Digital Carbon Footprint

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IT Governance, IT Compliance, IT Risk Management, IT Vendor Management, IT Sustainability,

2 **20+ years of experience in IT**

3 **Education**
M.Sc. Electrical & Telecom Eng.
Certificacions: CISA, CRISC, ITIL, MCSE
INSEAD Digital Transformation Leadership ,

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Leading ESG by example in our ecosystem

Schneider Electric

Be the **digital partner for Sustainability and Efficiency** for our customers

Strong recognition of our commitment

#1 the 2021 world's most sustainable corporation

2021 GLOBAL100
The Voice for Clean Capitalism
Corporate Knights
11 years in a row

CDP

A List
(Climate) 12 years in a row

MSCI ESG RATINGS

AAA
11 years in a row

= Bloomberg Gender-Equality Index 2021

From **2018**
Included since inception

2022 WORLD'S MOST ETHICAL COMPANIES™ WWW.ETHISPHERE.COM 11-TIME HONOREE

Top 100 Most Ethical Company
11 years in a row

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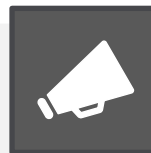
About the ITAM Forum

ITAM FORUM

MISSION:
To promote the business practice of ITAM.

VISION:
All organizations investing in technology have an appropriate ITAM capability delivering business value.

GUIDING PRINCIPLES:

Not-for-profit – We are independent and impartial, serving the best interests of the entire ITAM industry.

End-user led – A volunteer Board of Trustees ensures we are realistic, relevant and deliver value to ITAM practitioners.

Collaborative – We are constructive and collaborative, bringing together all ITAM industry stakeholders to push the ITAM industry forward.

OBJECTIVES:

Certification – To create (and be the caretakers of) the new ISO/IEC 19770-1 certification scheme so organisations can demonstrate the quality of their ITAM practices.

Enablement – To elevate ITAM by sharing knowledge and best practices that focus on business value and aid to grow the profession.

About the ITAM Forum

ITAM FORUM

1,000+ members

42 nationalities

10 Country Chapters
Brazil, Canada, Netherlands, Germany, India, Poland, SP Speaking, Türkiye, UK, USA

5 Special Interest Groups
Infosecurity, Mgmt. Systems, Sustainability, Optimisation, New Generation ITAMers

ISO 19770-1 Certification scheme

Committee of Experts
100+ individuals, 20 countries, 30+ industries

Discussion Board

eBooks, whitepapers, podcasts, membership magazine

Member-only Webinars
FinOps, Sustainability, Infosecurity, Certification...

Join us!
www.itamf.org

Agenda

Build it for **ZERO** carbon.
Build it for life.

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	Digital World Overview
	Digital Carbon Footprint
	The Paradox of Digital Sustainability
	GHG Emissions vs IT
	Global Digital Energy Demand
	Enterprise IT vs Carbon Footprint
	5 key areas to enhance IT Sustainability
	Q&A

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Digital World

Digital Enterprise

Digital Consumer

About 20% of Internet Traffic

Up to 75% of Internet Traffic

Digital Science

Digital Industry

Between 6-12% energy savings

Digital Technology Decarbonization Capacity is upto 7 times higher than the CO2 emissions caused by its deployment

Up to 25% energy savings

About 5% of Internet Traffic

About 10 % energy savings

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True or False?

1. Video Streaming for 30 Minutes Generates the Same Carbon Emissions as Driving 4 Miles
Media publications: "The Shift Project", New York Post, CBC, Yahoo!, The Guardian, and Thomson Reuters

2. Bitcoin Emissions Alone Could Push Global Warming Above 2°C
Media Publication: Forbes, ScienceDaily, The Independent (U.K.), CBC, Thomson Reuters, MIT Technology Review

3. Downloads of "Despacito," the first song to surpass 5 billion YouTube views, consumed as much electricity as the countries of Chad, Guinea-Bissau, Somalia, Sierra Leone, and the Central African Republic put together in a single year
Media Publication: Financial Times, BBC, Fortune, The Guardian, Al Jazeera.

4. Training One Natural Language Processing (NLP) Model Is Equivalent to 300 Round-Trip Flights Between New York and San Francisco
Media publications: MIT Technology Review, Vice, S&P Global, Forbes, NewScientist and AI Now Institute

Source: INFORMATION TECHNOLOGY & INNOVATION FOUNDATION

Digital Carbon Footprint
Baseline vs current state

IT sector baseline :
In 2015 ICT sector electricity demand reached almost 1800 TWh and represented around 3% global CO_2 emissions

Current state:
In 2020 the ICT electricity demand reached 1935 TWh (ca. 2.8 % of global CO_2 emissions)
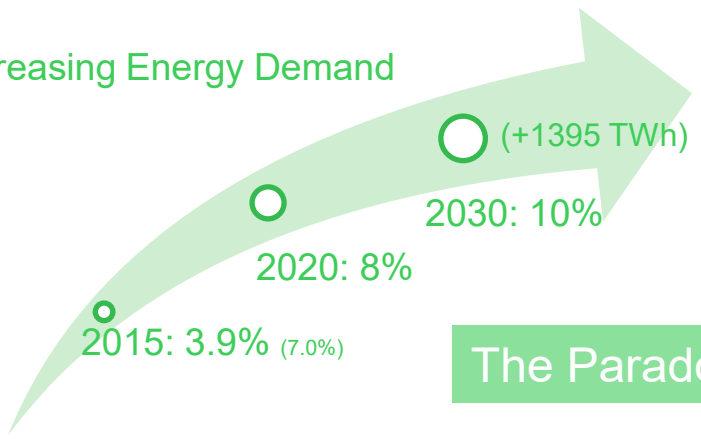Factors:
- Increased number of ICT users
- Social networks & Streaming
- New ICT trends behind the growth:
    - big data and AI,
    - the Internet of Things
    - blockchain and cryptocurrencies

sources:
Patterns/ Lancaster University
Schneider Electric Research Institute
International Telecommunication Union (ITU)

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Digital Sustainability

IT Carbon Footprint & global electricity demand

Increasing Energy Demand

(+1395 TWh)

2030: 10%

2020: 8%

2015: 3.9% (7.0%)

The Paradox of Digital Sustainability

2015 baseline
3.1% CO2
(0.74 -0.97 GtCO2)

2020
2.8%

2030
2.6%
(-0.08 GtCO2)
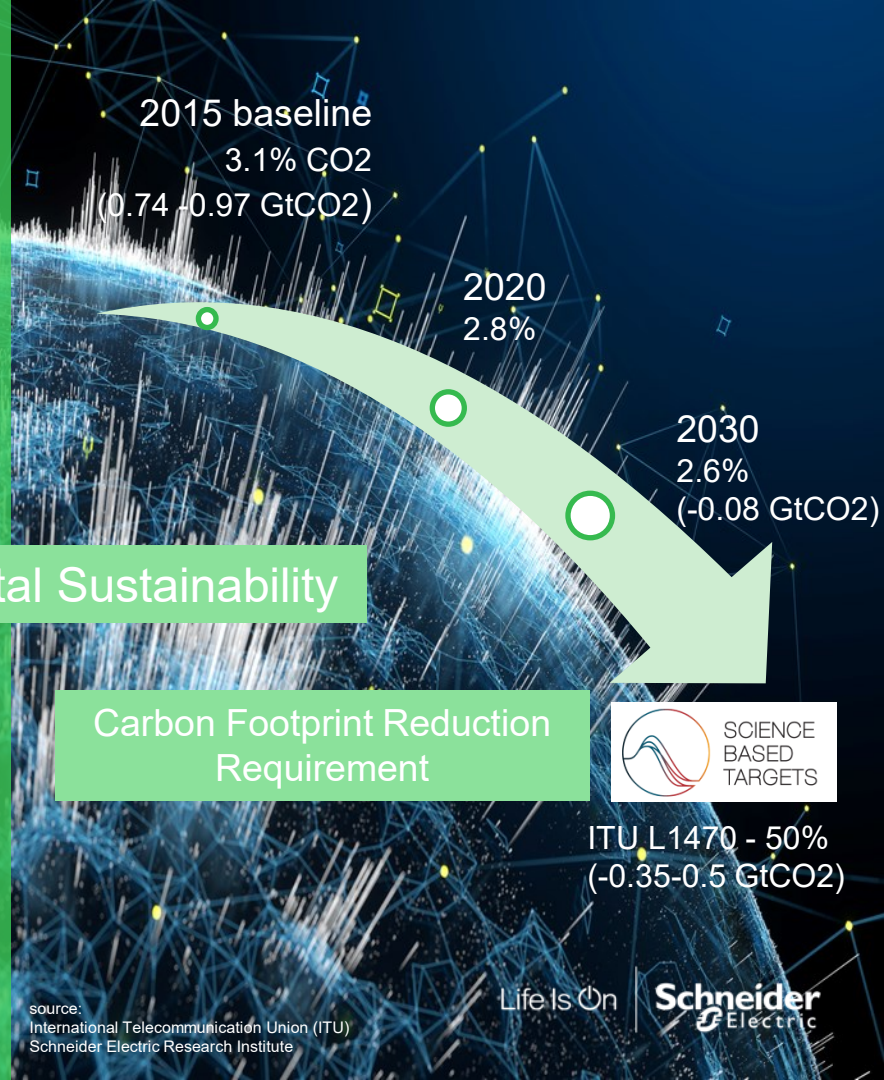
Carbon Footprint Reduction Requirement

SCIENCE BASED TARGETS

ITU L1470 - 50%
(-0.35-0.5 GtCO2)

source:
International Telecommunication Union (ITU)
Schneider Electric Research Institute

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Digital Carbon Footprint

Product Lifecycle vs IT Asset Lifecycle vs Carbon Footprint
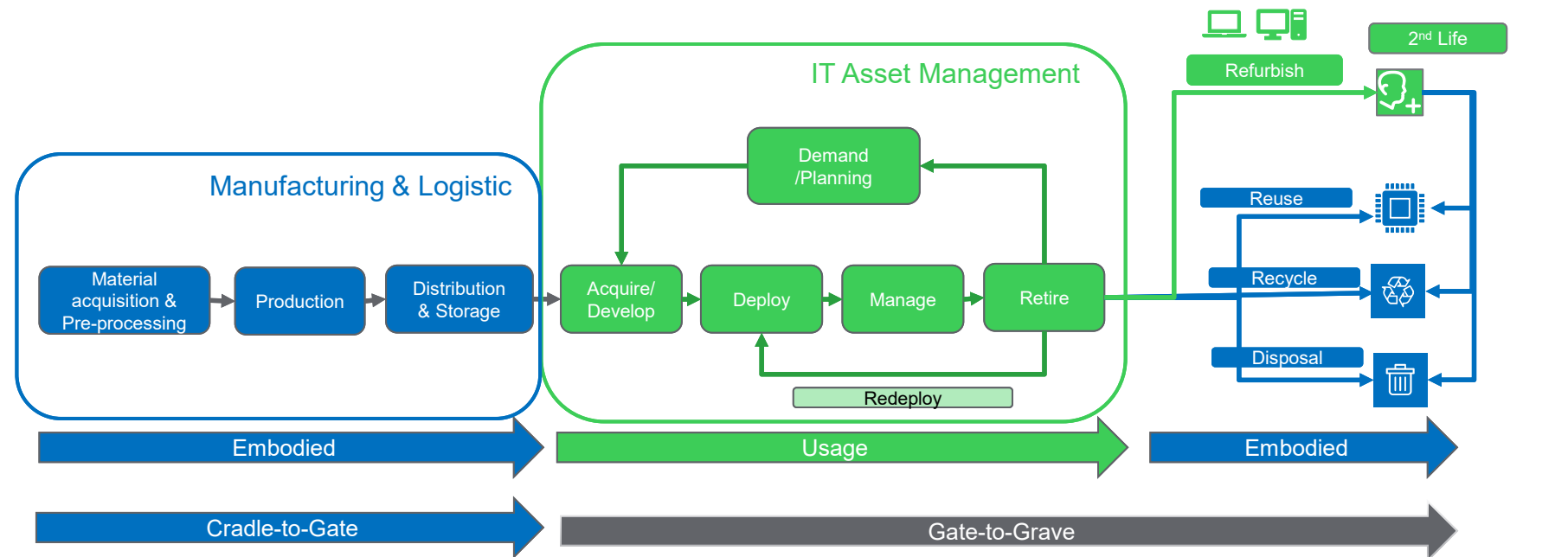
Digital Carbon Footprint

ICT Global Energy demand 2015-2030

source:Schneider Electric Research Institute
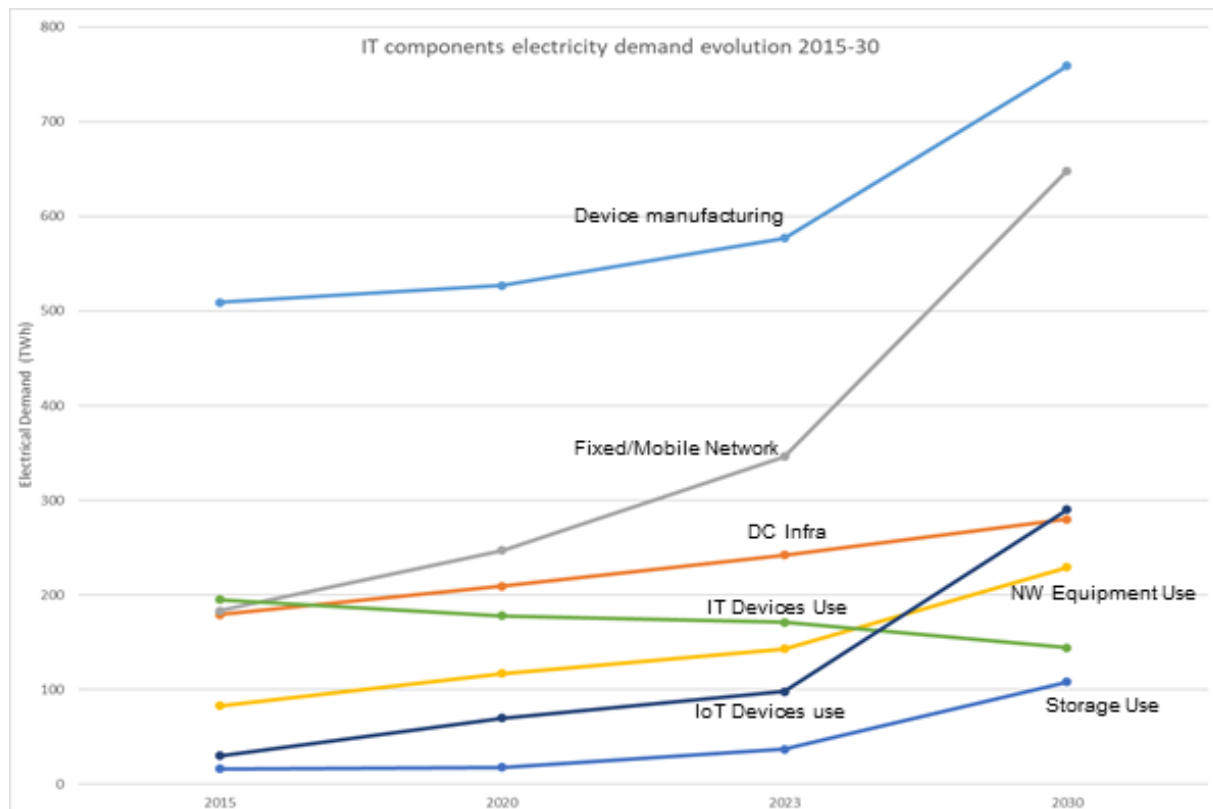
Digital Carbon Footprint

Enterprise IT Landscape

30/70
End User Devices

NW

SaaS/PaaS/IaaS
ORACLE
SAP
aws
servicenow
Microsoft
Google
IBM
salesforce
Adobe
Alibaba Cloud

NW
90/10

IT Infra
80/20

NW

On prem SW/Applications
Adobe
IBM
ptc
ORACLE
SAP
Google
Microsoft
vmware
open source initiative

NW

NW

IoT 80/20

- ▬ Usage CO2 Emissions
- ▬ Embodied CO2 Emissions

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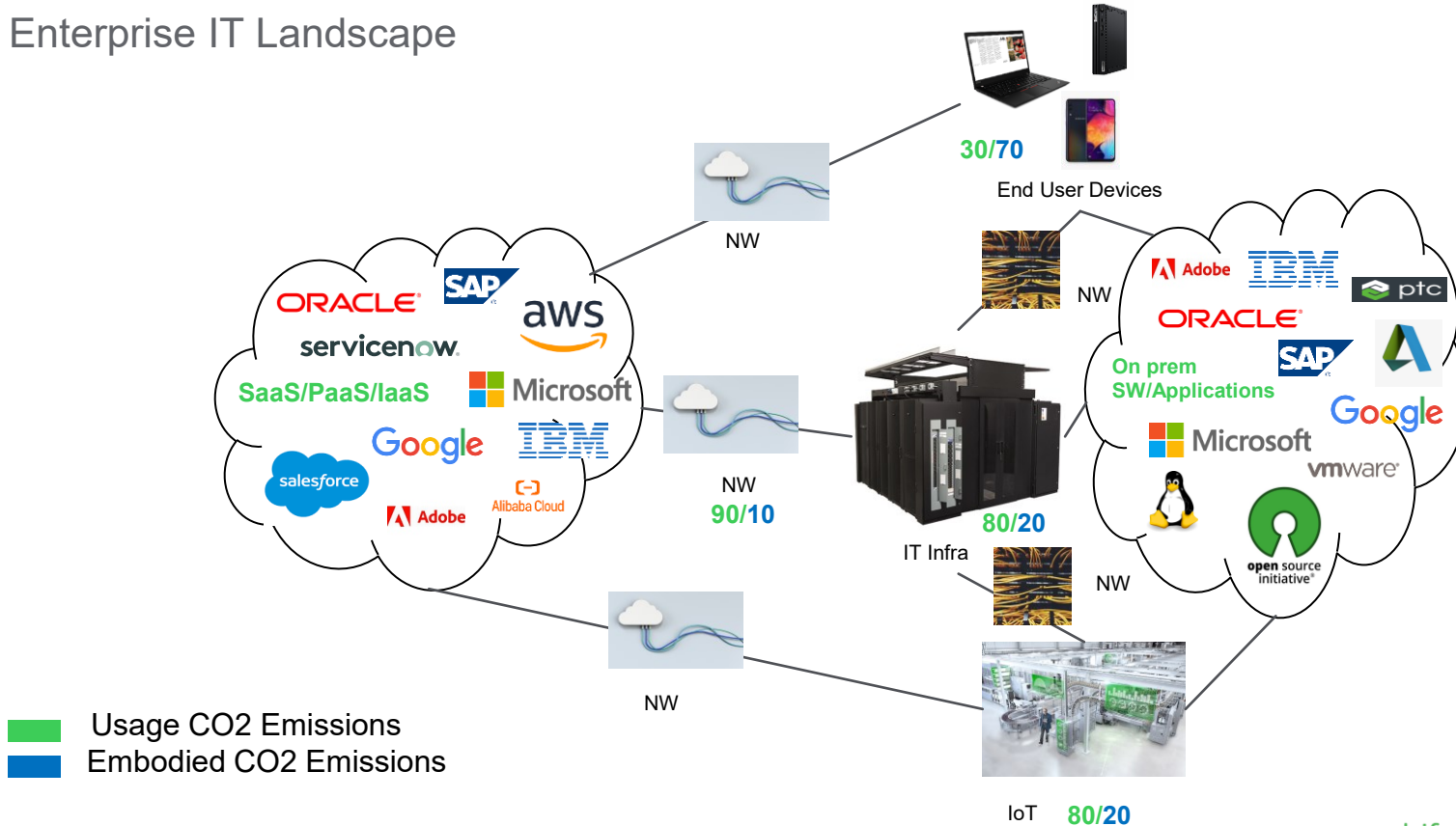
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5 keys areas to enhance Sustainable IT

Purchase "Green"

"Green" Design & Architecture

Operationalize Circular Economy

Use Renewable Energy

Increase Awareness on Green Digital Habits

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Q&A

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