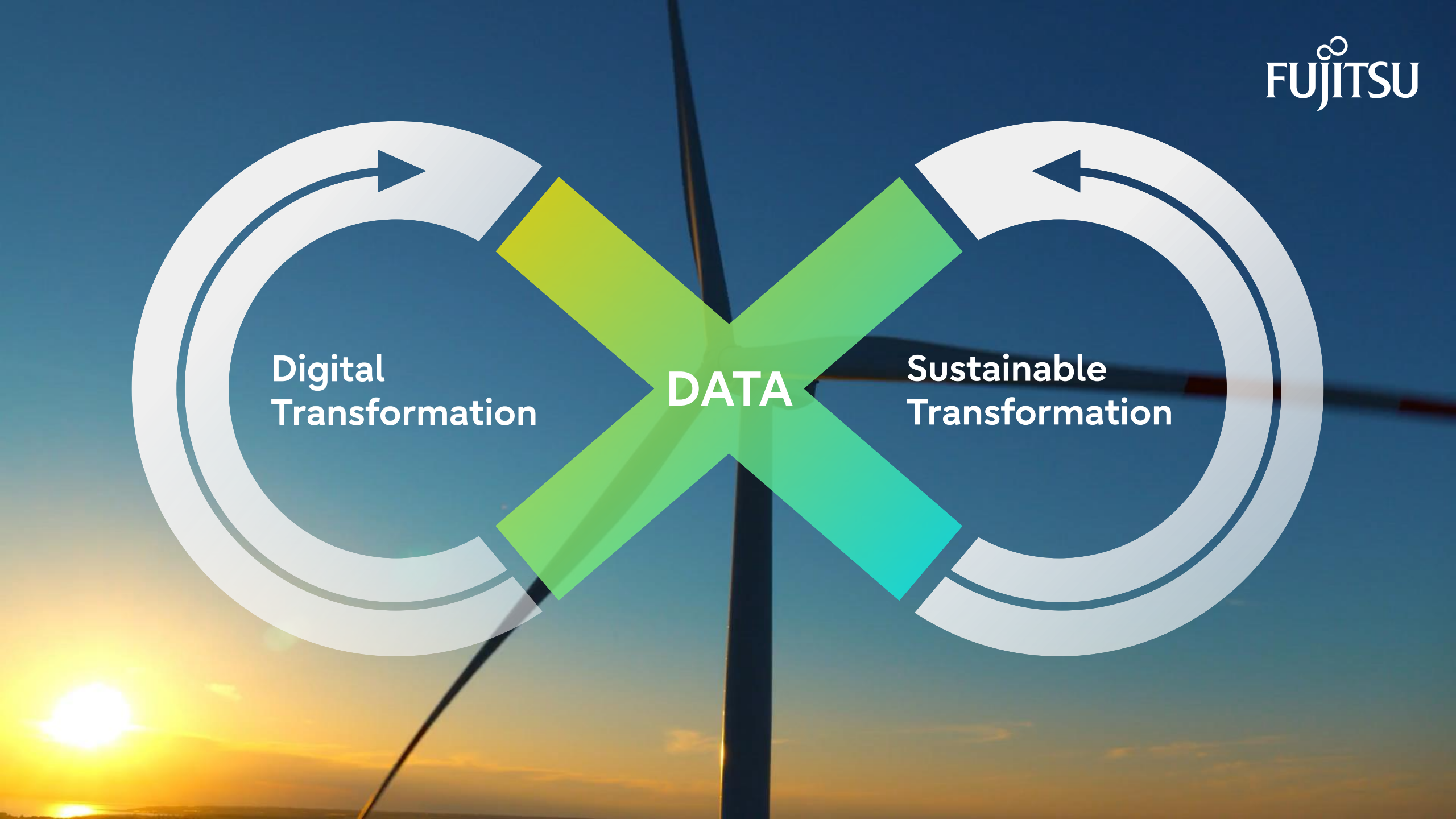
Hybrid Cloud Assessment Service: the path to a sustainable data-driven transformation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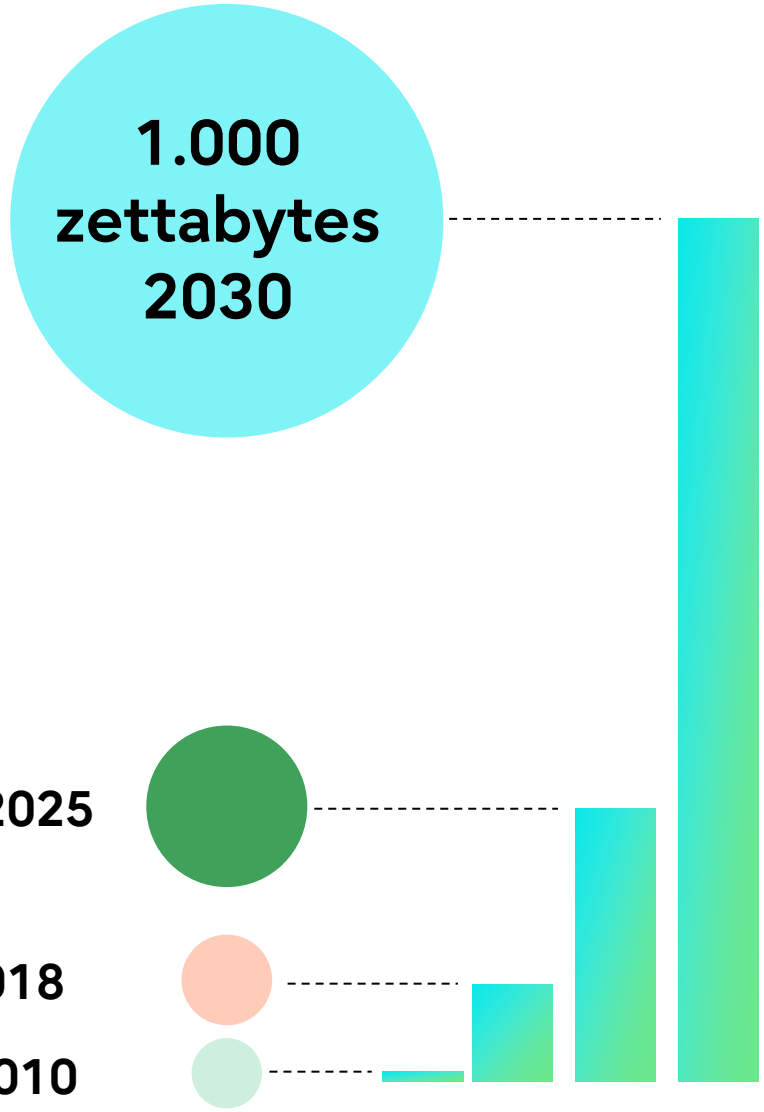
Digital Transformation
DATA
Sustainable Transformation

Our trash blindness

- Become desensitised to the amount of data we produce
- Be more mindful of our data usage and how it impacts the environment

Why data?



- One best case scenario is that ICT will consume 8% of the world's electricity demand by 2030, compared to 2% in 2020 [1)]
- Only about 32% of data created is ever used [2)]
- Storage as a percentage of DC energy consumption will continue to expand and could account for 38% of total DC power requirements in 2030 [3)]
- 1 GB of data generates 100-140g CO^2 within entire lifecycle [4)]
- By 2025, 49% of data will be stored in public cloud environments [2)]

1) https://www.bloombergquint.com/business/cutting-back-on-sending-emails-could-help-fight-global-warming
2) https://www.seagate.com/files/www-content/our-story/rethink-data/files/Rethink_Data_Report_2020.pdf
3) Emerging Technologies: Enterprise Storage Will Consume More of the Available Data Centre Power Budget and Undermine Sustainability

Globally data centres generate more CO_2 than the airline industry

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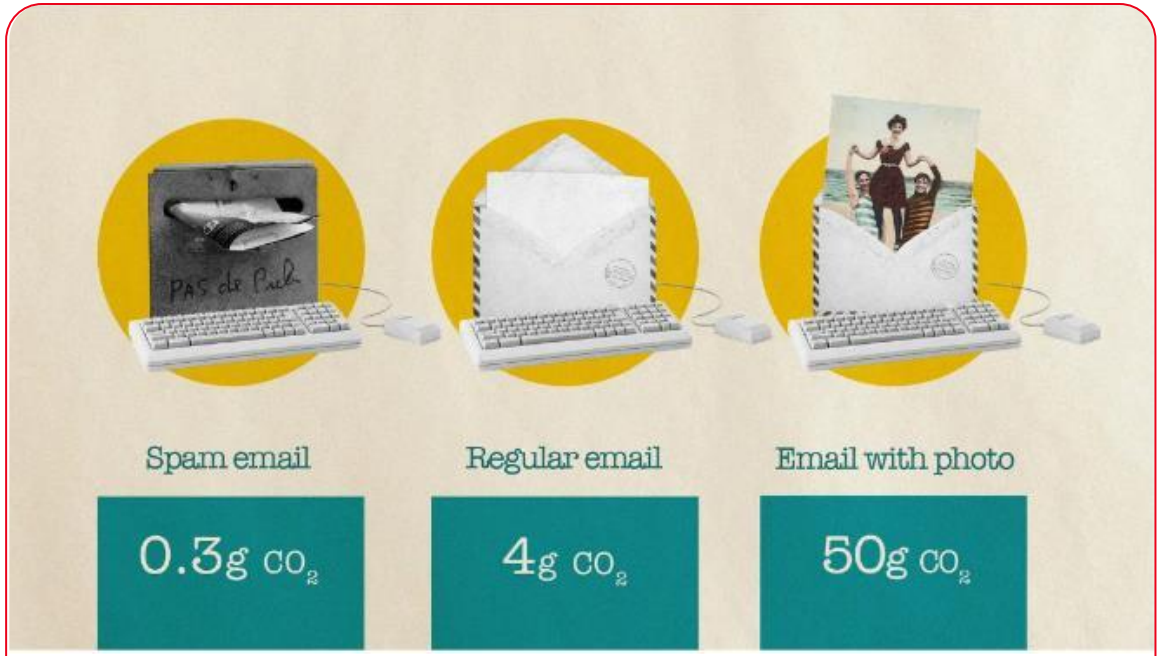
Airline emissions are declining, whilst datacentre emissions are rapidly growing
ICT will consume 8% of the world's electricity demand by 2030, compared to 2% in 2020

Increasing use of compute and AI:
- Training an AI model emits about as much carbon as the **lifetime** emissions of 5 cars

Rapidly expanding storage:
- Every day the world produces about **2.5 quintillion bytes of data** of which only about **32% is ever used**
- The total CO_2 generated in the UK alone from unneeded stored data, according to a report from IET, is the equivalent of **112,500** return flights from London to Australia

→ It is costing us the equivalent of maintaining the airline industry for data we do not even use
→ **New systems are much more efficient than old ones!**



Why your internet habits are not as clean as you think - BBC Future

Let's discuss data minimization

Optimize our data usage & minimise

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Manage your office data better & be mindful of what sustainable behaviour looks

» Spam emails: 0,3g CO^2, regular emails: 4g CO^2, with attachment 50g CO^2

» Know what is trash, what is not

- Data waste could be anything from pointless copies to forgotten backups
- Make yourself aware of what is required now, in future, never

» Map your digital waste

- Where is your forgotten digital trash?
- E.g. Forgotten backups, emails, expired records & documents
- Where are large files kept?

» Take action now & clean up less
(but be mindful about data privacy & security!)

- Stop sending “ok“ and “thank you“ emails
- Keep the important files in a cloud, so there is no need to keep the same file on every computer
- Backup wisely - make sure you backup only files that you need
- Create less “fast-content“ and be more intentional about your videos and photos
- Check your mailbox (e.g. Filter for large/old emails)
- Search for common names, addresses, (large) files etc. and remove duplications
- Unsubscribe from all newsletter you do not need anymore
- Clean up your calendars from digital waste
- Consider switching your video streaming off/make sure you are using the time effectively
- Incremental backup is a common backup regime

Let’s discuss digital waste management

Digital waste management

1. Gain insights first
2. Build & implement a data waste management strategy
3. Include sustainability in your data technology decision criteria
4. Host an internal digital clean-up day!

Gain insights first

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1

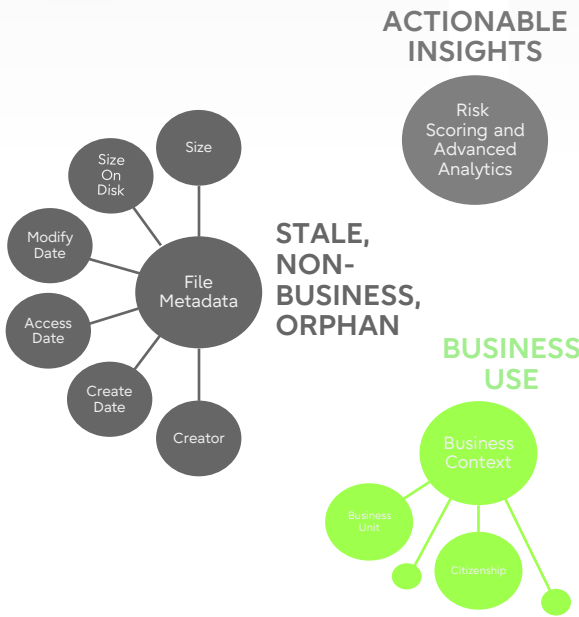
What do I have? What can I delete?

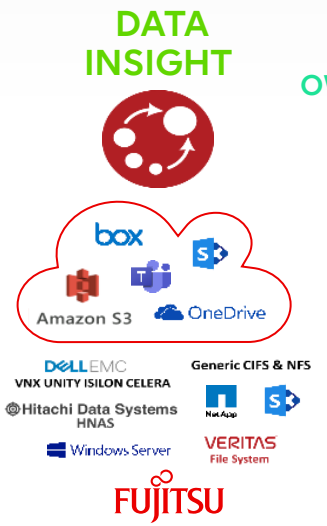
Is my data protected? Is there a compliance risk?

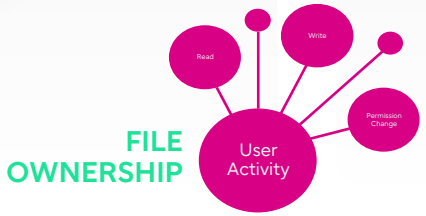
Can I find what I need quickly?

2

Data with context







Build & implement a data waste management strategy

The challenge

Control data growth and cost

Prepare for eDiscovery

Ensure supervisory compliance

ARCHIVE

Audit and security

Impose retention control

Provide easy access to information

The real challenge

Information growth & waste

- User mindset: keep everything forever
- Duplicated data causing more waste
- Unsustainable backup windows

Fear of deletion

- Over retention increasing costs
- Infinite retention = infinite waste
- Increased litigation risk and exposure

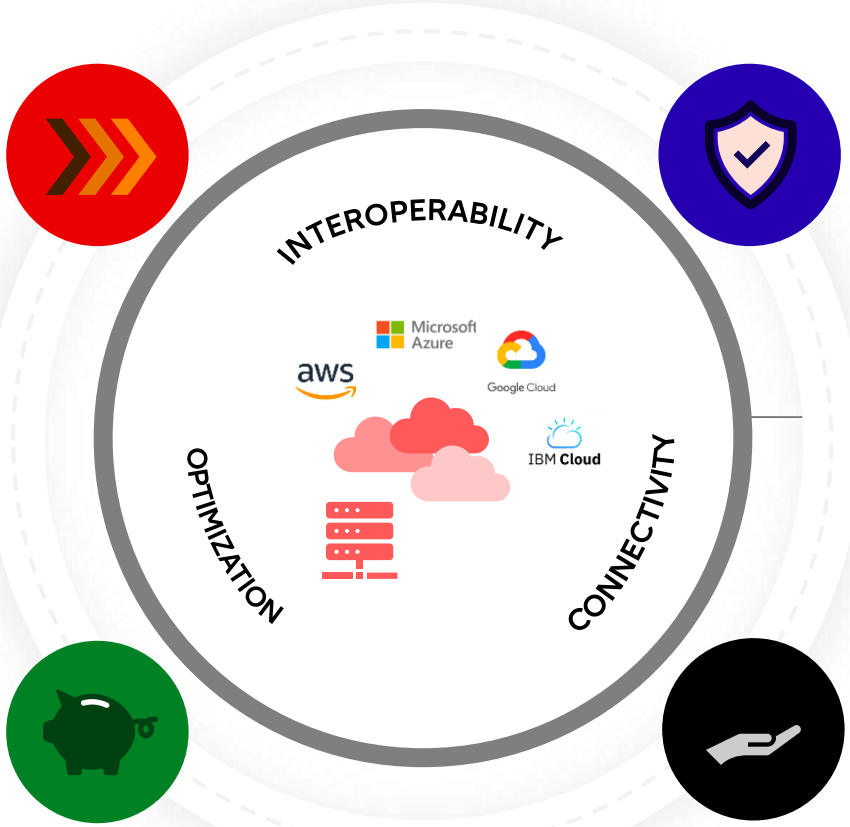
Search & eDiscovery “Fire Drill”

- Storage is cheap; search and review costly
- Improper use of backup systems
- Inefficient discovery and legal hold processes

Helping our customers on the journey

The initial journey to cloud is over — we are in a hybrid multi cloud world now

In an evolved cloud state, it is possible to unify operations, break down silos, create consistency, and get total observability



Powered by
- Unified management plane
- Common APIs, services, open architectures
- AI-driven automation

Simplicity
Unified hybrid multi cloud operations and cross-environment consistency

Security
Total observability and cyber resilience across environments

Savings
AI-driven automation to continuously optimize for cost, risk, efficiency, sustainability

Sustainability
More visibility, less waste, and higher efficiency to reduce your carbon footprint

A trusted sustainability transformation partner

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Responsible supplier

Our Responsible Business initiatives and policies ensure we **deliver responsibly as part of our customers supply chain**

IT products and services

We are optimizing our IT products, data centres and service desks to limit environmental impact

Carbon foot printing and offsetting

We provide **ICT Sustainability Benchmark analysis** and recommendations

Co-creation

We apply our cutting-edge technology to co-create **solutions for specific sustainability challenges**

Hybrid Cloud Assessment Service

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Your hidden champion for data exploration

01 **Analyze without overspending:**
The hybrid IT discovery service helps to achieve your desired performance and optimize costs through right sizing

02 **Optimize and make your IT infrastructure sustainable:**
The Services provides insights to support your IT transformation plan – heavy lifting and analysis is performed

03 **Innovate for your data-driven future:**
Get the most out of your data with a comprehensive overview on how best to optimize your IT

Within 6 weeks you can get a full overview on your complete IT environment.
Interested to learn more?
Please contact your local sales and presales to get more details.

Data visibility

- Inventory and mapping
- Data and workload analysis

Data governance & risk

- Evaluation of security, compliance and governance requirements
- Minimizing risks
- Identifying anomalies to reduce possible gaps

Data recommendations

- Optimizing your hybrid cloud strategy
- Find the best place for your data
- Efficient and effective ways to profit from your IT infrastructure – be it on-premise or in the cloud
- Sustainability and savings

Service timeline workflow

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Stage 1
- Customer discussion
  - Access
  - Permissions
  - Agree timelines

Stage 2
- Tooling deployment
  - Installation
  - Set up reporting and data capture

Stage 3
- Data extraction
  - Extract data for modelling

Stage 4
- Data analysis
  - Review findings
  - Identify areas for remediation and improvement
  - Highlight threats and vulnerabilities

Stage 5
- Report creation

Final stage
- Present report
- Review findings
- Discuss recommendations
- Agree actions for remediation and improvement

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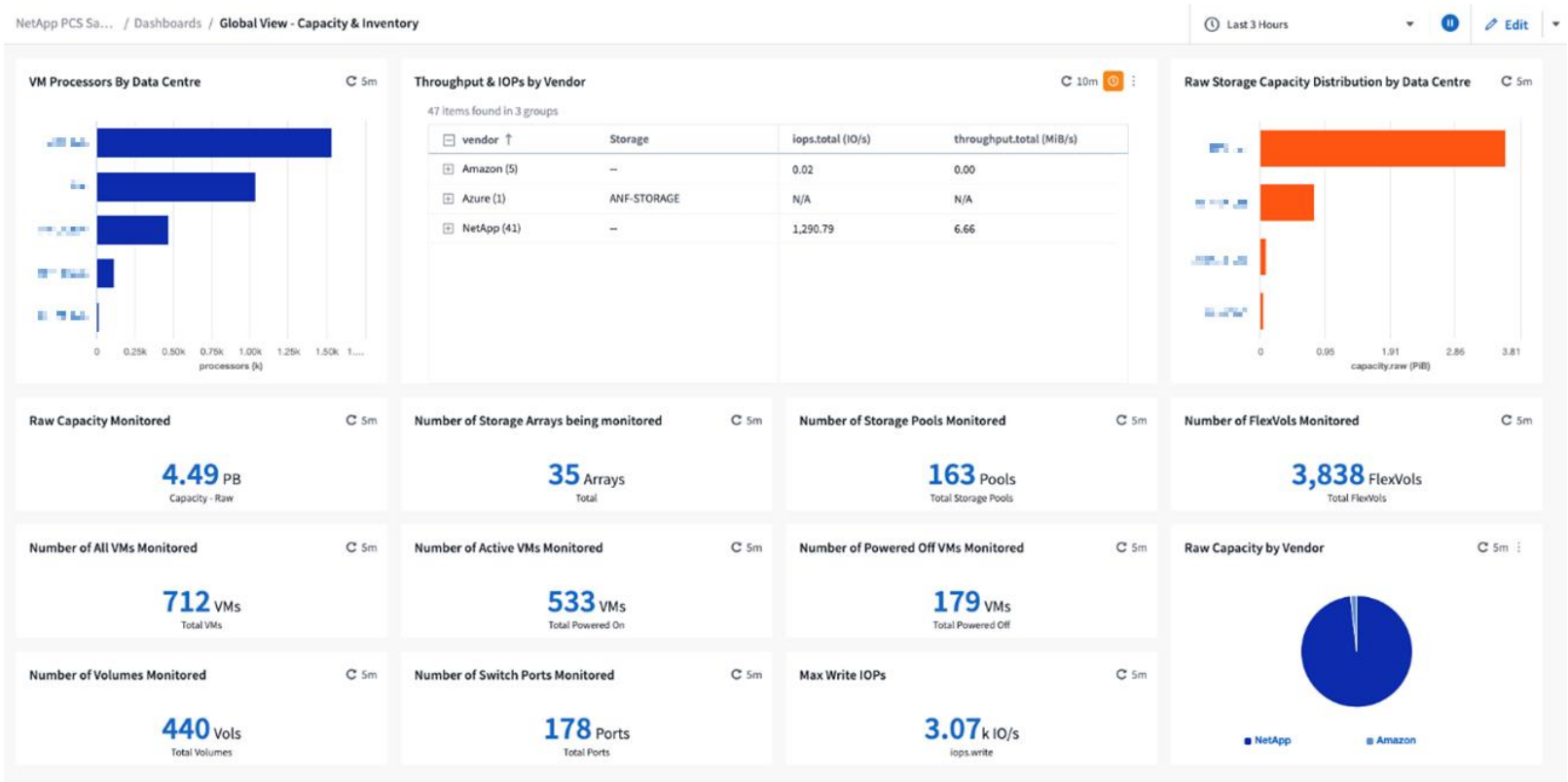
Infrastructure inventory

The observability into the assets that were monitored during the assessment and presents a high-level view of the estate



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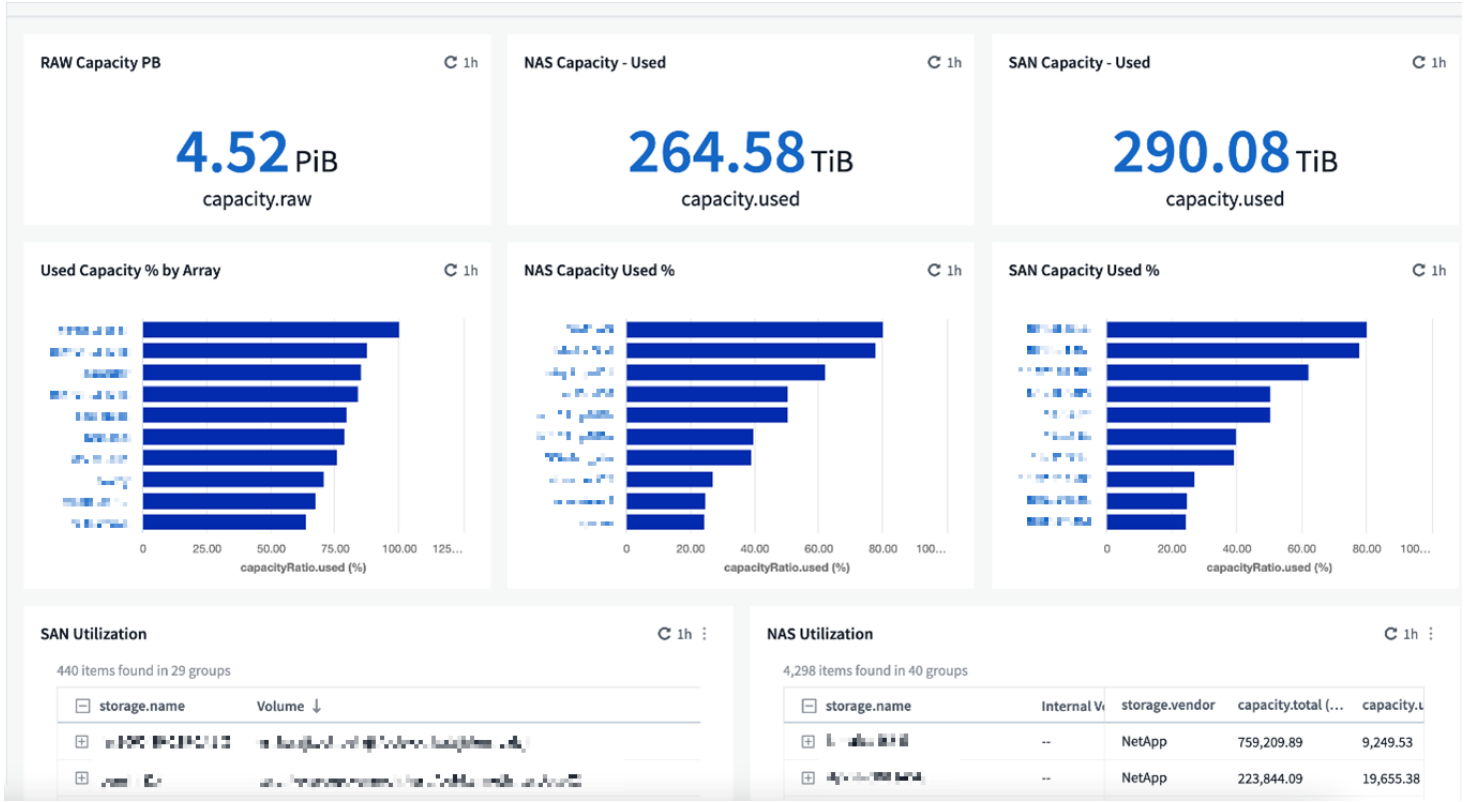
Storage inventory

- The visibility into the storage systems analysed including the underlying drive type for that system
- Modern storage systems provide the power consumption to calculate the assumed costs which are used in the sustainability and transformation sections later in this report



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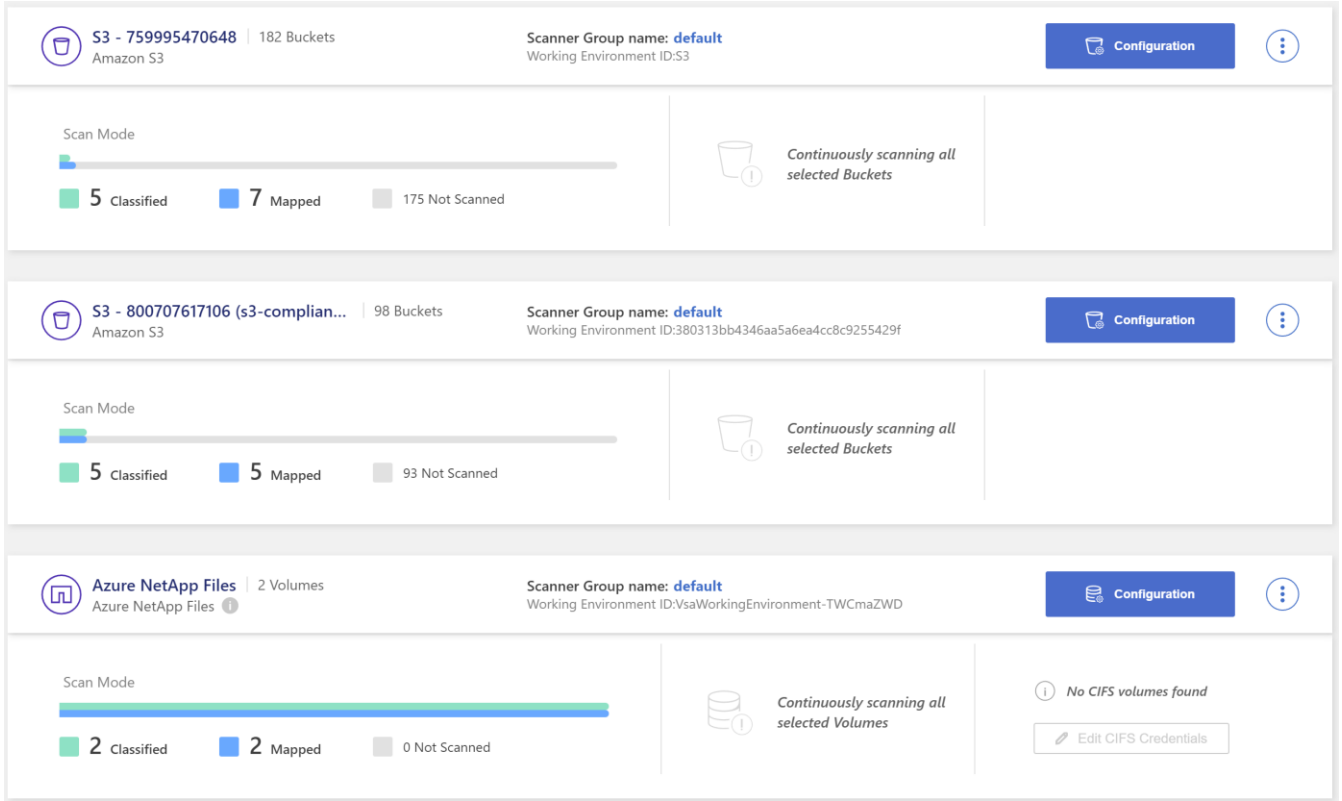
Data inventory

The details the inventory-based information pertaining to the data sets

- What data sets have been scanned and what source platforms they are held on
- Identification of the most frequently stored data types
- Categorisation of the data itself to identify contents of the stored data types



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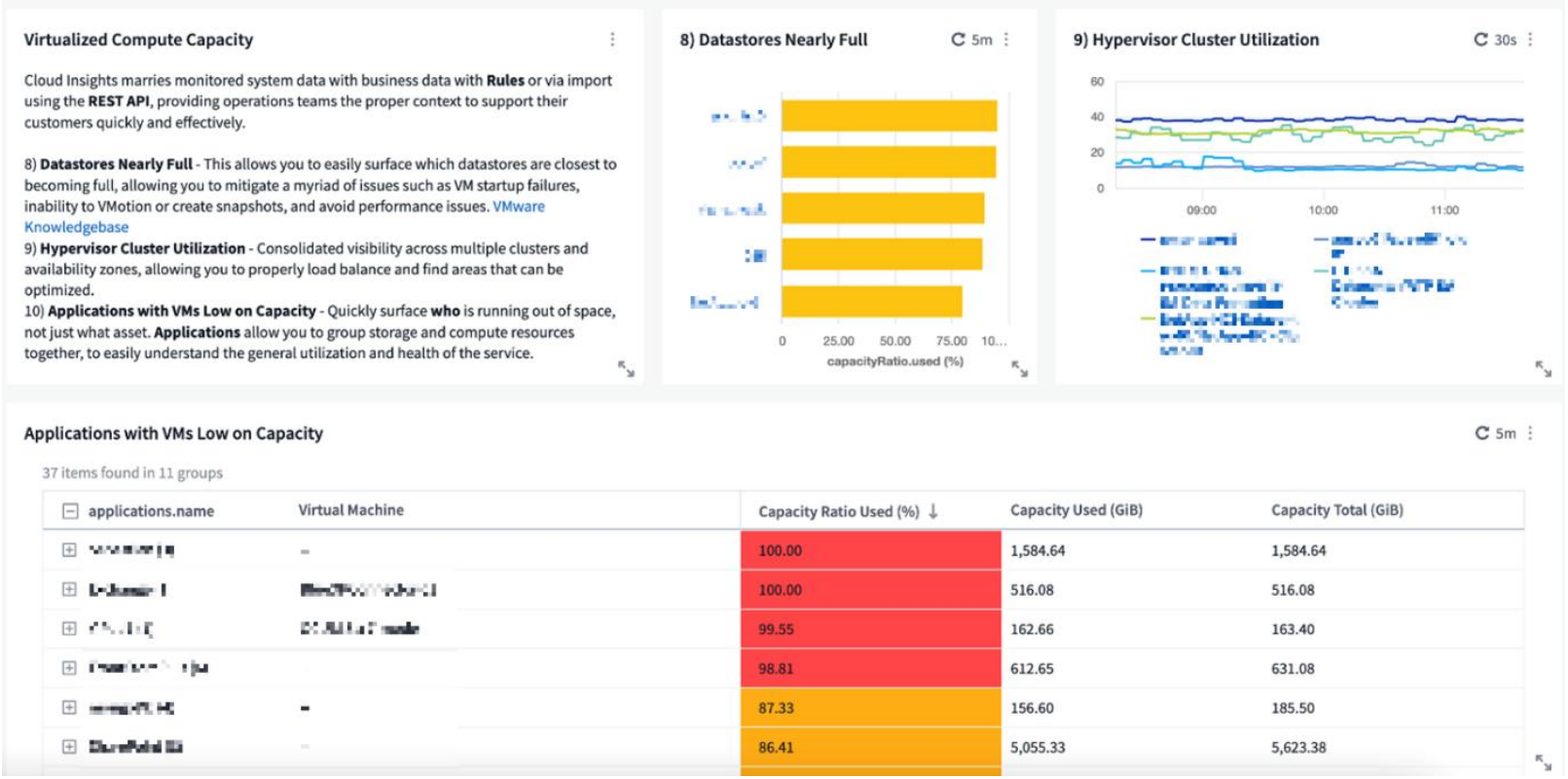
Risks

The risks pertaining to the data sets:

- Compute risks
- Storage risks
- Data permission risks
- Data sensitivity risks
- Personal data risks



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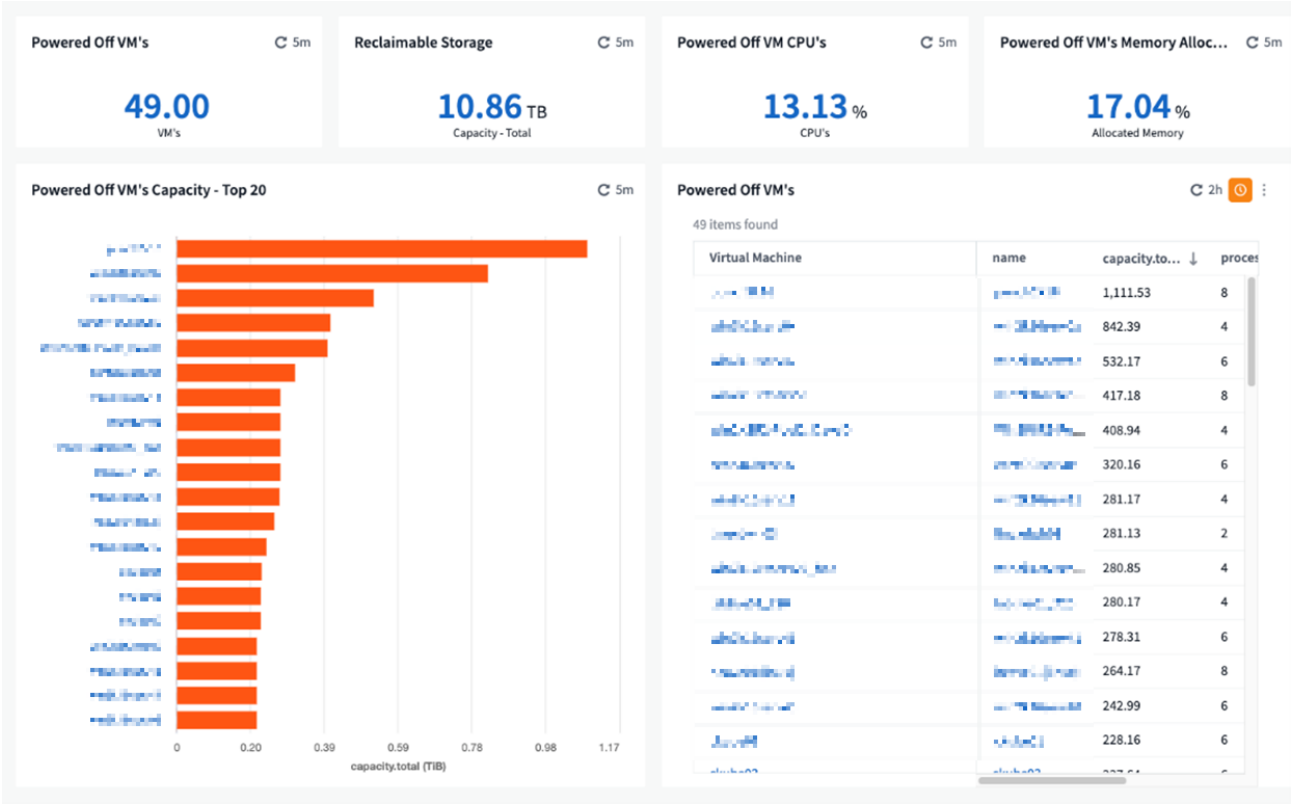
Optimisation

Possible optimisations pertaining to the data sets:

- Orphaned resource Dashboards
- Compute
- Storage
- Underutilised assets



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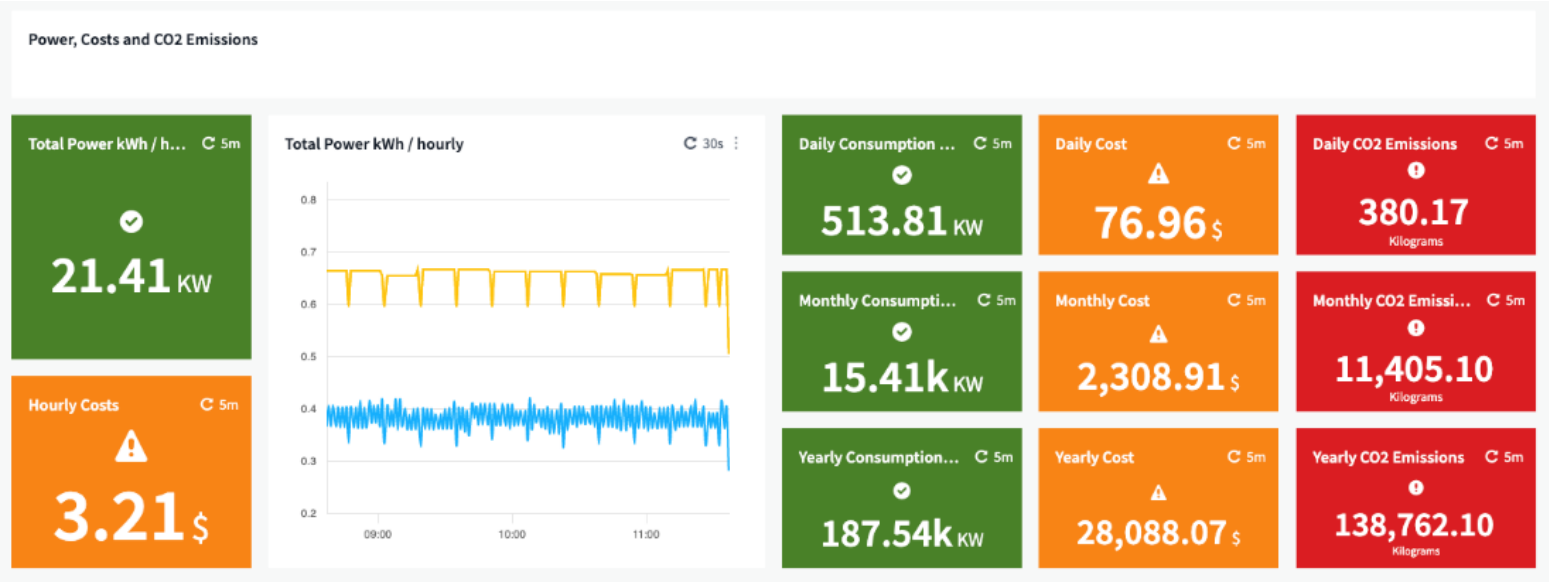
Sustainability and savings

This section identifies the energy consumption and possible savings pertaining to the data sets

- Storage power
- Compute power
- Storage cost
- Compute cost



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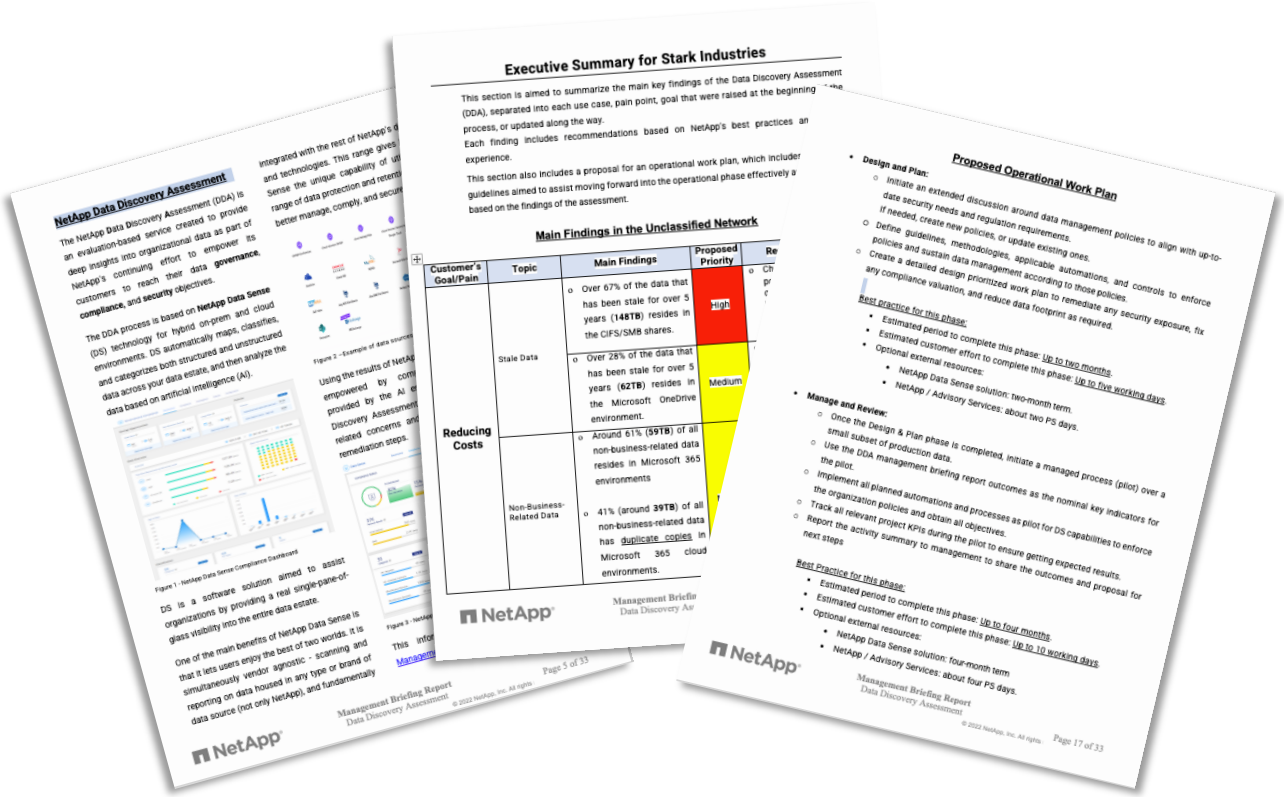
Final report and recommendations

- Overview of customer and challenges
- Governance, security and compliance concerns
- IT environment and pain points
- High level summary
- Key findings
- Potential remediation actions
- Value delivered across
  - Cost reduction
  - Right sizing
  - Risk reduction
  - Sustainability improvement



How to use Hybrid Cloud Assessment Service

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Data monitoring solution

- Use the service as a PoC
- Resell the software licenses

Audit

- Resell the service as a Data audit of the customers environment

Infrastructure project

- Use the service as an assessment for data gathering & detect:
  - Caveats
  - Upsell/cross sell

Part of your services

- Use it when onboarding new customers
- Use it in your regular services

Be THE consultative advisor

Let's make use of your data!

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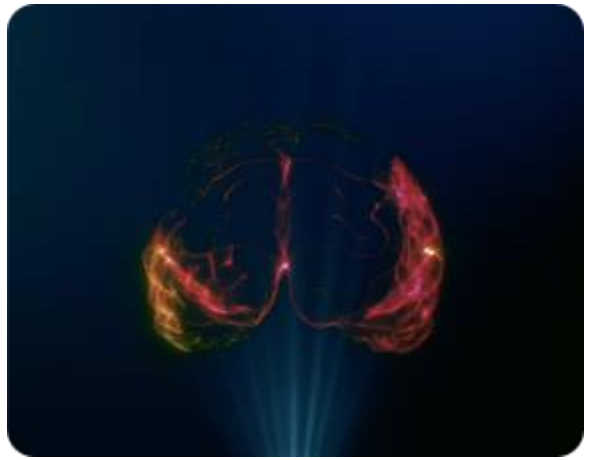

Experience ideas

Co-create ideas

Test-drive ideas

Bring to life

Supported by Professional Services Offerings team, data consultants, DX experts, our ecosystem

Experience

- Customer Experience Lab
- Projects with other partners/reference cases
- Solutions/challenges
- Innovation/trend discussion

Co-create

- Human Centric Experience Design (HXD)
- Data strategy session
- Consultancy services
- Ecosystem
- Enterprise architecture

Test drive

- DX Innovation platform
- AI platform
- Invest in joint PoC/MVPs

Win together

- Build joint go-to-markets based on many superpowers

Make the right sustainable data technology decisions

- Make use of neutral **technology consultancy**
  - Current practice – price, technology feasibility, performance
  - Future practice – ask for a sustainability assessment e.g. heat, less is more/consolidate for more compact systems, HDD vs SSD & energy efficiency
  - Like Google Maps – choose between shortest trip vs fastest way vs the most sustainable way
- Optimal & most efficient architecture e.g. data inference at the edge
- Conduct a sustainability assessment as part of the system health checks
- Each IT feature cost energy as well!

Consumption-based IT
A tool to support sustainable transformation initiatives

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Enabled by
Fujitsu uSCALE

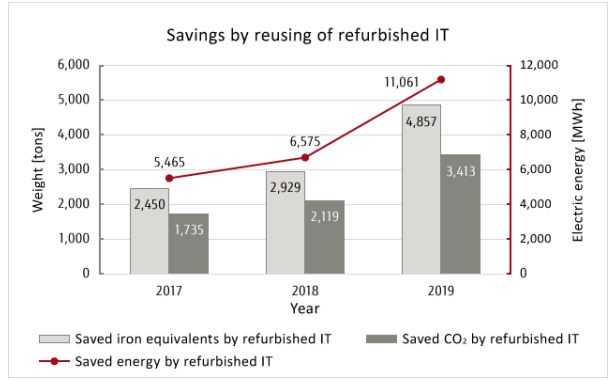
IT efficiency

Align your budget and energy consumption expenditures to the actual business needs
By not overprovisioning, you are not overspending and overconsuming energy

"Overprovisioning is an extremely expensive risk-avoidance tactic and is costing organizations 136% of their operating budget."
- Mission Critical Magazine

Circularity

Allow assets to be given a second life, as they can be refurbished, recycled or remarketed for other purposes by the end of the contract, if customers wish to do so



Traceability and transparency

Track CO2 emissions & energy consumption
Track, report and share sustainability related KPIs

So, let's create a sustainable world

Data-driven solutions

Sustainable Manufacturing

Consumer Experience

Healthy Living

Trusted Society

Digital Shifts

Business Applications

Hybrid IT

Thank you