KIN+CARTA

Integrating Sustainability Into Digital Transformation

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Agenda

Setting the Scene

Sustainability in Tech

Sustainability as a Form of Risk Mitigation

Tangible Practices

Getting Started

Sustainability is all-encompassing and includes the society, environment, and economy.

Society

Ensuring equitable access to critical resources.

- Human health
- Accessibility
- Education
- Resource security
- Sustainable community development

Environment

Preservation and regeneration of the environment.

- Decarbonization
- Clean air/water
- Minimizing waste generation
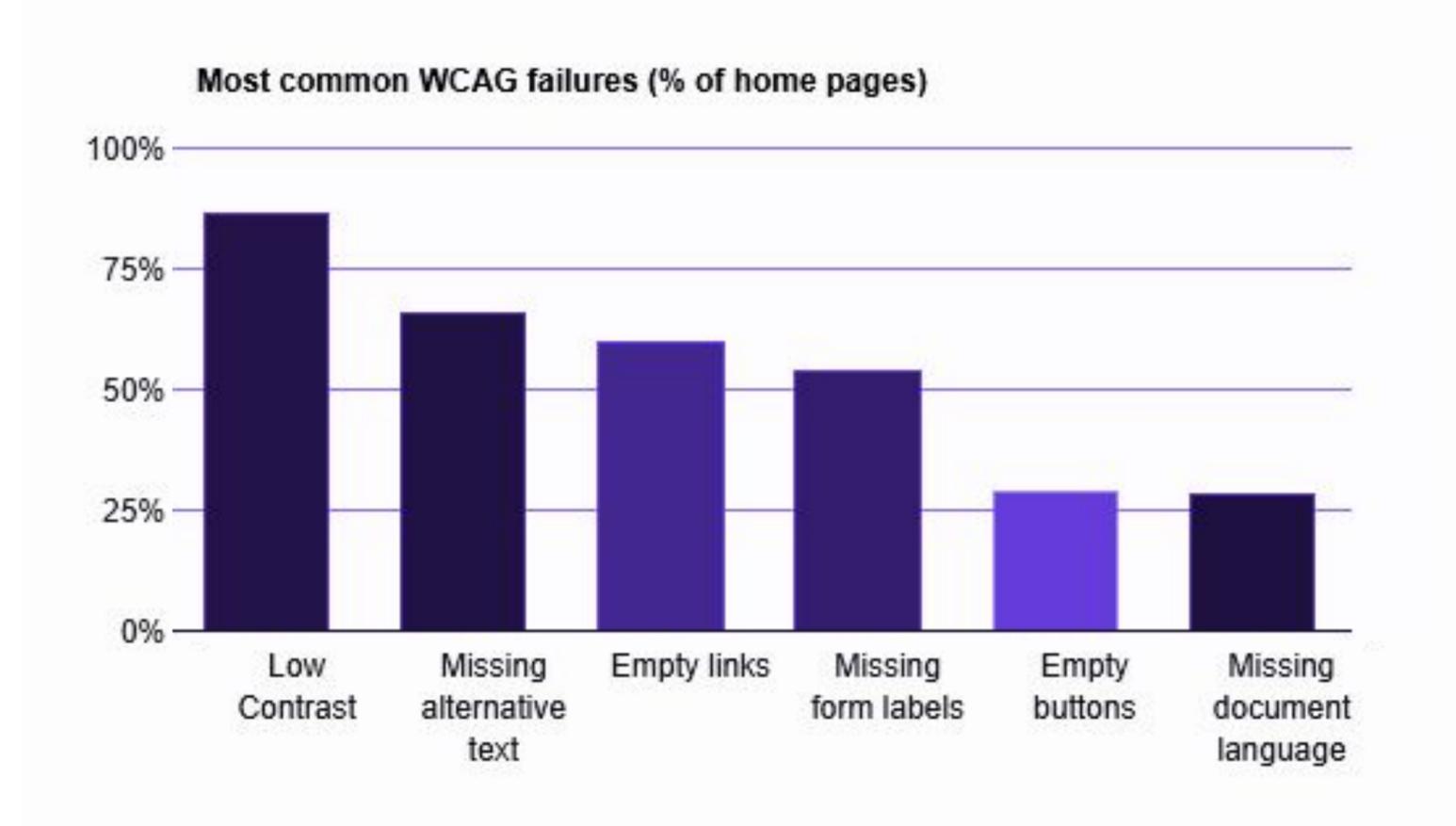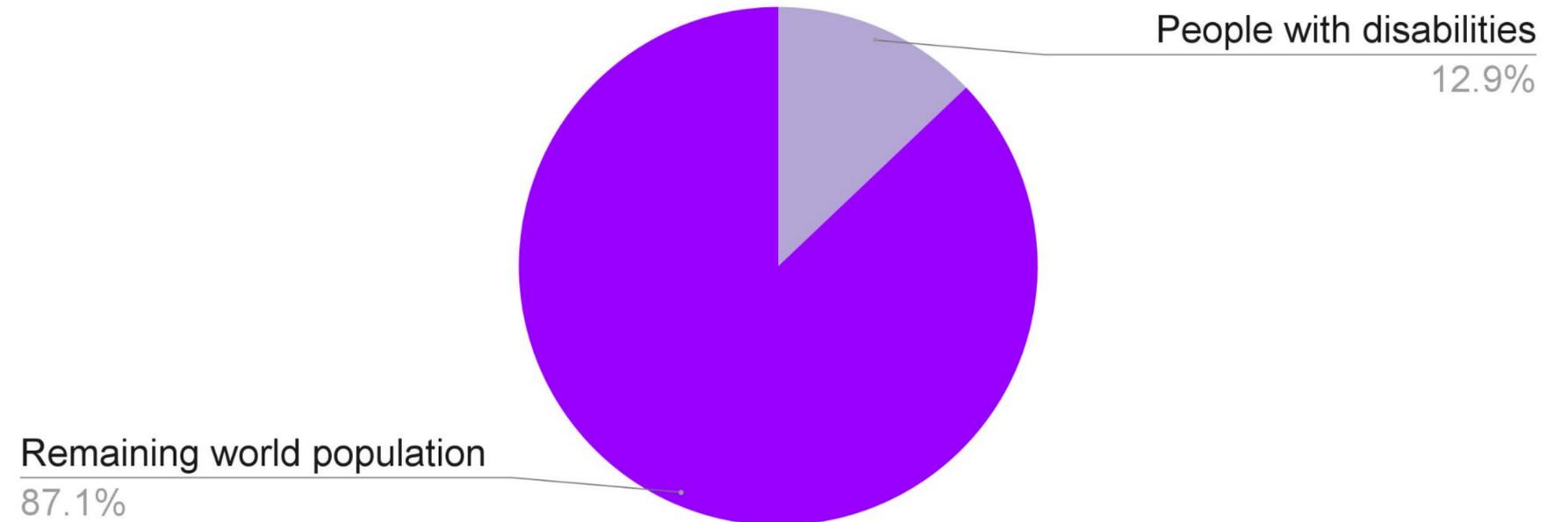- Protecting and restoring habitats/ecosystems

Economy

Creating an economy that will work for generations.

- Creation of future jobs
- Economic incentives that promote sustainable behavior
- Full accounting of products and resources

90%

Of websites are inaccessible to people with disabilities who rely on assistive technology.

People with disabilities 12.9%

Remaining world population 87.1%

Most common WCAG failures (% of home pages)

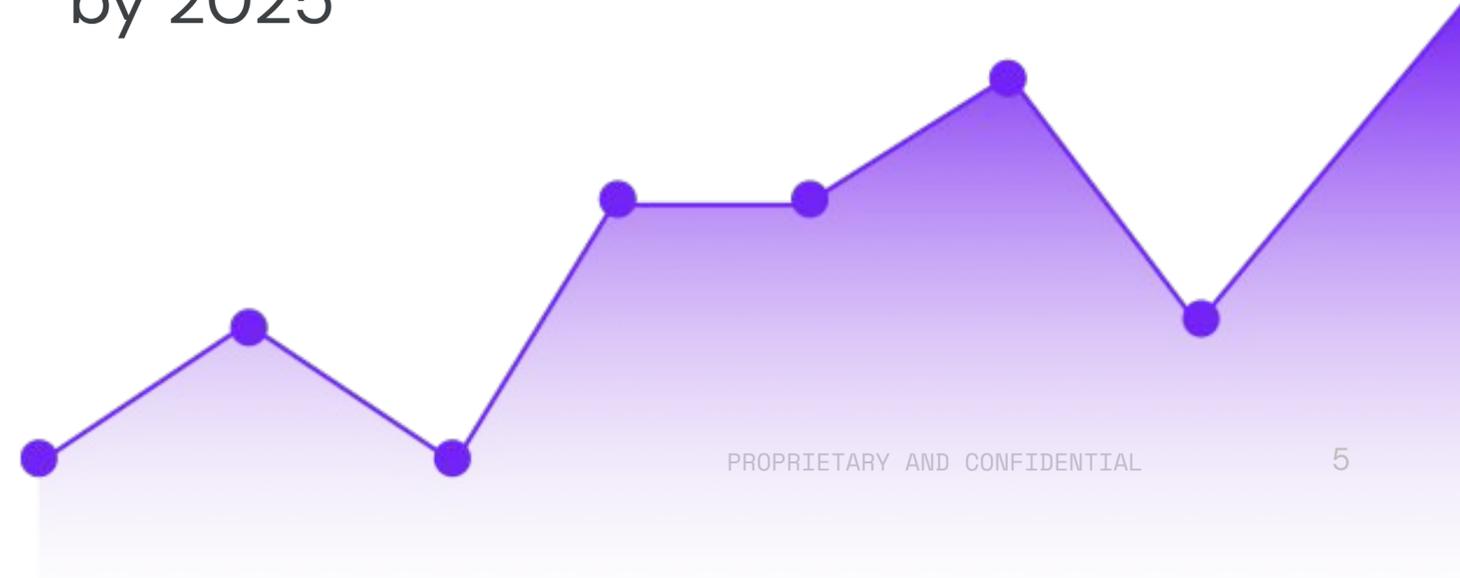|					
Low Contrast	Missing alternative text	Empty links	Missing form labels	Empty buttons	Missing document language

1%

Global electricity Use

Data centers worldwide today consume around ~**1% of global electricity use**, even while workloads – a measure of service demand –have more than doubled.
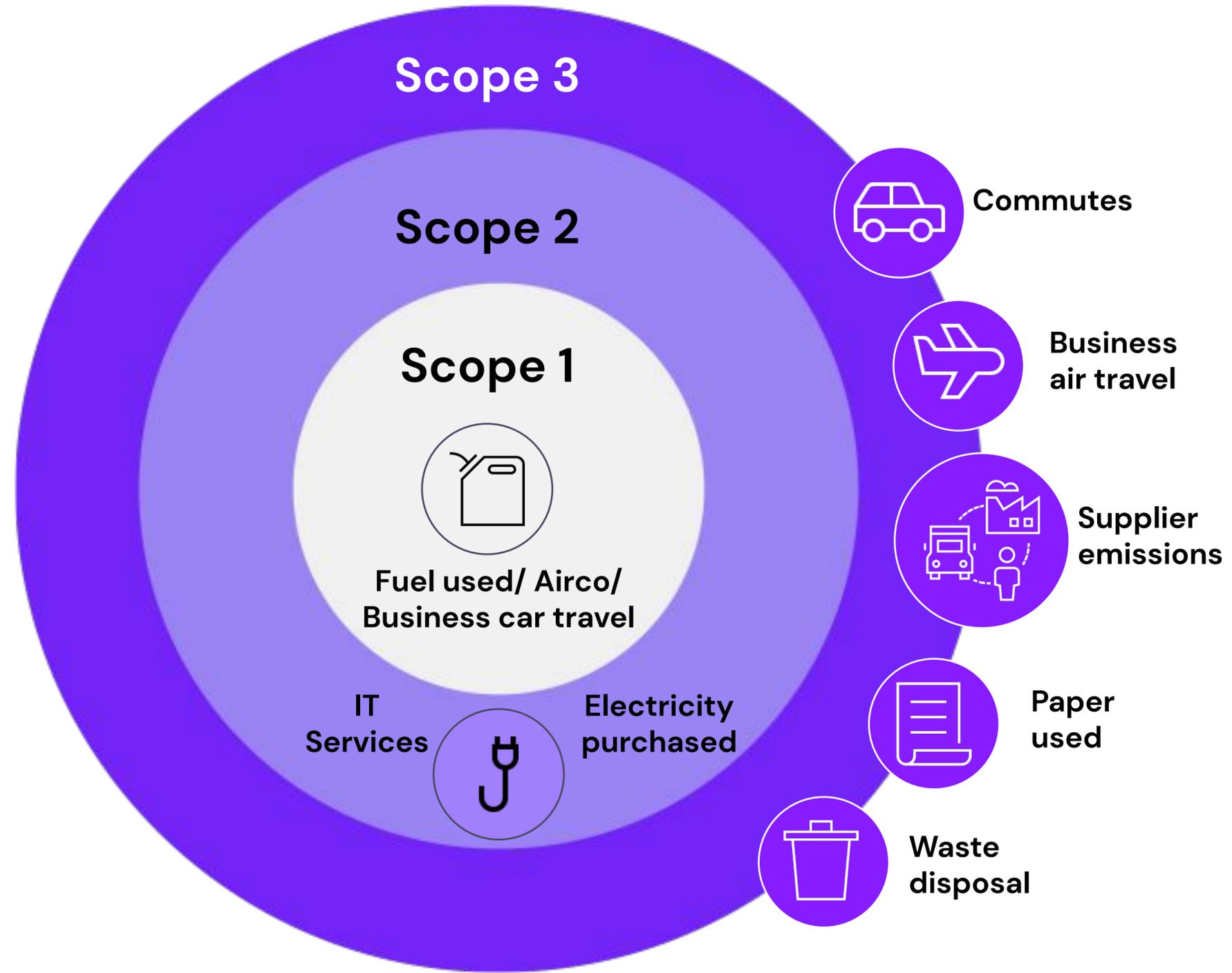
3.7%

Global Greenhouse Emissions

The carton footprint of the IT sector accounts for **3.7% of global greenhouse emissions**. These emissions are predicted to double by 2025

Carbon is currently priced at $51 per ton.

Methane: $1,500/ton

NO2: $18,000/ton

Scope 3

Scope 2

Scope 1

Fuel used/ Airco/ Business car travel

IT Services

Electricity purchased

Commutes

Business air travel

Supplier emissions

Paper used

Waste disposal

Sustainability in Tech
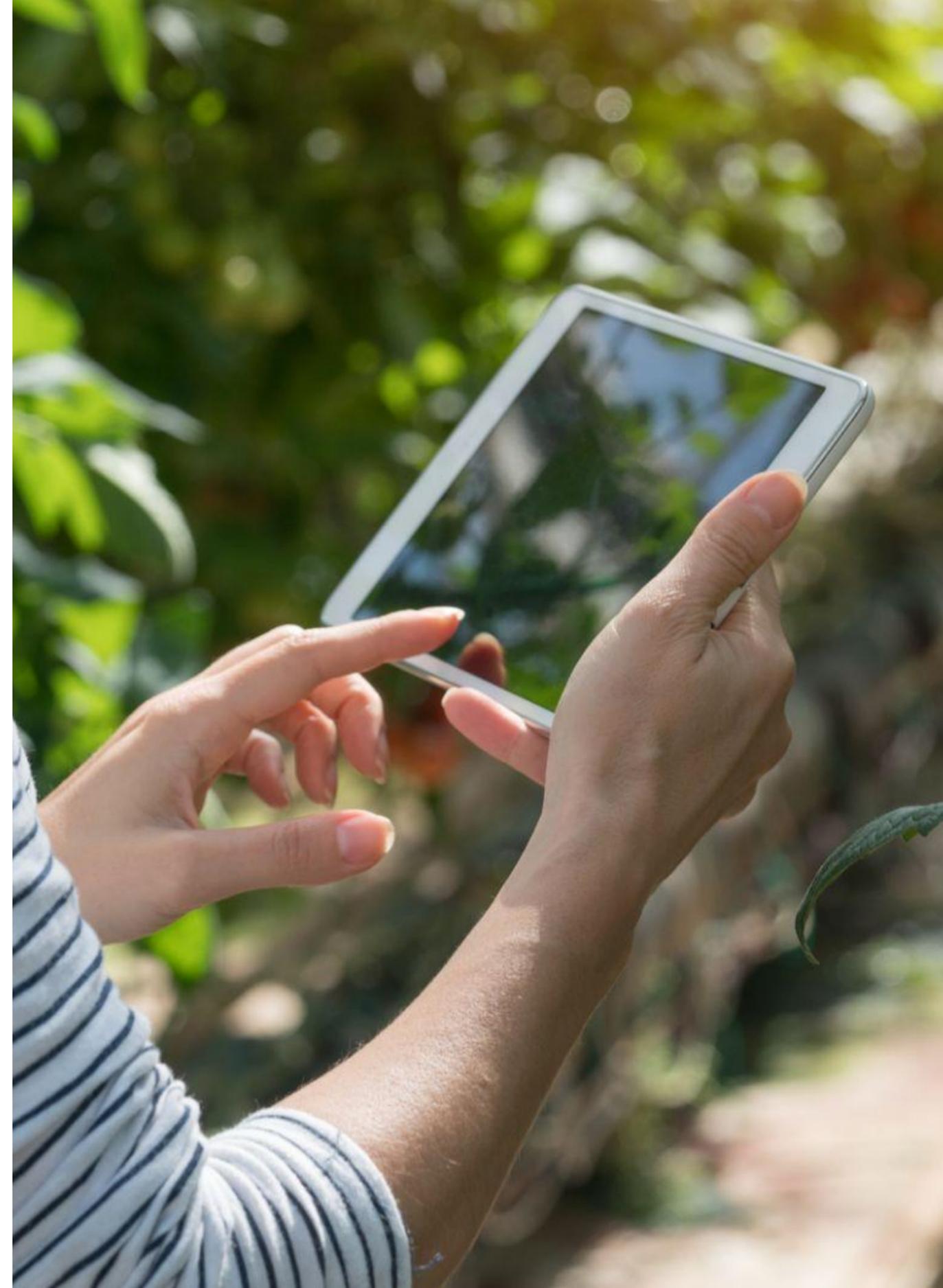
Outcomes of Digital Assets

The meta-impacts of a digital asset on sustainability.

- Reducing loss using supply chain intelligence and IoT
- Eco-routing and distribution
- Resource reduction (e.g. carbon, water)
- Reducing illness and/or mortality using AI

Delivery, Infrastructure, and Systems

The sustainability of the system itself.

- Diversity of the teams who build/manage products
- The carbon impact of hosting and delivering the experience to the end user
- Impact of departments that produce and manage digital assets

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Sustainable Innovation as a form of risk mitigation

Mitigating Reputational Risk

– Climate change and civil unrest are increasingly shifting consumer preferences
– Iincreased salience of climate change for consumers and employees

Mitigating Transitional Risk

– Shifts in regulatory structures (from greenhouse gasses to accessibility)
– Changes in incentive frameworks
– Other forms of transitional risk

Mitigating Physical Risk

– Chronic Shifts
  – Rising temperatures
  – Rising sea levels
– Acute Hazards
  – Floods
  – Wildfires
  – Other extreme weather events

Tangible Practices

Coding/building for carbon efficiency

- Moving on-prem workloads to the cloud
- Optimizing for energy efficiency when deciding where to store different classifications of data
- Reducing the amount of provisioned storage
  - Maximize utilization of what is provisioned

Designing accessible products

- Diverse workforces require digital assets accessible to all
- Meet legislative requirements first
  - Then, best practices
- Educate the workforce on the importance of accessibility
- Audit existing products and prioritize improvements

Mitigating bias in algorithms

- Ensuring that your org's use of AI isn't perpetuating historical biases
- Increase diversity of teams
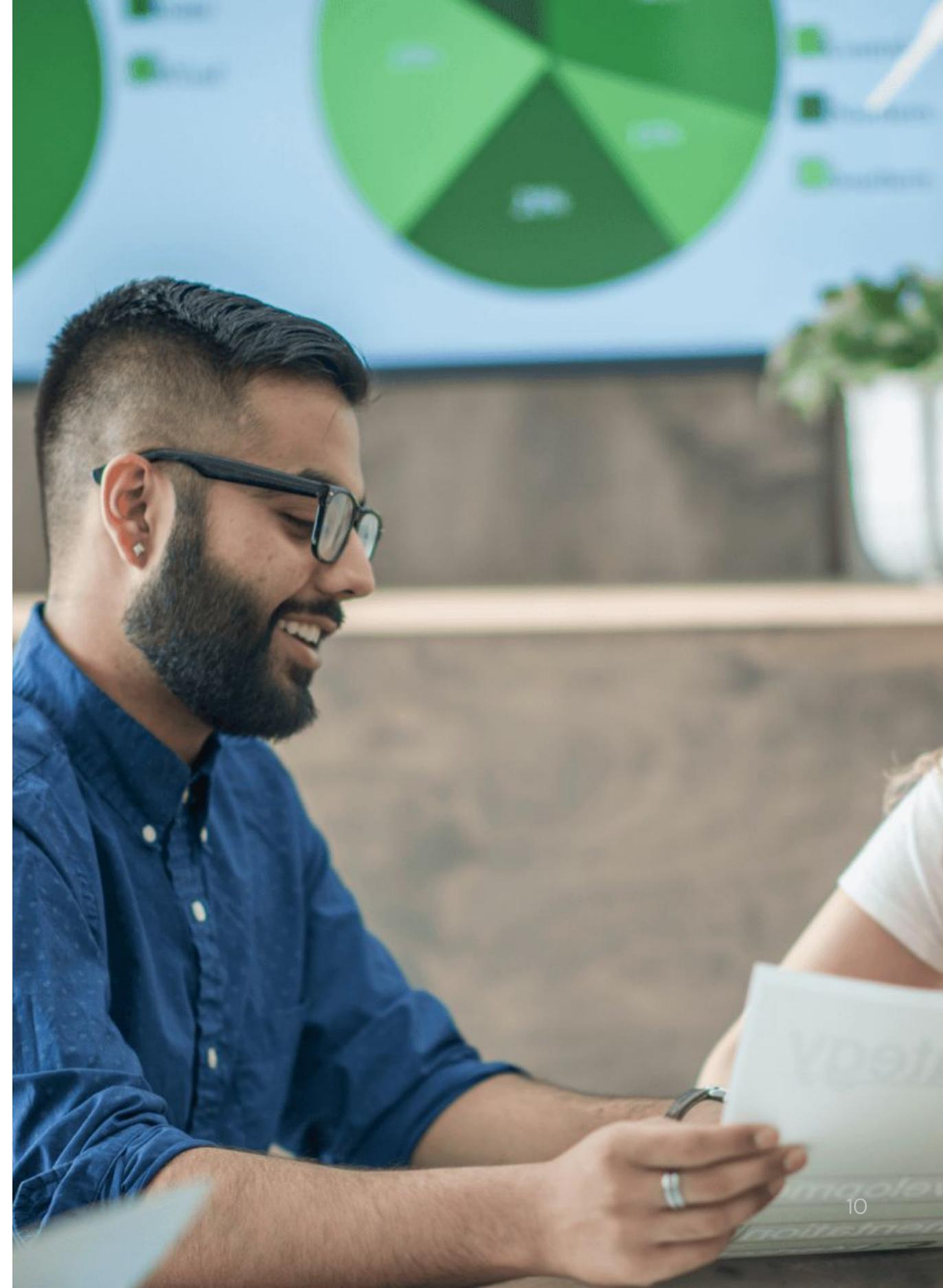- Evaluate historical data for bias
- When in doubt, humanize

Getting Started

Key steps to bring sustainability to life.

Understand and Prioritize: Link your broader organizational sustainability ambitions with the scope of your role/department. Assess the technology landscape and evaluate sustainability in the context of your approach to delivery, data storage, and computing.

Measure, Benchmark, and Set Goals: Examine key areas of opportunity and explore sustainable software processes through a product lens.

Execute: Map initiatives and opportunities according to impact and contribution to broader objectives. Define and execute on inward and outward facing communications specific to sustainability progress and goals.

Thanks

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