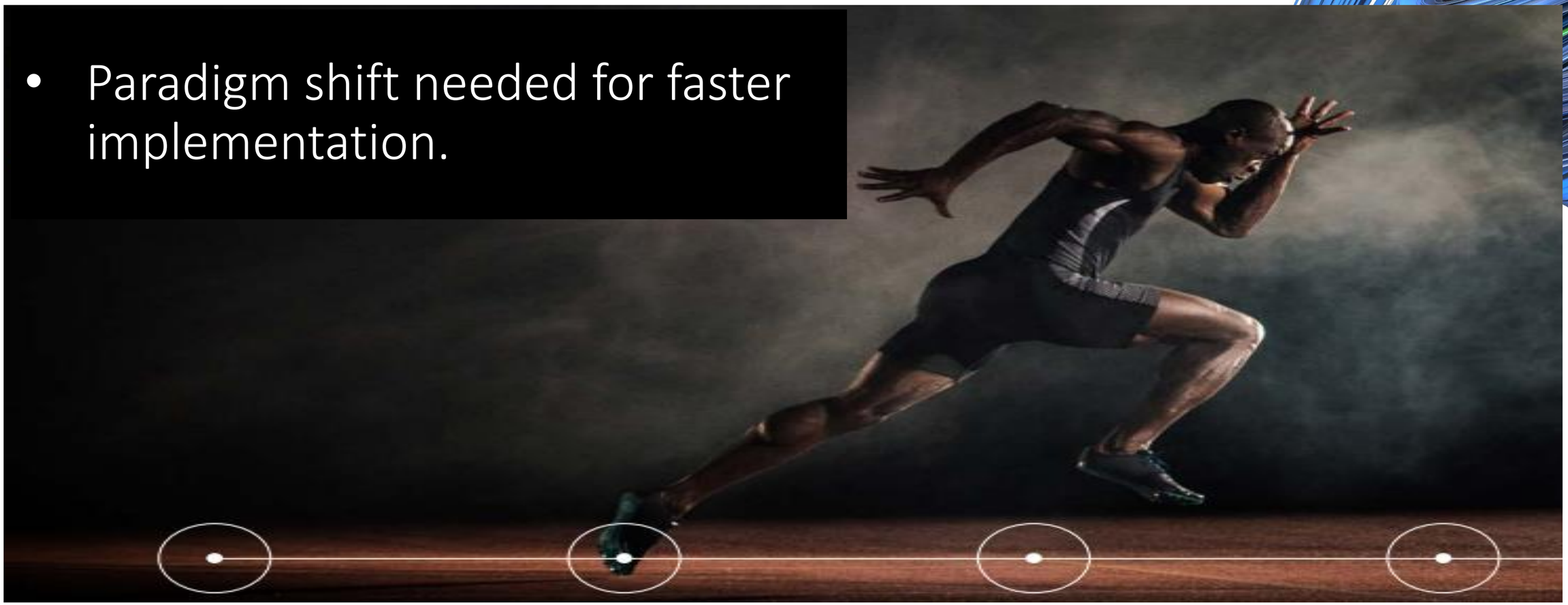
"Today, most employers know that investing in skills needs to be a key issue in their strategy. They realise that they cannot only rely on governments to take the responsibility for education and training. There needs to be a strong private-public partnership in order to respond to the huge and urgent needs of investment in upskilling and reskilling. The Pact will gather and inspire different commitments from individual companies and other stakeholders like VET (Vocational Education and Training) providers or social partners. It will also support large-scale industrial partnerships. Joining the Pact, stakeholders will get access to networking, knowledge, guidance and resource hubs. I count on commitment and concrete actions from all actors. We do not have time for half measures. We need to act now."

imec

"The launch of the Pact for Skills in microelectronics by Commissioners Breton and Schmit represents a strong and timely signal for our microelectronics industry. It recognizes that addressing the skills challenge is a pressing common priority for Europe's microelectronics R&D, design and manufacturing ecosystem. More than ever, electronic components and systems are essential in safeguarding our crucial infrastructure and in supporting Europe's premier position in important sectors such as automotive electronics, health systems, communications, IoT, Edge AI, automation and power electronics."

- Luc Van den hove, president and CEO, imec

- Paradigm shift needed for faster implementation.



Edge AI

Horizon Europe & **KDTs**

Assembly & Testing

Digital Europe Programme

Increased Market share

IPCEI, **Industry Alliances, TTC CHIPS Act,**

Advanced Skills

METIS, Erasmus+ **Pact for Skills**

- **Semiconductors, the heartbeat of the $2.5T Electronics Design & Manufacturing Ecosystem**
  - Enabling Connected, Safe, Secure and Sustainable Digital Future
- **Semiconductor sales is expected to reach $1.2T by 2030 (2021 exceeded $0.5T)**
  - IoT, Automotive, EV, AI, 5 / 6G, Medical, Telecommunications and Quantum computing
- **Europe is strategically positioned in the global electronics supply chain to remain at the forefront of the Digital Transformation**
  - Building on the core strengths of Europe to maintain leadership and resilience
- **Workforce is an Industry Global Challenge, “Talent, Diversity & Inclusion”**
  - SEMI Comprehensive Diversity and Inclusion & Workforce Development – Filling the Pipeline supporting Europe’s business growth


HANDS
FACE
SPACE
FRESH AIR

SEMICON® EUROPA

Thank You!

semi™