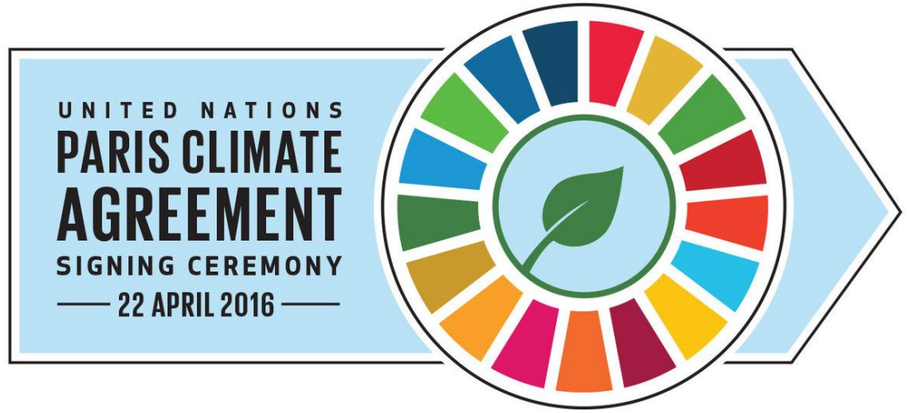
SUSTAINABLE DIGITAL
INFRASTRUCTURE ALLIANCE

Introducing the Roadmap towards a Sustainable Digital Infrastructure.

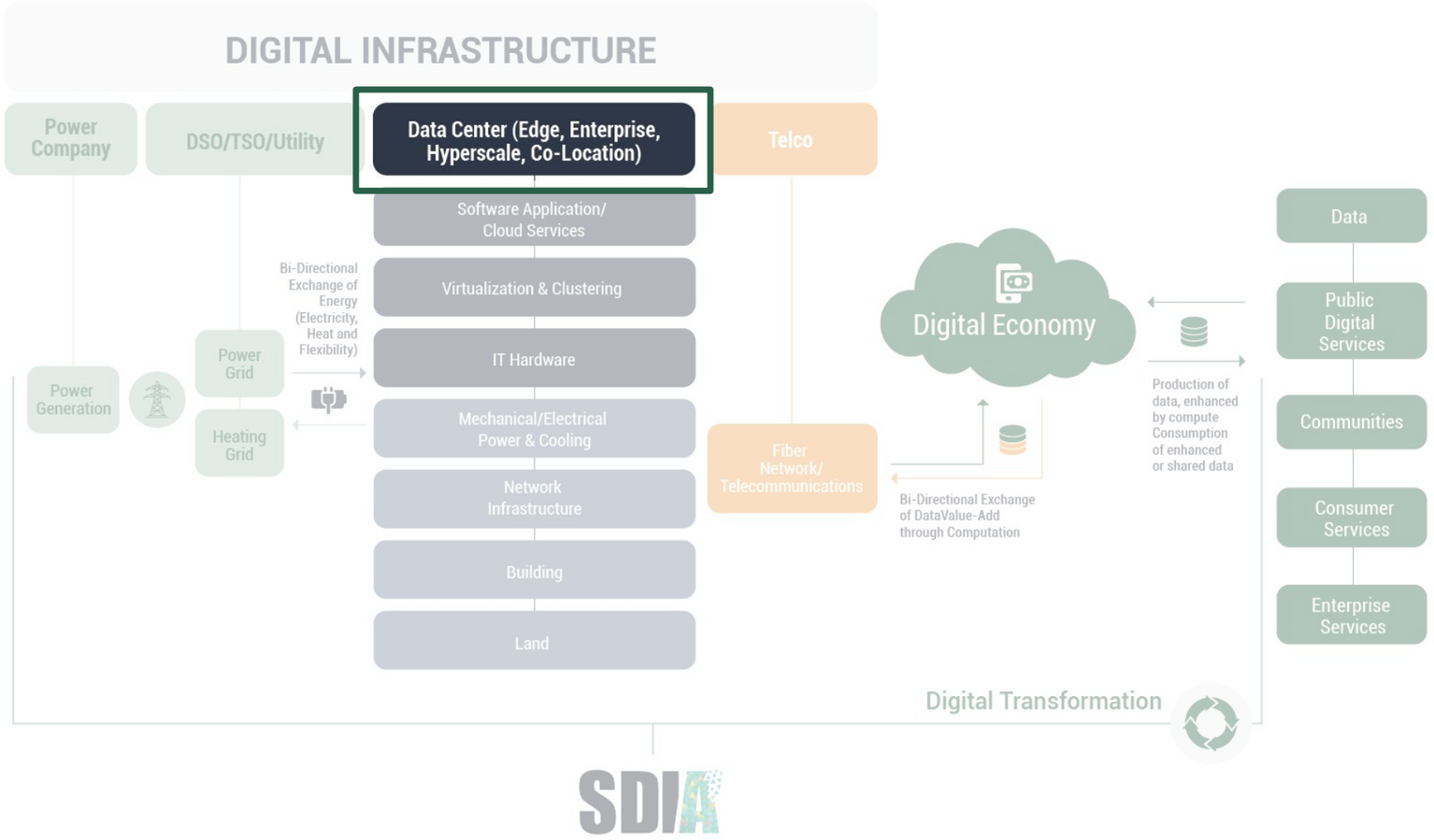
Mohan Gandhi - Head of Research, SDIA

24th of October 2020

Our Sustainability Goals are set, and in order to reach them we need to come together.



And focus on systematically embedding sustainability across the sector.



The Sustainable Digital Infrastructure Alliance brings together all actors across the sector.

Setting the Stage - Goals & Implementation of the Sustainable Digital Infrastructure Roadmap.

Creating the universal language for the Digital Sector to come together and create a Sustainable Digital Economy.

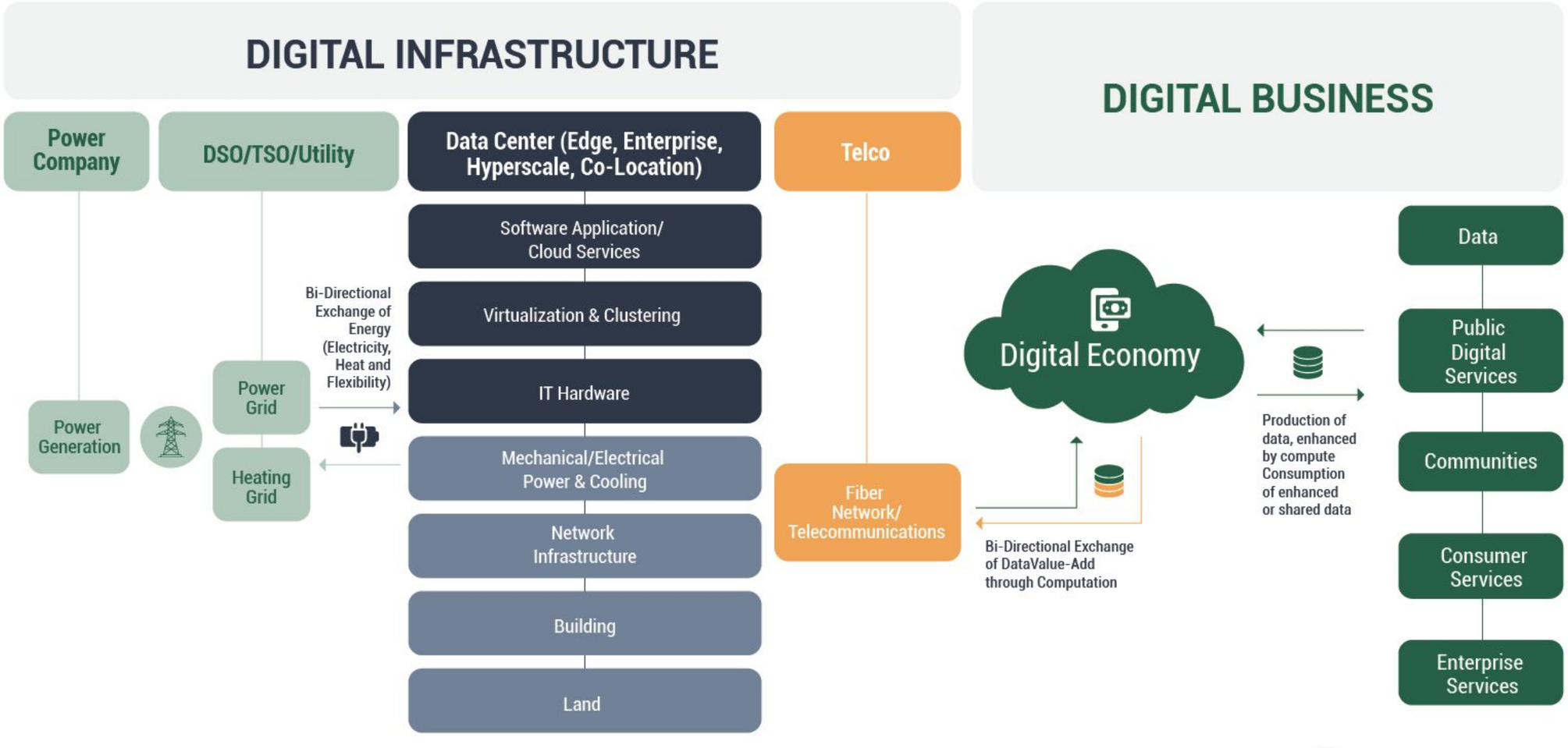
Sustainable Digital Infrastructure is creating new commercial opportunities for businesses.

Commercial Opportunities

Resource Provision	Updates without Impacting Performance	Second Life Options
Green Coding	The Right to Repair	Feedback Loop to Production
Purpose of Software	Energy Consumption	Audits on actual Recycling success
Optimizing Deployment of Applications	Cooling Systems	Pollutants
Updates without Impacting Performance	Waste Heat	Server Utilization Rates
Efficiency by Design	Hardware Maintenance	
Recycling Compatibility	Energy Production	
Transport	Construction of the Facility	

… and many more.

Lack of Leadership in a vastly interconnected system.



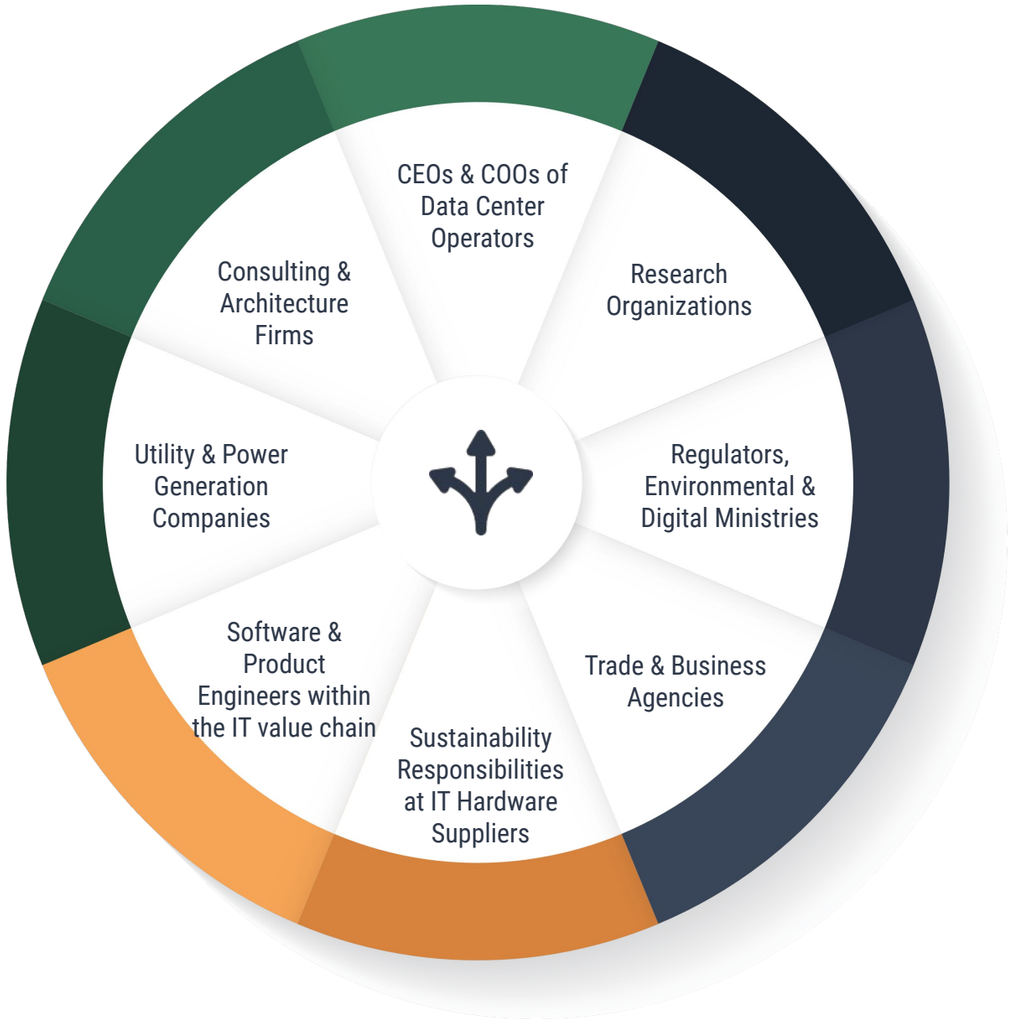
The Roadmap provides the missing universal language for the Sector to drive Sustainability.

Sets the targets towards environmental, economic and social sustainability of data centers, fiber networks and energy.

Provides metrics that **evaluate the efficacy of each measure.**

Enables transparency and collaboration across all participants of the value chain

Delivers tangible next steps, policy recommendations as well as commercial & research objectives



The Roadmap as the Universal Language to enable Collaboration.

Metrics

- ADP and WEEE
- Energy Consumption and GHGs
- Pollutions
- Cost of compute

Activities

- Impact in Principle
- Collaboration & Dissemination
- Transparency, Accountability

Milestones & Targets

- Aligns goals & interests
- Provides forward planning & backward progress evaluations
- Environmentally neutral by 2030

Conclusion: The Roadmap

- **A sector-wide dashboard** to track progress.
- **Shared Sustainability Targets** enable collaboration and aligned direction
- **Shared Metrics** provide the **universal language, enabling** transparency and accountability

The 2030 Roadmap for Sustainable Digital Infrastructure.

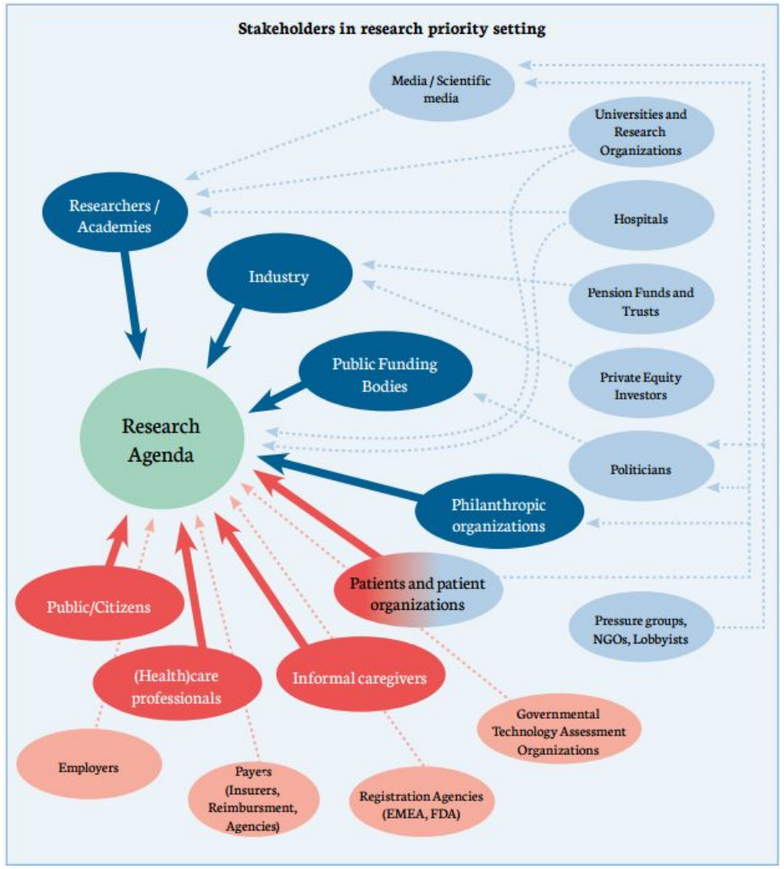
Capturing the Opportunity - The Business Case in Sustainability.

Unlocking opportunities through commercial & scientific collaboration.

For Business: A map of opportunities for technologies & products to facilitate the sustainable transformation

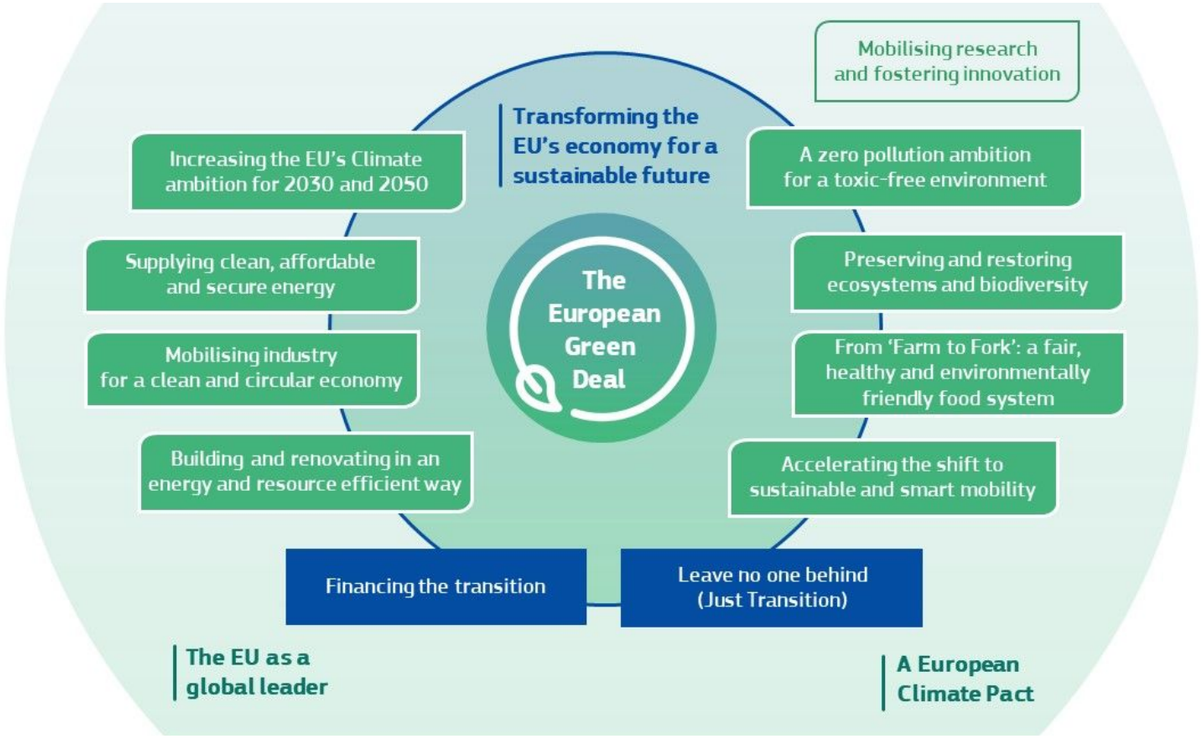
To realize the **Sustainability Targets** many existing technologies & products can be applied; creating opportunities.

For Research: A clear agenda and topics that require research & new technology developments.



Clear priorities, involving all stakeholders and **aligned with government agendas.** Ready for scientific collaboration.

For Policy: Creating an environment for the Digital Economy to thrive sustainably across Europe.



Creating a Sustainable European Digital Economy - turning European know-how into Economic Value, without consuming Natural Resources.

Concluding: Commercial opportunities, a clear research agenda & policy guidance for a Sustainable Digital Economy.

A map for commercial opportunities, applying existing products & technologies

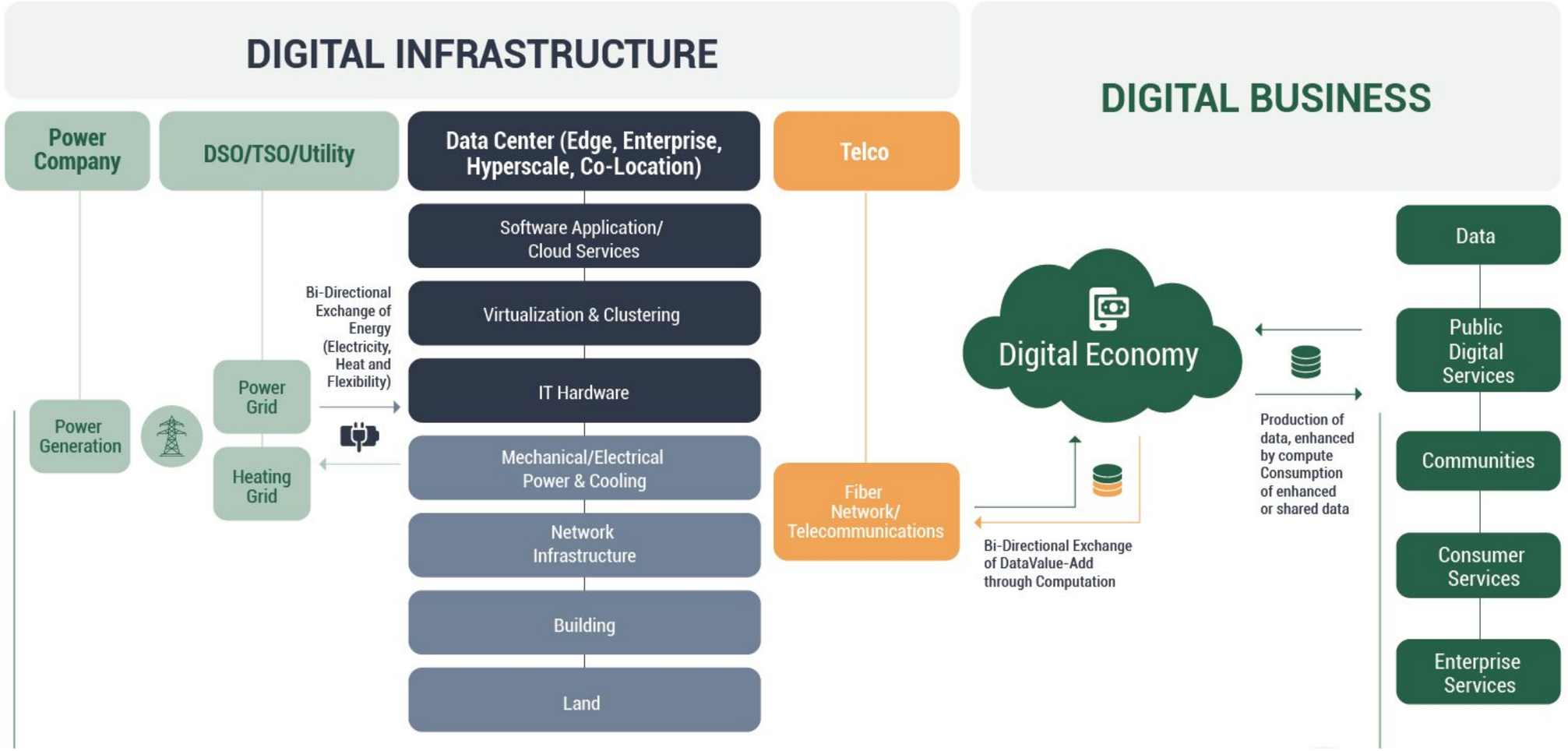
An agenda for researchers to collaborate & shape the future

A guide to create policy that enables a Sustainable Digital Economy

Creating Digital Infrastructure as a sector - The Alliance connects industries.

Examples of industries collaborating with the Roadmap towards a Sustainable Digital Economy.

Creating Digital Infrastructure as a Sector.



Examples: Energy as a Service and new approach to Buildings.

Energy Companies

- Provide new Energy as a Service models: Backup Power & Generation, Electrical Infrastructure
- Deliver Renewable Power and Recover Residual Energy, e.g. Heat Recovery

Construction & Building Design

- Through Collaboration with Energy Companies, implement Micro-Grids, On-Site Generation, and Low-Temperature District Heating
- New Materials & Design, e.g. NZEBs

Examples: Adapting the Business Model of the Data Center & taking responsibility as a Digital Company

Data Center Operators

- Focus business model on Availability & value-delivery towards Digital Businesses
- Commoditized part of the value chain can be passed to partners via collaboration

EQUINIX
DIGITAL REALTY
e-shelter
OVH
interxion
QTS
CloudHQ

Digital Businesses

- Taking responsibility for created Footprint through digital services and applications
- Through Software optimize, measure and report Sustainability of the total value chain

SAP
zalando
deezer
Google
Spotify

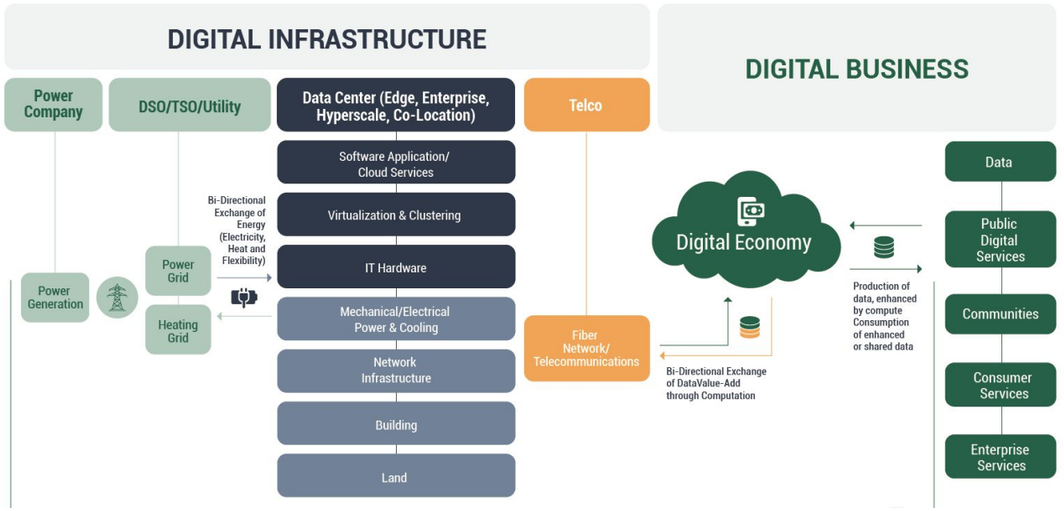
Concluding: Bringing together Digital Industries as a Sector and enabling Partnerships to unlock value.

New business models for industries across the sector - Energy, Construction & IT

Creating the sector out of separate industries to enable collaboration.

The Roadmap as the Universal Language for the Digital Infrastructure sector.

Bringing together Digital Infrastructure industries together as a sector.



The Future - A Sustainable Digital Economy that advances society.

What does the future look like in which we have successfully created a Sustainable Digital Economy?

To drive progress, we must change the way we procure IT infrastructure for the Digital Transformation.

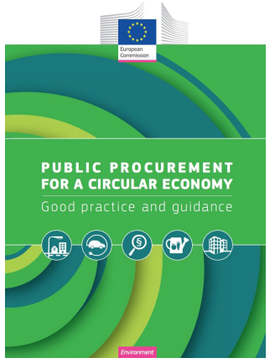
Businesses

- IT Departments & CIOs must include Sustainability Metrics & Ratings in their procurement
- Software Developers and IT experts need to consider the footprint of their applications

SUSTAINABLE DEVELOPMENT GOALS

Governments

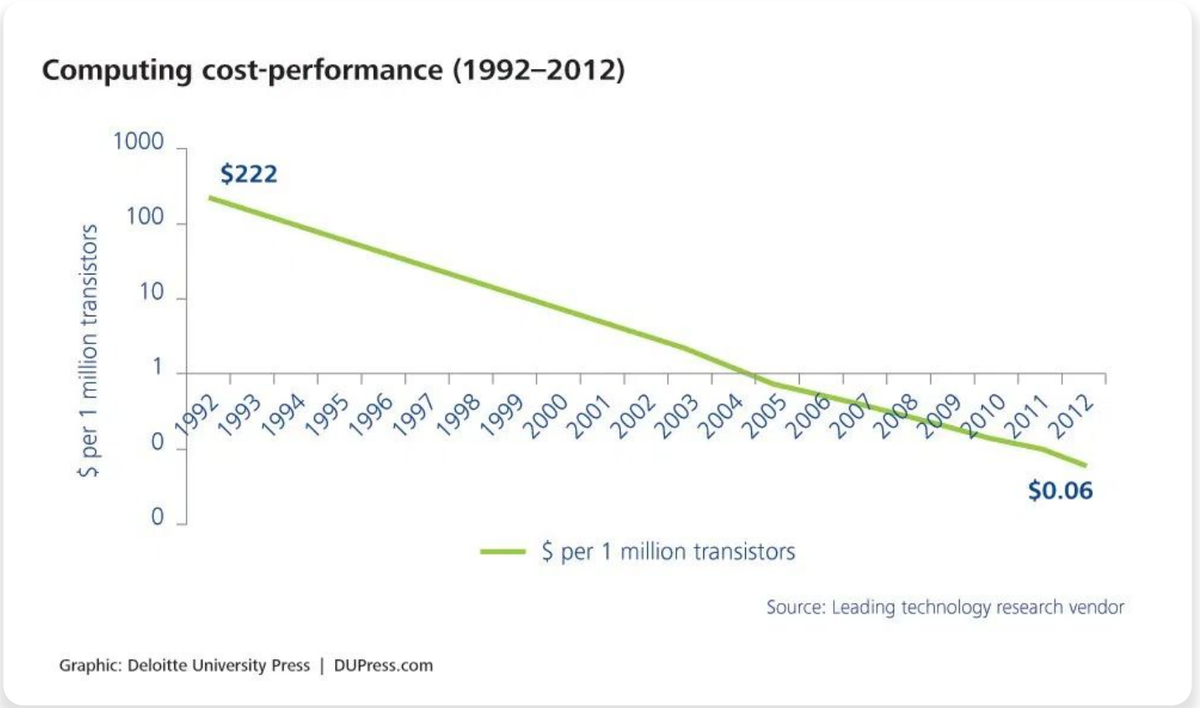
- Governments must play a leading role in prioritizing Sustainability in their IT procurement policies - setting the bar for industry
- Suppliers with strong Sustainability credentials must be rewarded



Cheap and abundant Digital Power will trigger the Digital Industrial Revolution.

Digital Power

- Compute
- Storage
- Network

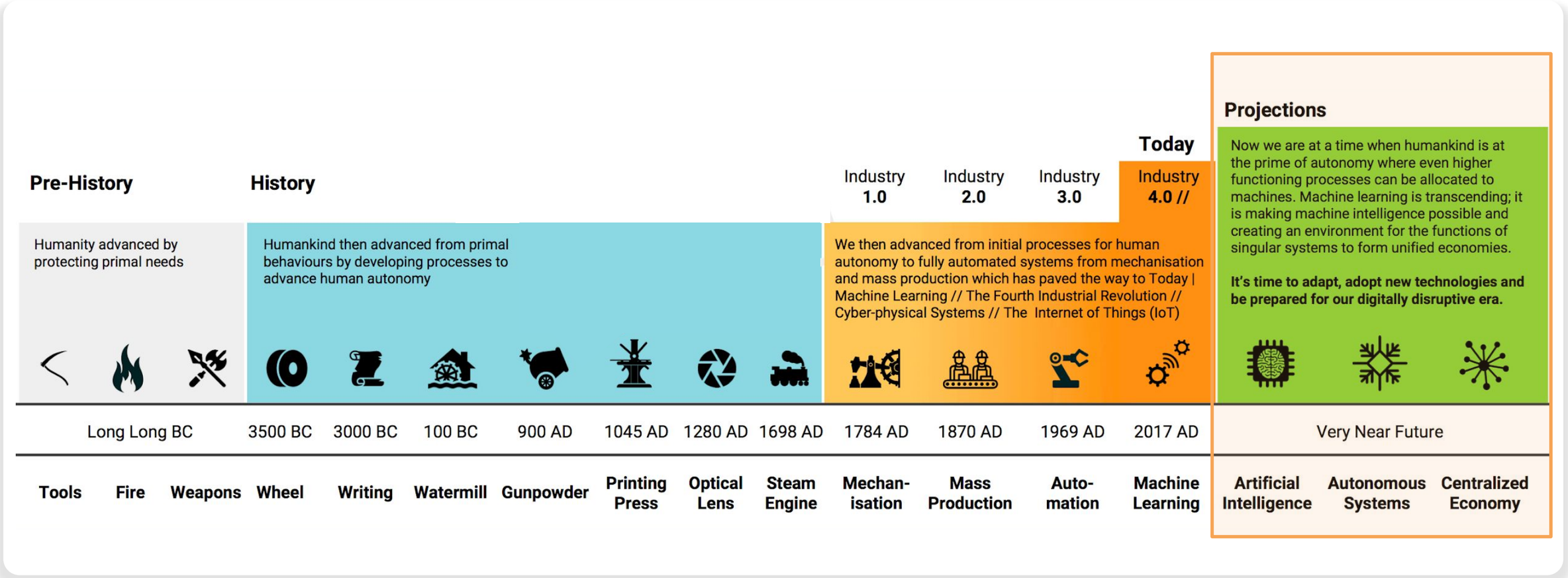


The Fourth Industrial Revolution

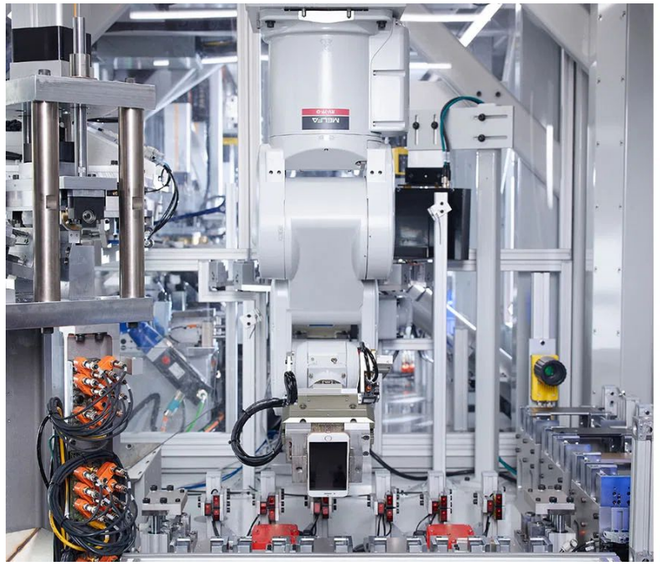
Klaus Schwab

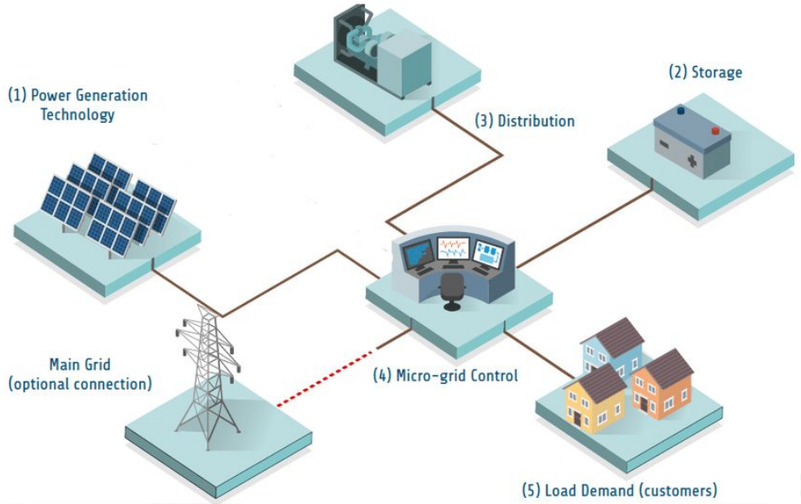
Founder and Executive Chairman,
World Economic Forum

We are still at the beginning of it.



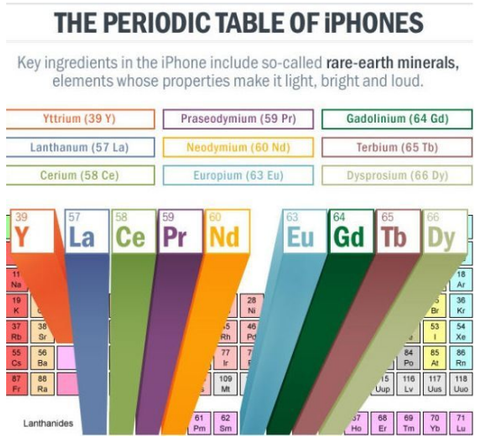
With technology & know-how available today, we can create the first Sustainable Industrial Revolution. And we must.



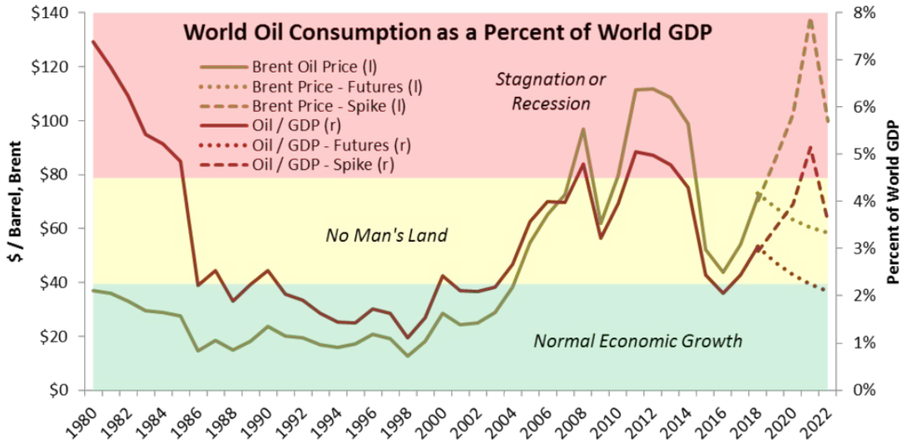


Imagine what it could mean if we succeed...

Rare Minerals



CO2-equivalents



Electronic Waste

Let’s create the Sustainable Digital Economy.

Questions?

SDIA

Up Next Thursday 13:45 CET - SDIA Chairman Max Schulze dives deeper into the Roadmap

Join him for a deep dive and Live Q & A session:

sdialliance.org/roadmap

Join our Expert Session to dive deeper

01 **SDIA Session 1 - Finance**
Today at 14:00 CET
Young-jin Choi, Pierre Alexandre Hughes-Daly
http://sdia.io/spfinance

02 **SDIA Session 2 - Technology Progressors**
Wednesday, 09:00 CET
Anna Lyubina, Trevor Hinkle, Chris Adams, Gunnar Schomaker
http://sdia.io/sptech

03 **SDIA Session 3 - Heat Recovery**
Wednesday, 14:45 CET
Karl Rabe, Dr. Jens Struckmeier, Dr.-Ing. Birger Ober
http://sdia.io/spheat

04 **SDIA Session 4 - SDIA Initiatives**
Thursday, 13:00 CET
Mohan Gandhi, John Laban, Max Schulze, Lasse Schneppenheim
http://sdia.io/spsdia

05 **SDIA Session 5 - Hardware Design**
Friday at 10:00 CET
Deborah Andrews & Beth Whitehead, Ali Fenn, Sophia Flucker
http://sdia.io/sphardware

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SDIA Session 5 - Hardware Design **- Friday at 10:00 CET.**

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