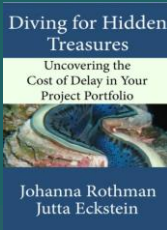
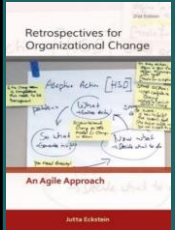
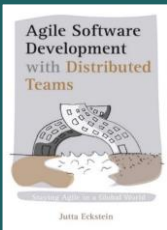
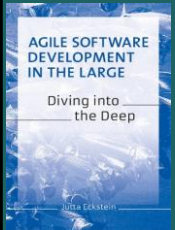
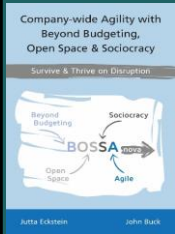


Let's get more –social, environmental, and economic– sustainability based on data!

Jutta Eckstein



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What is your connection to sustainability?

# Purpose & Goal

- **Agility comes with responsibility!**
- **We can use data**
  - to increase our awareness and
  - to define our next steps!

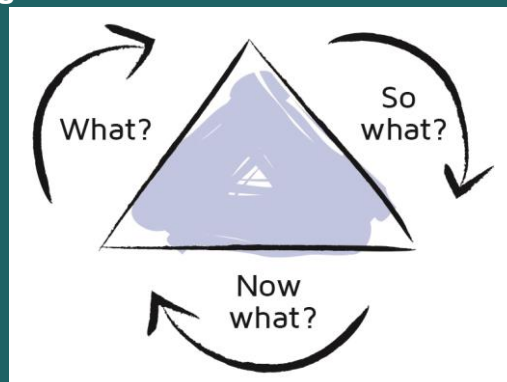
# Agenda

## What?

Welcome & set the stage  
Defining & connecting  
sustainability

## So what?

Connecting to agility



Now what? Gathering & analyzing data

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

UN Brundtland commission

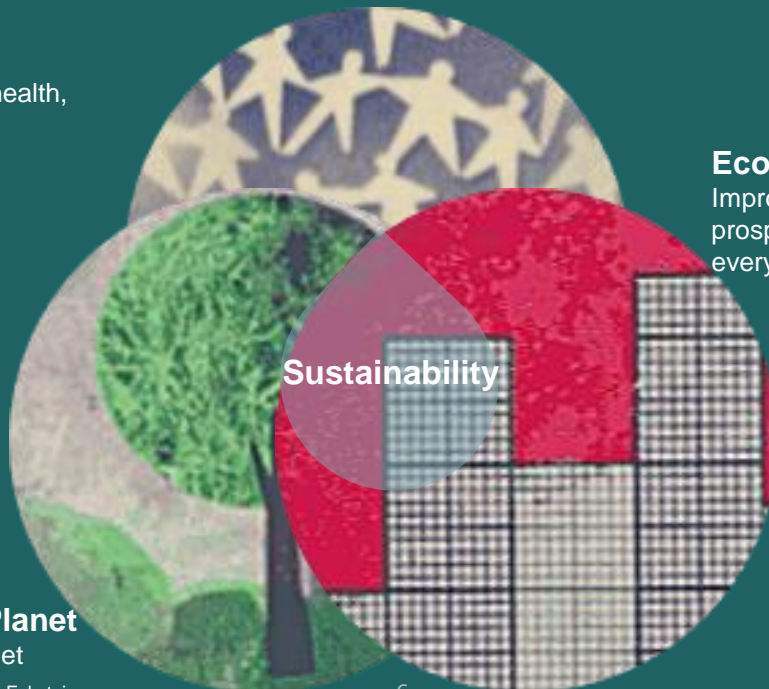


### Social/People

Aiming for equity, health, liveability

### Economic/Prosperity

Improving the lives & prospects of everyone, everywhere



### Environment/Planet

Protecting the Planet

# Software to the Rescue! ?



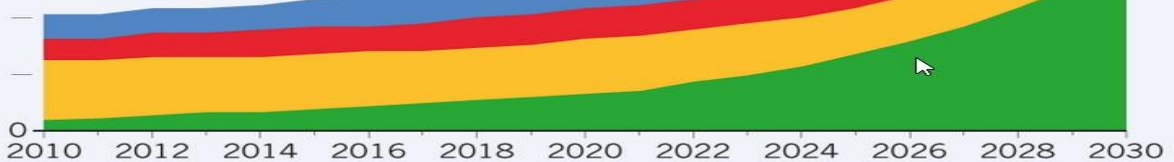
9,000 terawatt hours (TWh)

## ENERGY FORECAST


Widely cited forecasts suggest that the total electricity demand of information and communications technology (ICT) will accelerate in the 2020s, and that data centres will take a larger slice.

- Networks (wireless and wired)
- Production of ICT
- Consumer devices (televisions, computers, mobile phones)
- Data centres

20.9% of projected electricity demand



The chart above is an 'expected case' projection from Anders Andrae, a specialist in sustainable ICT. In his 'best case' scenario, ICT grows to only 8% of total electricity demand by 2030, rather than to 21%.



**THE WEEE MAN**

Tonnes per lifetime	Tonnes/year (t/y)	Weight
1 average UK citizen = 3.3 t/lifetime	1 average UK citizen = 0.016 t/y	= 160 x Mobile Phones
	59 million UK population = 939,000 t/y	= 81 x HMS Belfasts
	459 million European population = 6,500,000 t/y	= 590 x Tower Bridge

7 meter

The WEEE Man  
Created by Paul Bonomini

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## Our Individual Digital Carbon Footprint

■ <https://www.digitalcarbonfootprint.eu/>



# DIGITAL CLEANUP DAY

HOME REGISTRATION AND AWARD RESOURCES [Worldcleanupday.org](https://Worldcleanupday.org)

Each year the internet and its supporting systems produce more than 900 million tons of CO2!

Join Digital Cleanup Day!

18 March 2023

Be cool and don't warm up the planet with your digital waste!



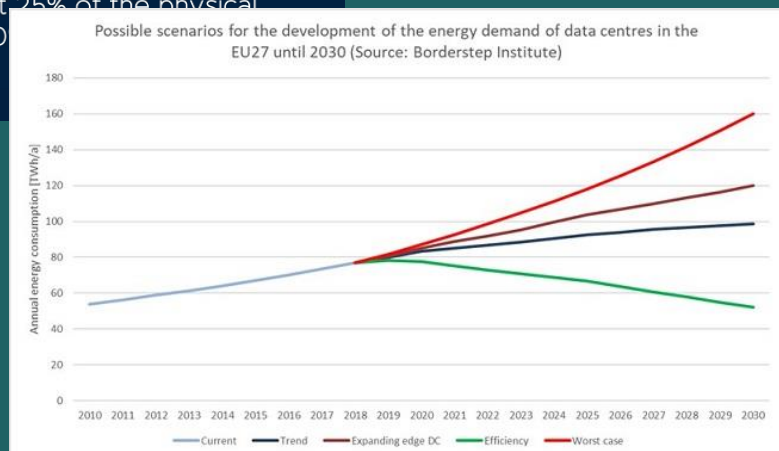
JOIN DIGITAL CLEANUP DAY ON 18 MARCH 2023!  
LET'S TAKE OUT OUR DIGITAL WASTE AND SAVE OUR ENVIRONMENT!

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[JEckstein.com/sustainability](https://JEckstein.com/sustainability)

1. In 2019, VMware consolidated a datacenter in Singapore. 66% of the host machines were "zombies". They were decommissioned.
2. In a 2017 study, Jon Koomey surveyed 16,000 non-virtualized and virtualized physical servers, across 10 datacenters. He concluded that 25% of the physical servers were "zombies" and 30 machines were "zombies".



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[JEckstein.com/sustainability](https://JEckstein.com/sustainability)

<https://digital-strategy.ec.europa.eu/en/policies/green-cloud>

# Chef & Homeland Security



After protest, open source software company Chef will let ICE contract expire



CHEF

https://www.fedscoop.com/protest-open-source-software-company-chef-will-let-ice-contract-expire/  
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Patient's first name

Shirley

Patient's last name

Wu

Enter a valid last name.



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# Agenda

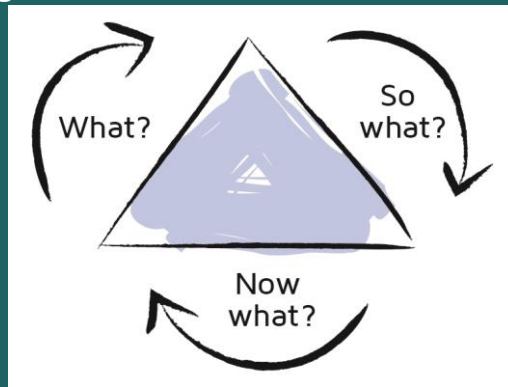
What?

Welcome & set the stage

Defining & connecting sustainability

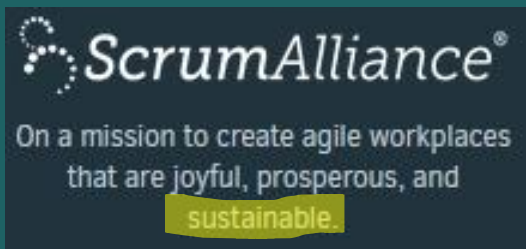
So what?

Connecting to agility



Now what? Gathering & analyzing data

## Agile made a Promise!



Through the last two decades, members like you have helped make work more effective, humane, and **sustainable** by applying the Agile mindset and methods.





## More Sustainable

We recognize that Agile plays a crucial role in building a resilient and sustainable way of working to **create positive economic, social, and environmental outcomes**. Our members are building a strong future by developing ways to:

- Build a new generation of Agile fluent leaders
- Support academic adoption of Agile
- Explore how Agile can improve society and the environment
- Evolve Agile to meet the modern needs of the workplace



The [Agile Sustainability Initiative](https://www.agilealliance.org/resources/initiatives/agile-sustainability-initiative/) is an effort to create awareness about sustainability within the Agile community and explore how Agile can contribute to a more sustainable future. The initiative aims to achieve this through various activities,

<https://www.agilealliance.org/resources/initiatives/agile-sustainability-initiative/>

### Transparency

Make the company's actions transparent both internally and externally.

### Self-organization

Regard the company as one node of a global network that creates the environment it lives in together with other companies and societal institutions.

### Continuous Learning

Learn continuously from and with society to make the whole world a better place.

### Constant Customer Focus

Understand the economic, ecologic, societal, and social environment as a customer that needs permanent attention.

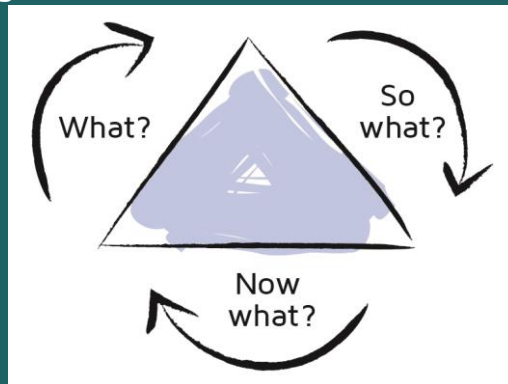
## Agenda

What?

Welcome & set the stage  
Defining & connecting sustainability

So what?

Connecting to agility



**Now what?** Gathering & analyzing data

## Sustainability *by* Agile / IT

- Use agile practices & mindset to help solve the climate crisis
- For example:
  - Use your skills for increasing sustainability
    - E.g., as part of HackYourFuture, Nicole Belilos was a SM for refugees creating a food saver app



## Sustainability *in* Agile / IT




- Use sustainability to guide your actions and outcomes in (agile) development
- For example:
  - Have a definition of done that verifies that the energy consumption of your system does (at least) not increase
  - Run regularly a “Planet as a Stakeholder”-Retrospective

**Where do we stand?  
Here's the data, we collected!**  
<https://bit.ly/ACCU-2023>



**Change your Conversations  
for  
Increasing Sustainability!**

# Many Thanks!

-  @agilealliance.social @JuttaEckstein
-  @JuttaEckstein
-  <https://www.linkedin.com/in/juttaeckstein>
- <https://jeckstein.com/sustainability>
- <https://agilebossanova.com>

- **Assessment by**  *comparative agility*   
– <https://bit.ly/agile-sustainability>

Coral Calero  
M<sup>a</sup> Angeles Moraga  
Mario Piattini *Editors*

## Software Sustainability

Company-wide Agility with  
Beyond Budgeting,  
Open Space & Sociocracy

Survive & Thrive on Disruption

 Springer



Jutta Eckstein

John Buck