



SUSTAINABLE DIGITAL  
INFRASTRUCTURE ALLIANCE

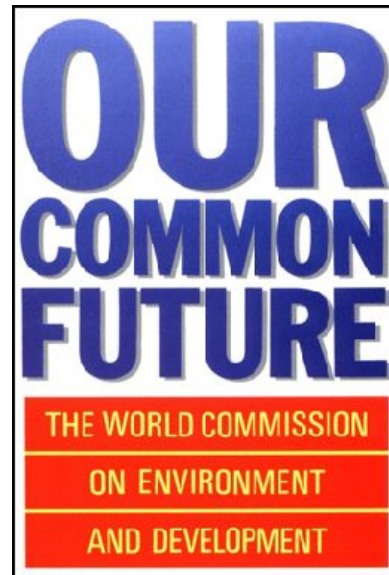
# Creating a digital environmental footprint: a Life Cycle Assessment approach (EN)

Bits and Bäume, Berlin, 01-10-2022

# Sustainability = A balance of environmental, societal and economic needs.



# Even more important: The sustainable development of our society & economy.



*"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*

United Nations Brundtland Commission, 1987



## What does this mean for us in the SDIA Community?

*"We want to chart a path for the sustainable development of IT, Digitalization, the Digital Economy, and Digital Infrastructure and execute it."*

# But wait, who says it's not sustainable already?



Carbon neutral since 2007.  
Carbon free by 2030.

Microsoft will be carbon negative by 2030

Jan 16, 2020 | [Brad Smith - President & Vice Chair](#)

Commitment to 100% product return

At the World Economic Forum in January 2018, Cisco CEO Chuck Robbins and eight other tech executives signed the Capital Equipment Pledge, in which Cisco committed to 100% product return.



- 82% of 100 analyzed blue chips disclosed their commitment to the SDG in their 2016 annual reports.

PRODUCT SUSTAINABILITY

396.5 million

pounds of sustainable materials in our products and packaging.

Find Out More →

RECYCLING

2.5 billion

pounds of used electronics recovered for reuse and recycling since 2007.

Recycle Now →

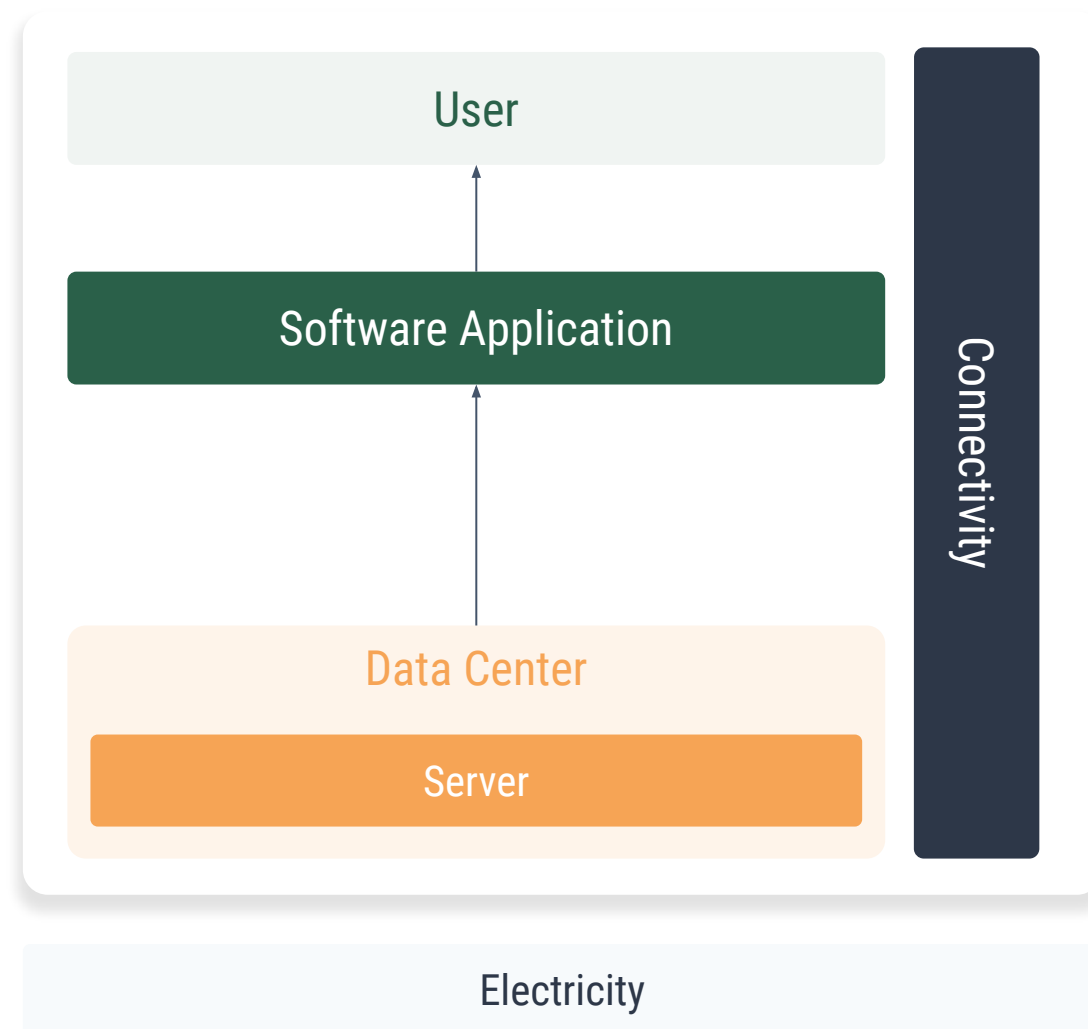


**“to measure is to know”**

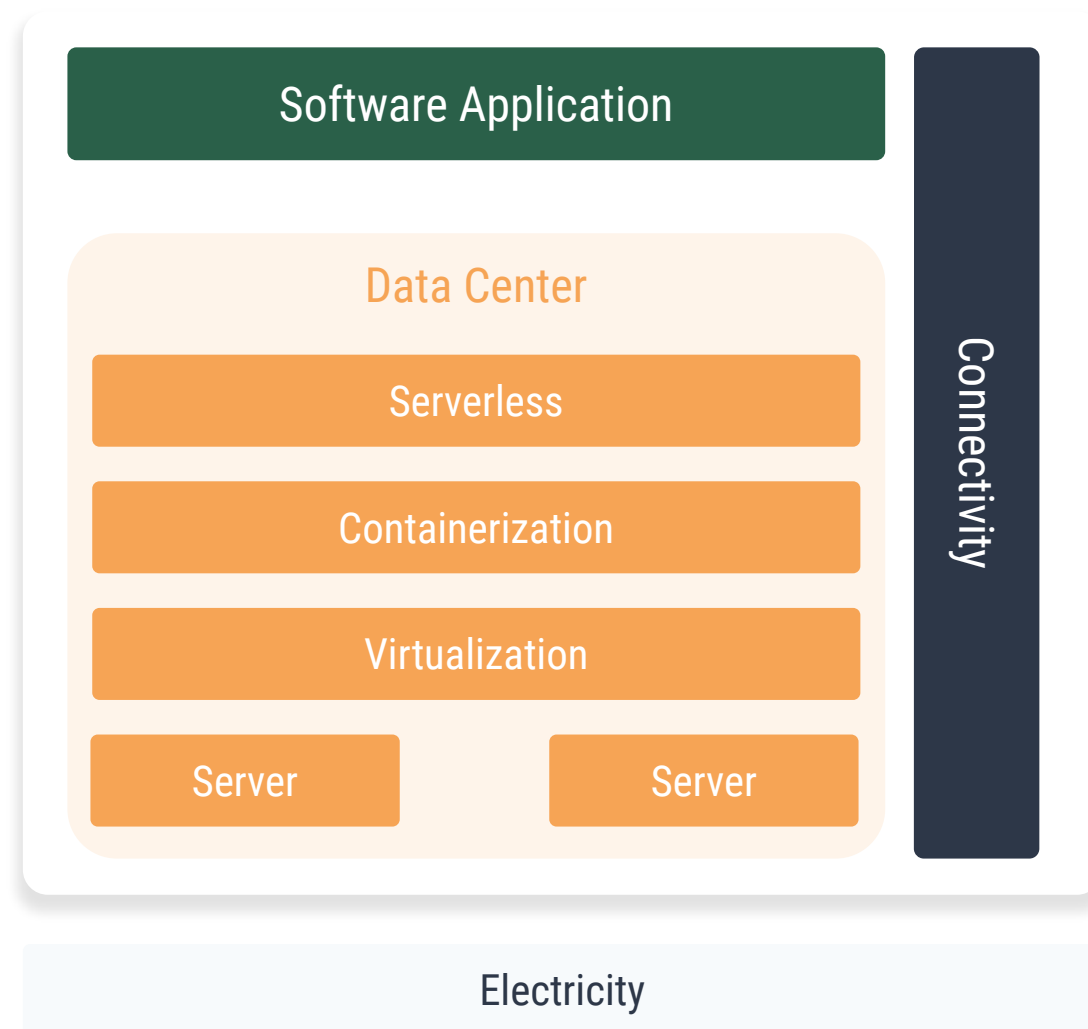
Lord Kelvin

THE PAST

# When I started my career, software applications and their infrastructure looked like this:

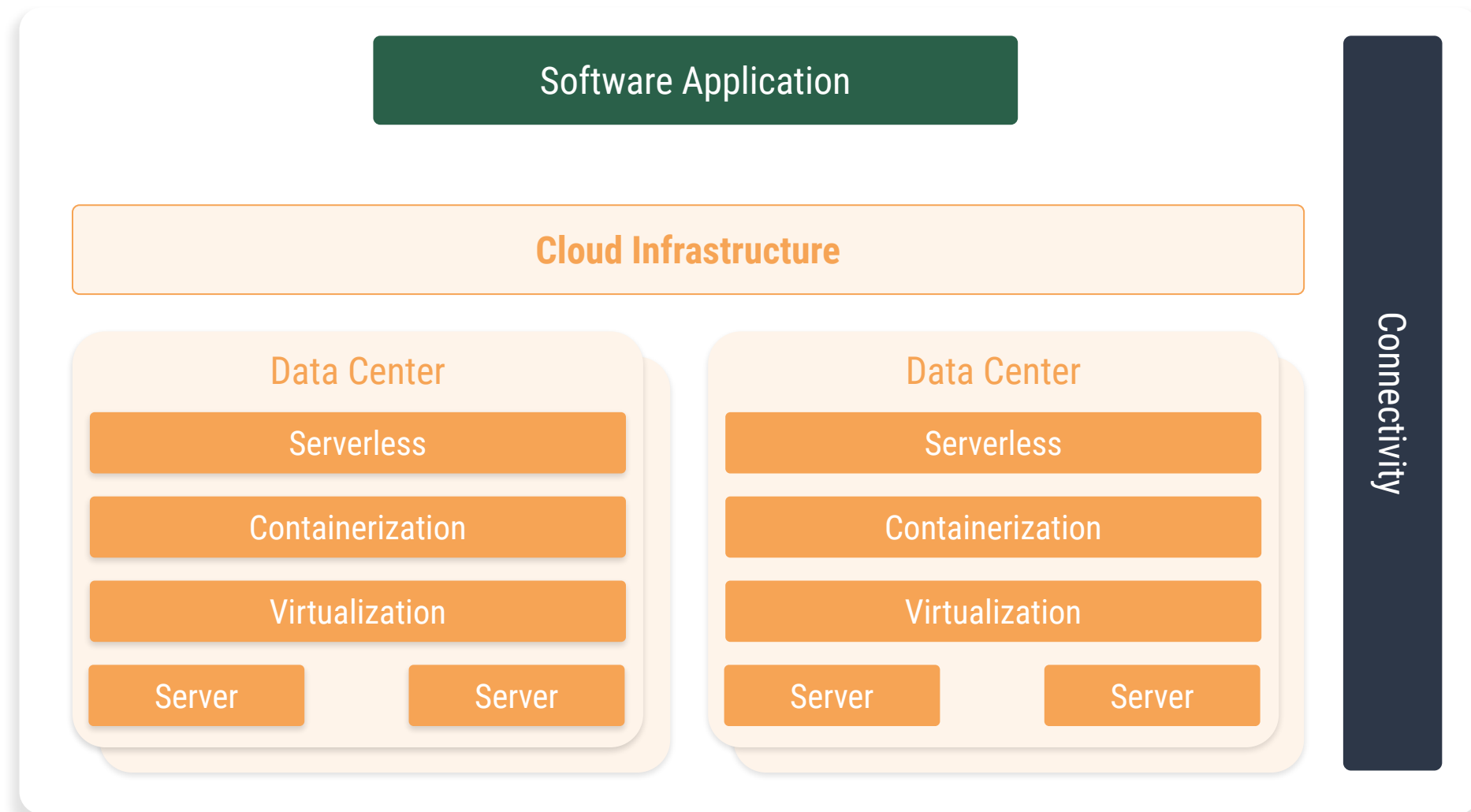


**As my career advanced, I watched the application move further and further away from the physical infrastructure.**

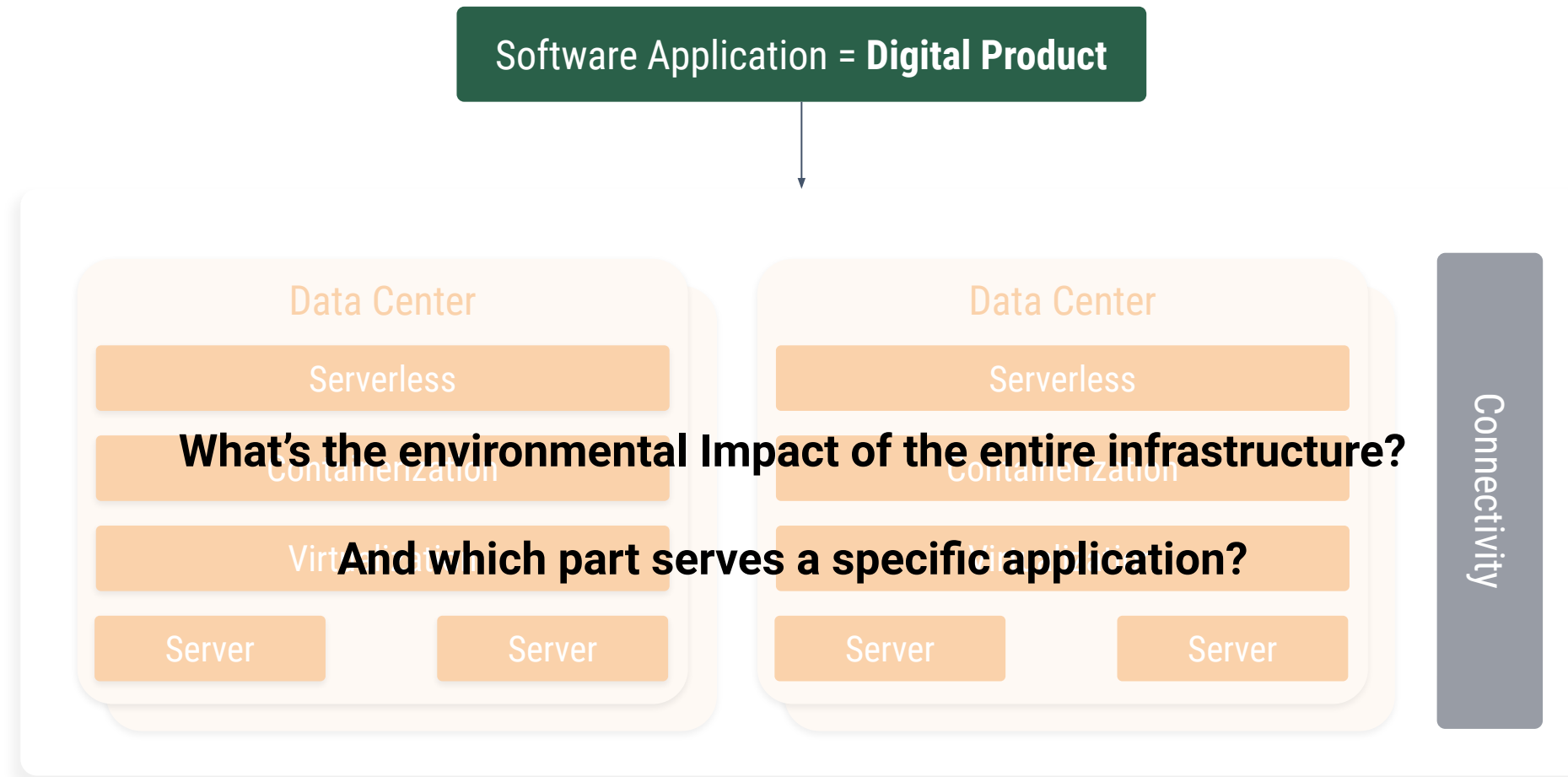




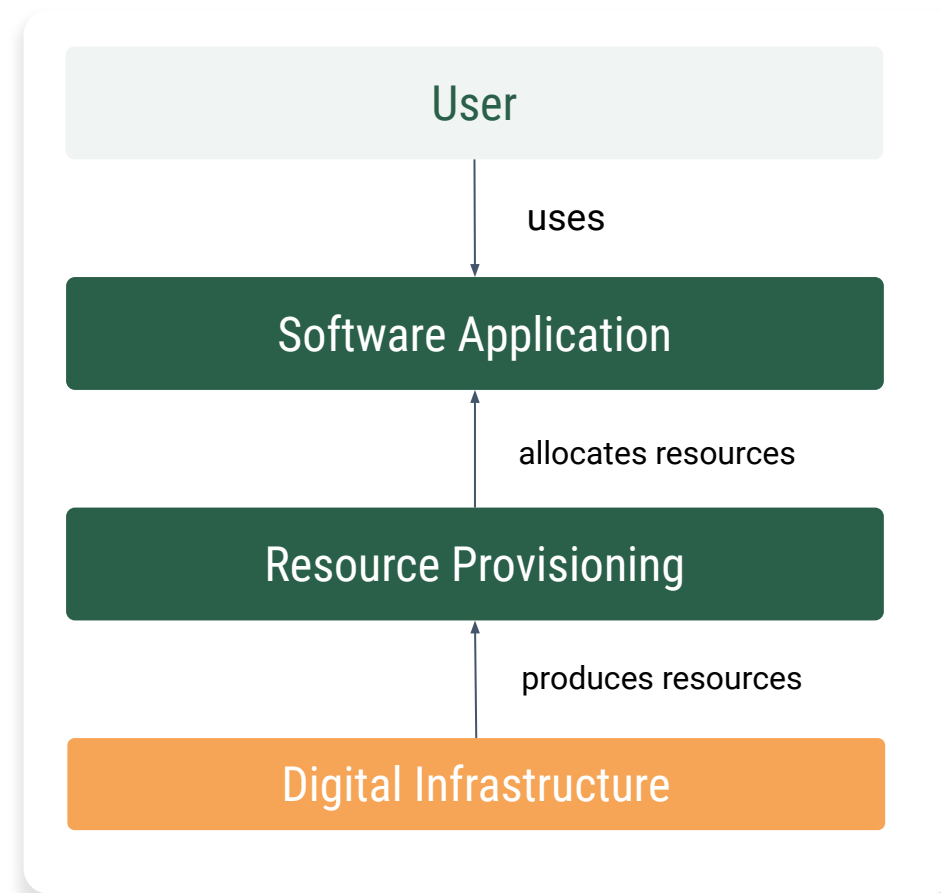
**Each layer of abstraction made the one below invisible - the illusion of infinite resources is created.**



# Now if attempt to assess the environmental impact of the application we get lost in complexity.

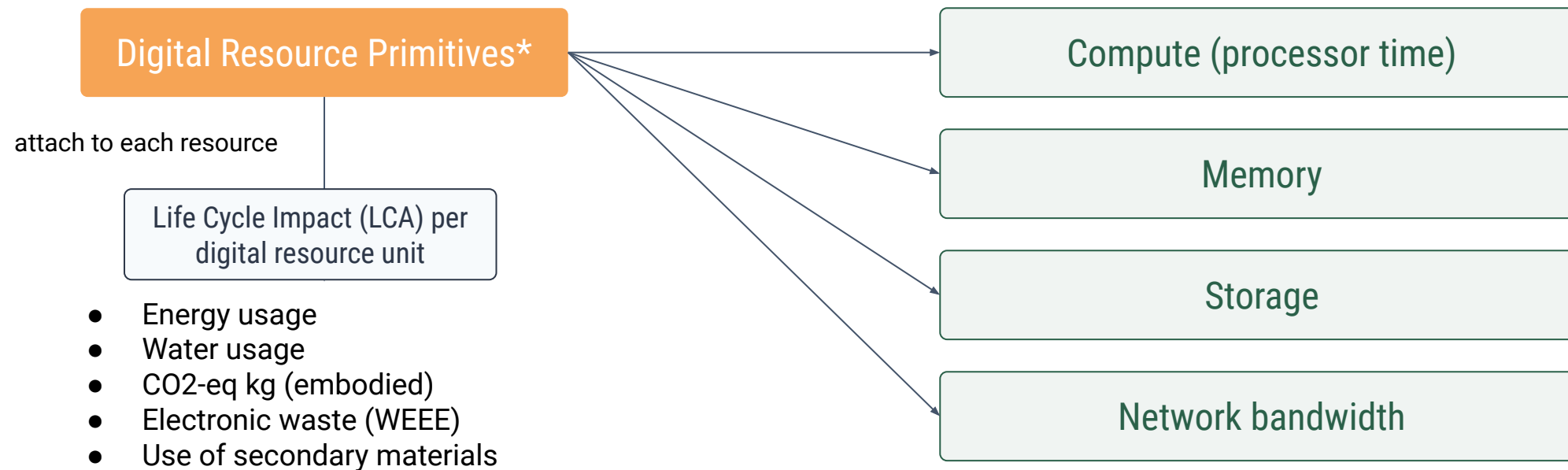


# So we started to define a more simplified model & school of thought on how we can look at digital products & infrastructure:



*A more detailed version can be found in the paper [Taxonomy for a Digital Economy](#) Schulze, Kumar, Oghia, 2021 published by the Commonwealth & SDIA*

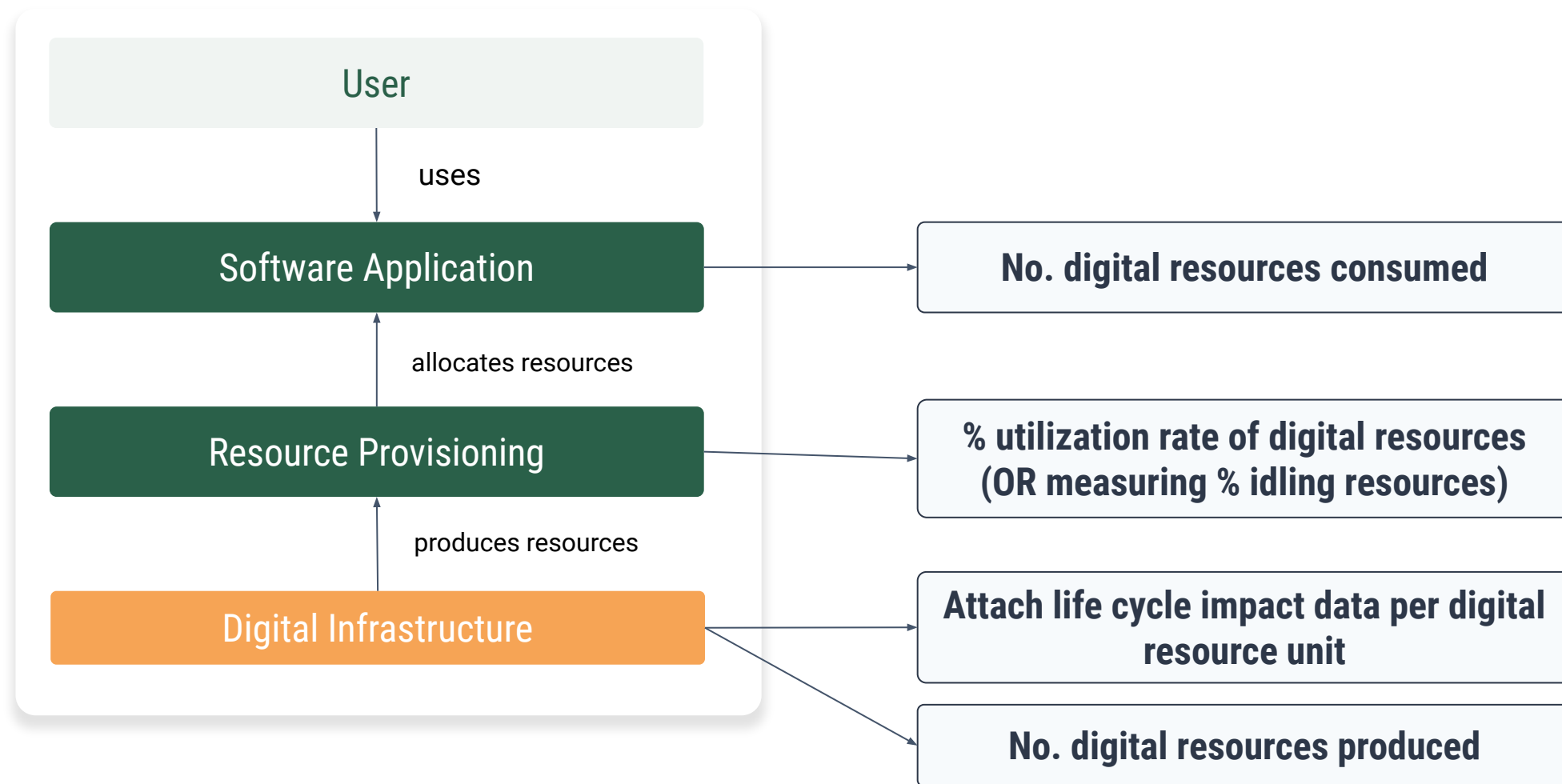
# With this simplified model and the introduction of the concept of a digital resource that can be produced & consumed...



simplified, each resource primitive can of course have further attributes (e.g. type of compute, storage, etc.)

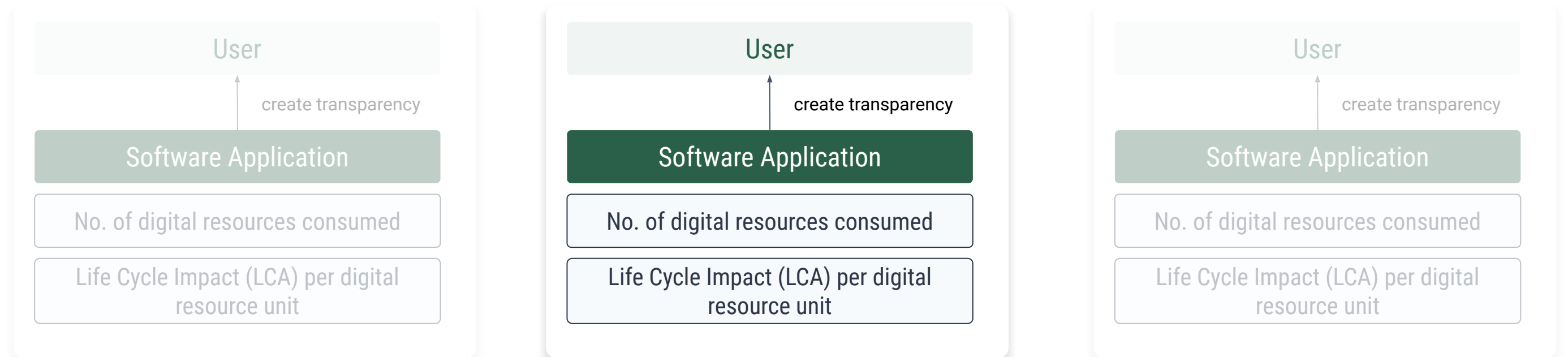
\* More information on the exact definition can be found at [knowledge.sdialliance.org](https://knowledge.sdialliance.org)

# ...measuring becomes a lot easier.



# The result is an environmental footprint per application or digital product and the ability to measure the digital economy.

## Environmental Impact of Digital Economy & Transformation



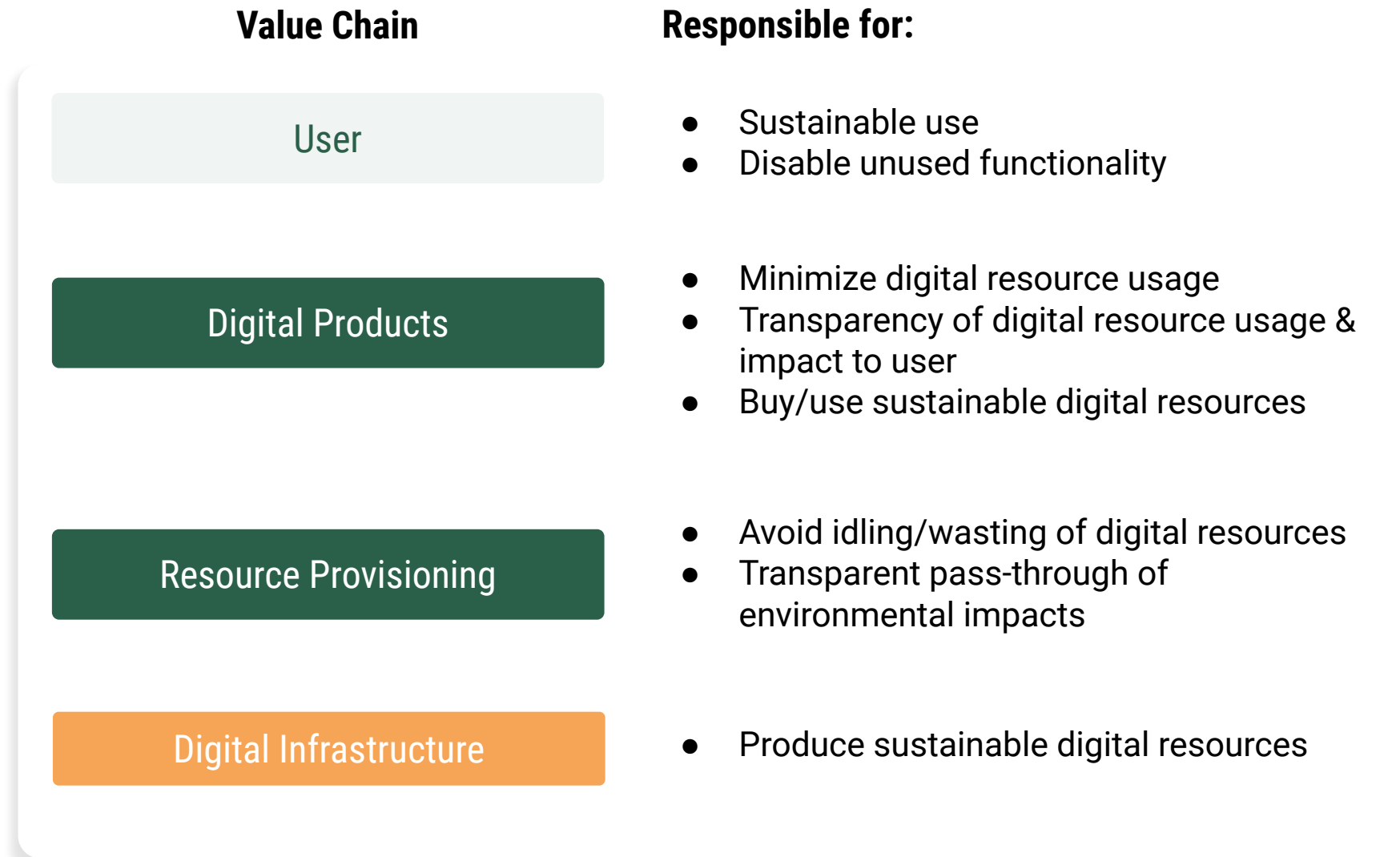
### Digital Infrastructure

(physical infrastructure required by digital economy & transformation)

# **OK, we can measure it, but how does it become sustainable?**

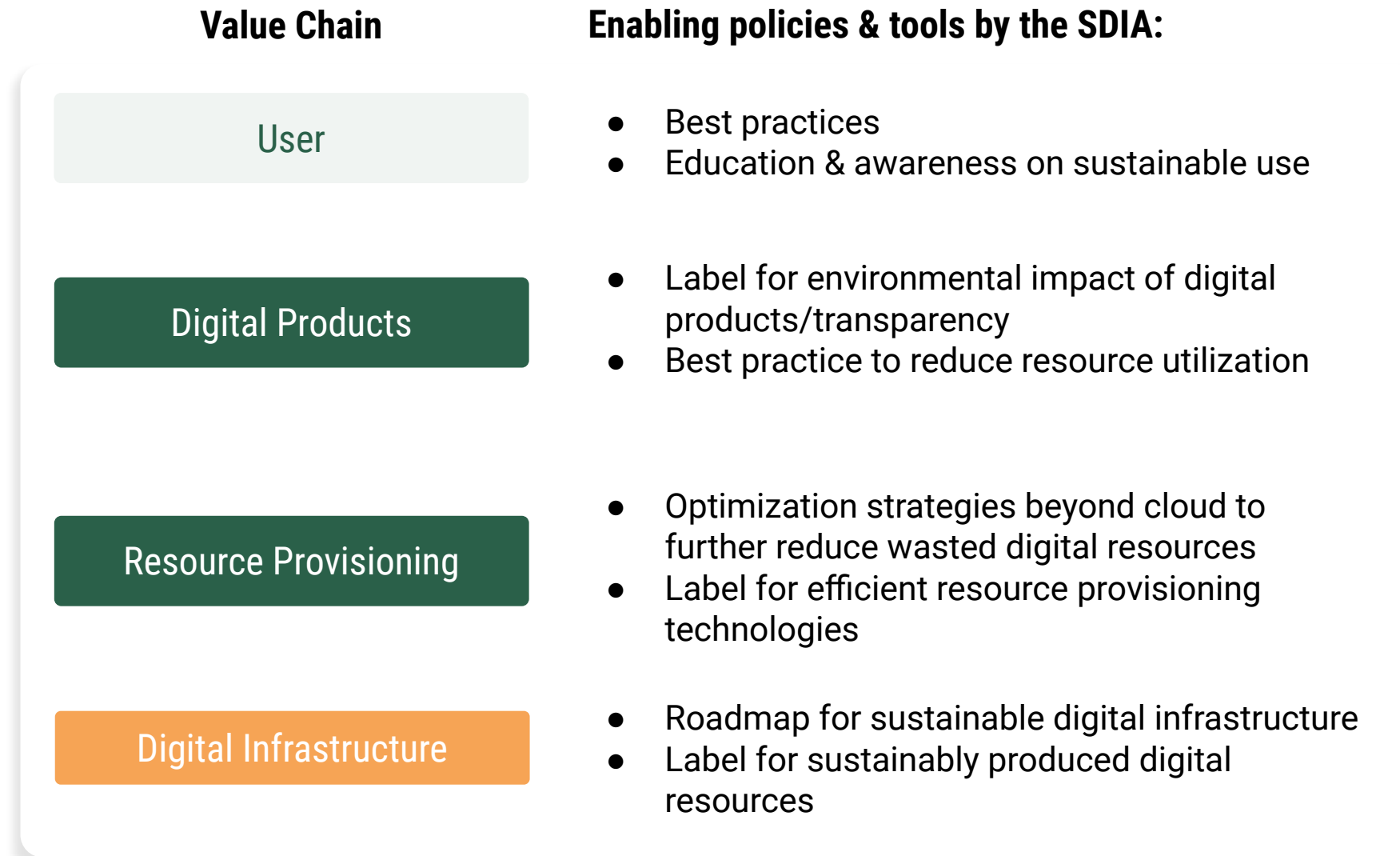
How we do enable the sustainable development of the digital economy & digitalization?

# It starts with clarifying responsibilities.



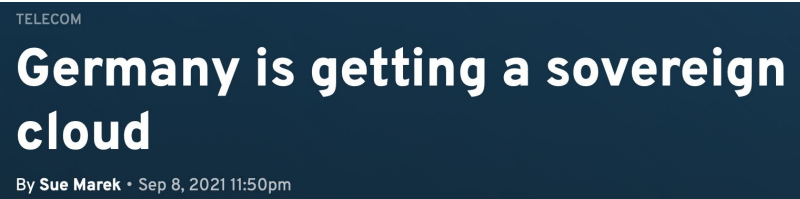


# And the tools and policies needed to fulfill those responsibilities – the work of the SDIA:



# What role does Germany and Europe want to play in the sustainable development of the digital sector?

What we are talking about in Europe?



Germany to launch sovereign tech fund to secure digital infrastructure

31 May 2022 | News

**Germany advocates regaining “digital sovereignty”**

Published: 12 November 2020 Author: Stefan Talmon

Was uns ausmacht:

- Peace
- Democracy
- Human rights
- Freedom
- Social justice
- Equality
- ...
- **Sustainability**



# Thank you!

Join the SDIA (it's free): [sdia.io/join](https://sdia.io/join)

# My contact details



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