

Engineering for Sustainability

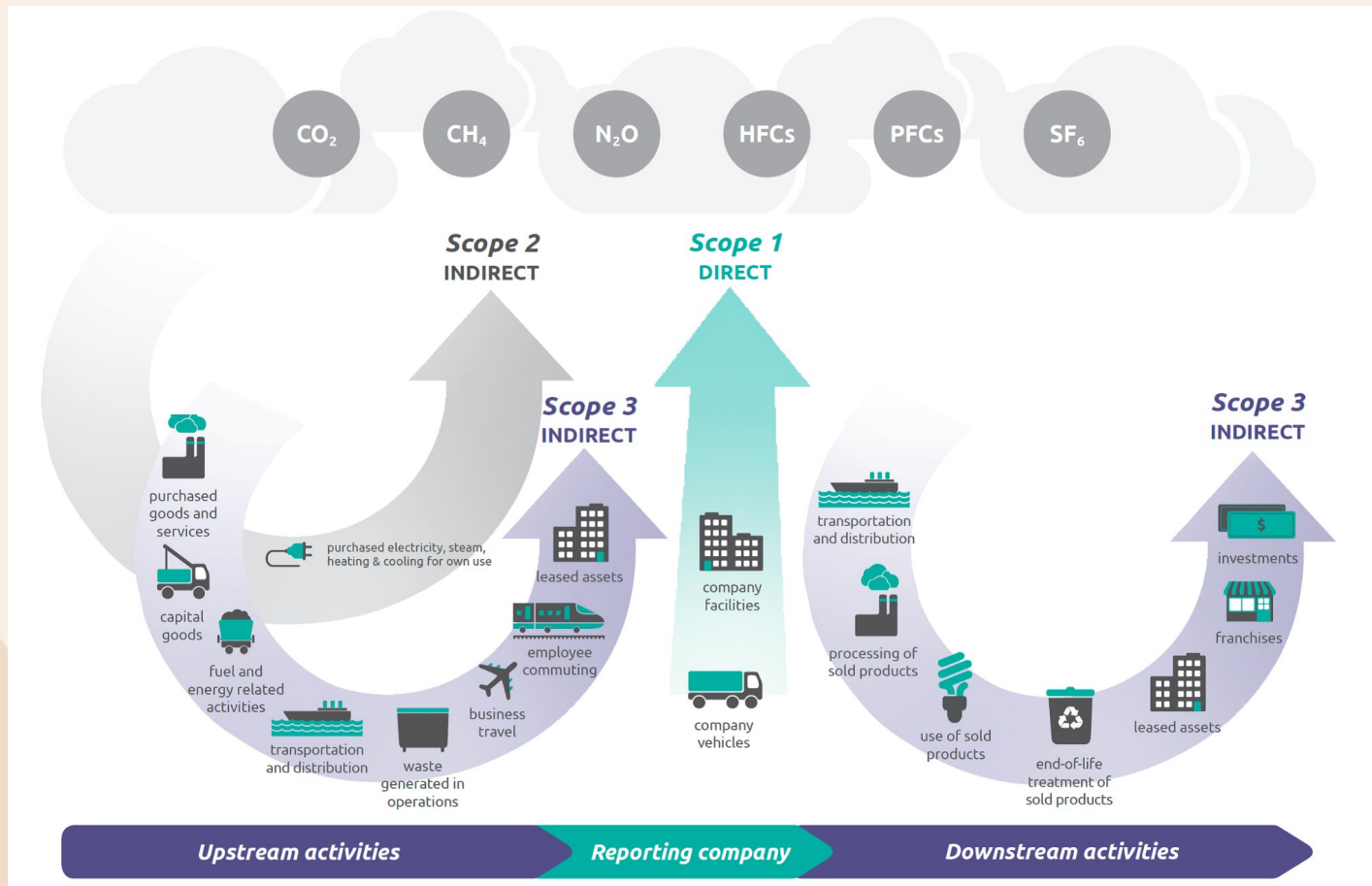
Namrata

Workday

SRECon EMEA 2022

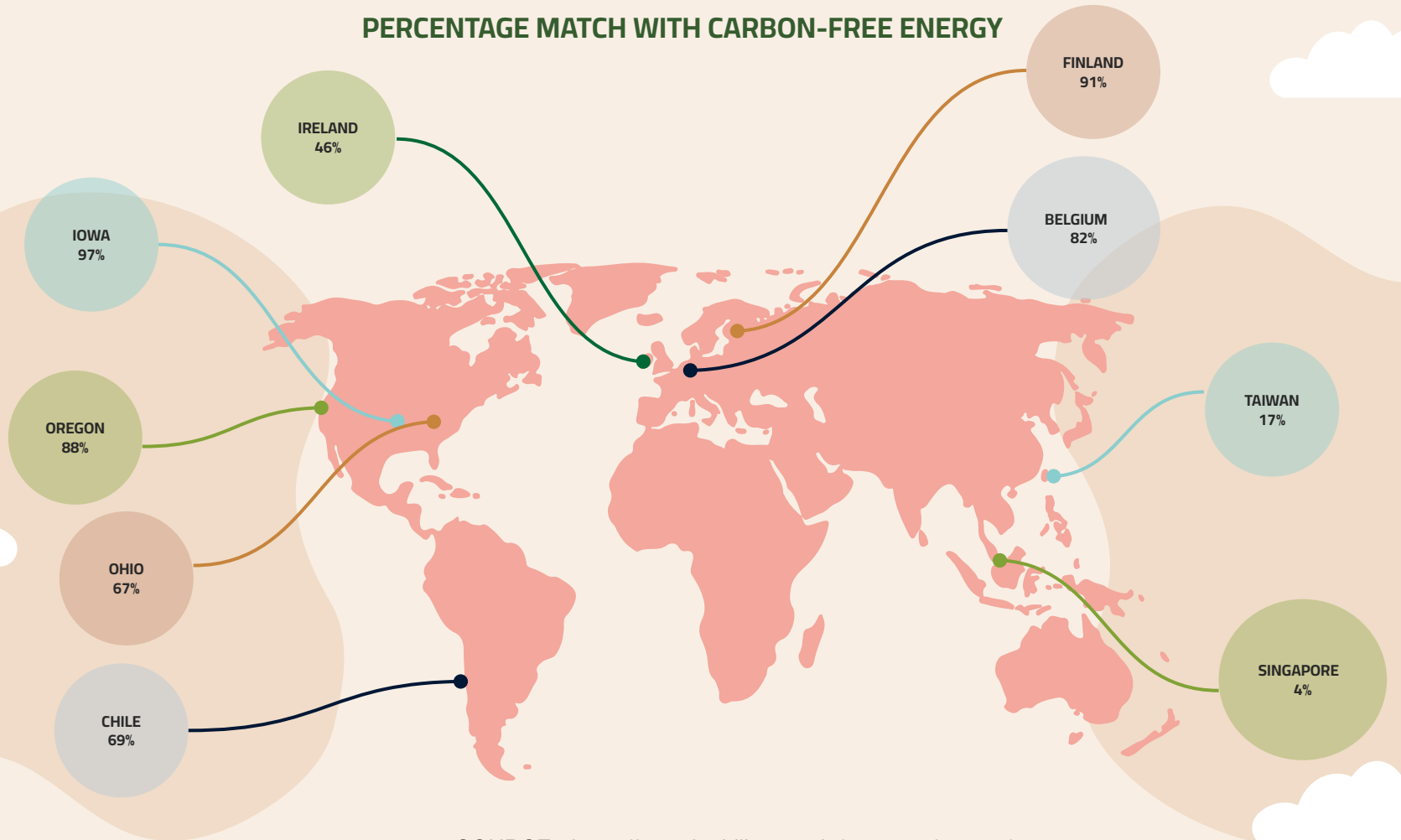
Collective Action





Source: [WRI/WBCSD Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard \(PDF\)](#), page 5.

PERCENTAGE MATCH WITH CARBON-FREE ENERGY



SOURCE - <https://sustainability.google/progress/energy/>

MONITORING SOLUTIONS

AWS

Customer Carbon
Footprint

GCP

Carbon Footprint
tooling API



AZURE

Microsoft
Sustainability
Manager

OSS

CloudCarbonFootprint.org
Green Software Foundation

**Higher resource wastage
leads to higher carbon
emissions**



Select your workload

Instance Type *

m4.xlarge

AWS Region *

us-east-1 | US East (N. Virginia)

Computing hours

1 Hour(s)

Estimate

Your Estimation

Detailed calculation for:

Instance: **m4.xlarge** [More info](#)

Region: **US East (N. Virginia)** [More info](#)



Just estimated the carbon footprint of my EC2 workload: for 24 hour(s) of m4.xlarge in us-east-1 the result is

306.6 gCO₂eq

(251.4 gCO₂eq for running the instance and 55.2 gCO₂eq for its manufacturing). Give it a try too!

by Teads Engineering

Share on Twitter

Better resource utilisation



**Software Carbon
Intensity**



**Orchestration
Platforms**





**DATA CENTERS
AND
ECONOMIES OF
SCALE**

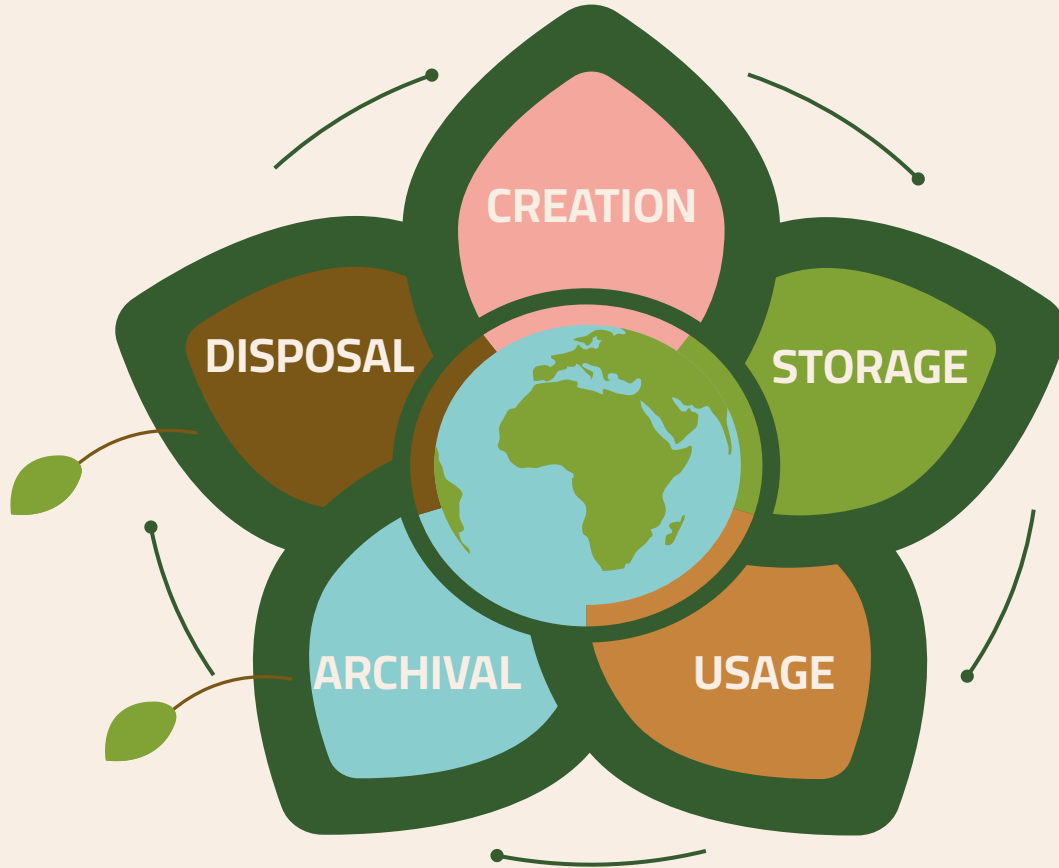
Vast amount of data is a new kind of trash for information age.



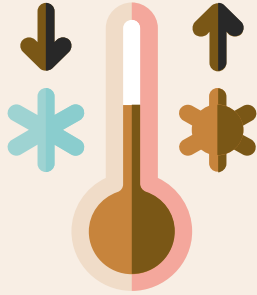


**COMPLIANCE
IS YOUR
FRIEND**

DATA LIFECYCLE MANAGEMENT



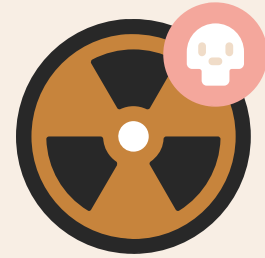
DECLUTTER YOUR METRICS



SLI



SLO



ERROR
BUDGET



ACT NOW



Thank you!

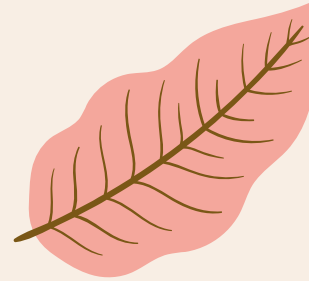
<https://namc.in>

With many thanks to my partner, Stephen, friends and colleagues who helped along the way.

REFERENCES



- [Paris Agreement 2016](#)
- [Scopes of Emission](#)
- [Economic modelling for carbon](#)
- [Process level modelling for carbon](#)
- [Monitoring Carbon by Adrian Cockroft](#)
- [Impact of Digital Waste](#)





REFERENCES

- [Chasing Carbon: The Elusive Environmental Footprint of Computing](#)
- [Green Software Foundation](#)
- [GHG for data centers](#)
- [Carbon offsetting and how does it work](#)
- [Coursera - finance of climate change](#)