



Where to start improving your datacenter and what had GDPR to do with this?

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Certios timeline 2008-2017

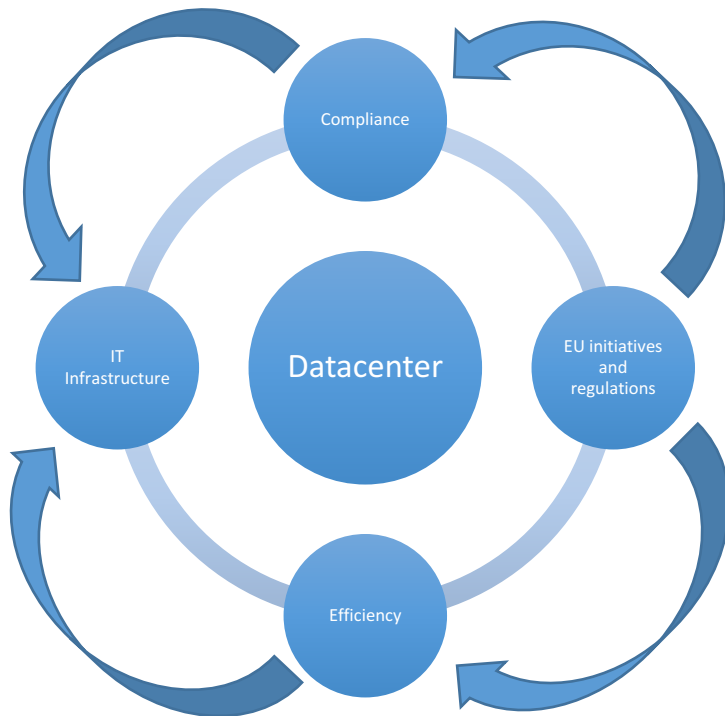


datacentrealliance...
The Data Centre Industry Association



Different aspects?

- Physical security
- Extra services



- GDPR
- EURECA Training

- EURECA Tool
- EURECA Training

*consolidation,
hardware refresh,
increased utilization*

- EU CoC
- EED
- EURECA Training

- Introduction EURECA Project 
- Structure of the EURECA training
- Introduction EURECA DCMM Module
- Introduction EURECA Tool
- Datacenters and GDPR

EURECA project www.dceureca.eu

- H2020
- Objectives
 - Procurement / PPI
 - Datacentre energy efficiency awareness
 - EURECA Training and Tool
 - EURECA is currently supporting consolidation, new build and retrofit data centre projects in various European countries, with focus on public procurement for innovation (PPI). Additionally, EURECA is supporting the development of European standards, best practices and policies related to energy efficiency in data centres and green public procurement by providing the scientific evidence and data.
- Status (Feb '18 ready, 12 workshops, Training modules)



- Introduction EURECA Project
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Structure of the EURECA training

EURECA Training Toolkit

Procurement

Module 1: PPI for Public Sector Procurers and ICT Managers

Module 2: Business Case Development

Module 3: Legislation and Policies

Module 4: Procurement Strategy

Module 5: Tendering

Module 6: Data Centre Contracts and Risks

Technical

Module 7: Data Centre KPI's and Standards

Module 8: The EU Code of Conduct for Energy Efficiency in Data Centres

Module 9: The Data Centre Maturity Model

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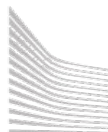


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649972.

EURECA Training

Module 9: The Data Centre Maturity Model

Target Audience: Technical/DC



European
Commission

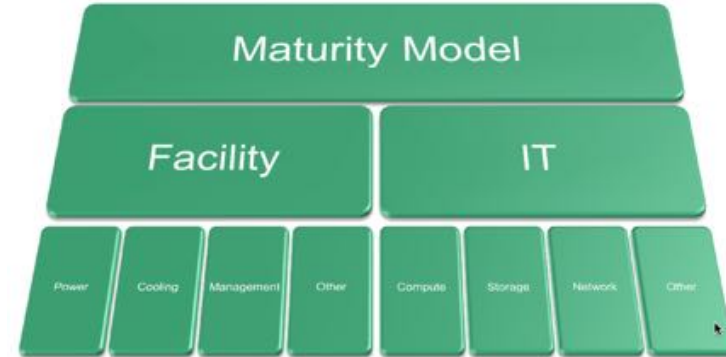
Horizon 2020
European Union funding
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- Starting questions
- Structure of the EURECA courses
- Learning outcomes
- **Course contents**
 - Introduction EURECA Project
 - The Green Grid
 - DCMM
 - The EURECA tool
 - DCMM and the EURECA tool
 - Understanding DCMM to use for your priorities
- Starting questions to be answered
- References and further reading

*The same structure for
each of the 9 EURECA
modules available*

Introduction EURECA DCMM Module

- Provides provides clear goals and direction for improving energy efficiency and sustainability across all aspects of the data centre
- Model to benchmark and inspire for next improvements (road maps)
- Not prescribing technology (signposting what to do, not how to do it)
 - Power
 - Cooling
 - Facilities
 - Management
 - Compute
 - Storage
 - Network
 - Other IT

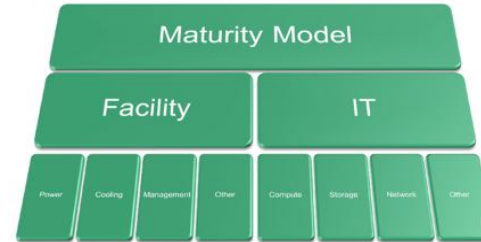
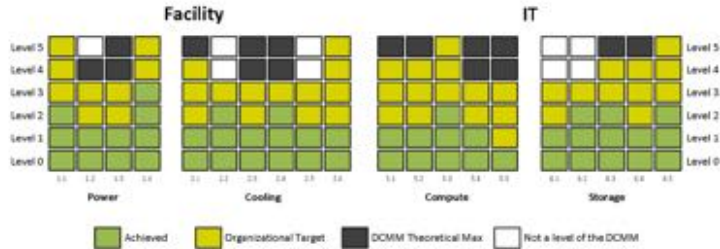


<https://youtu.be/1Q8zNjEitS8>

Introduction EURECA DCMM Module



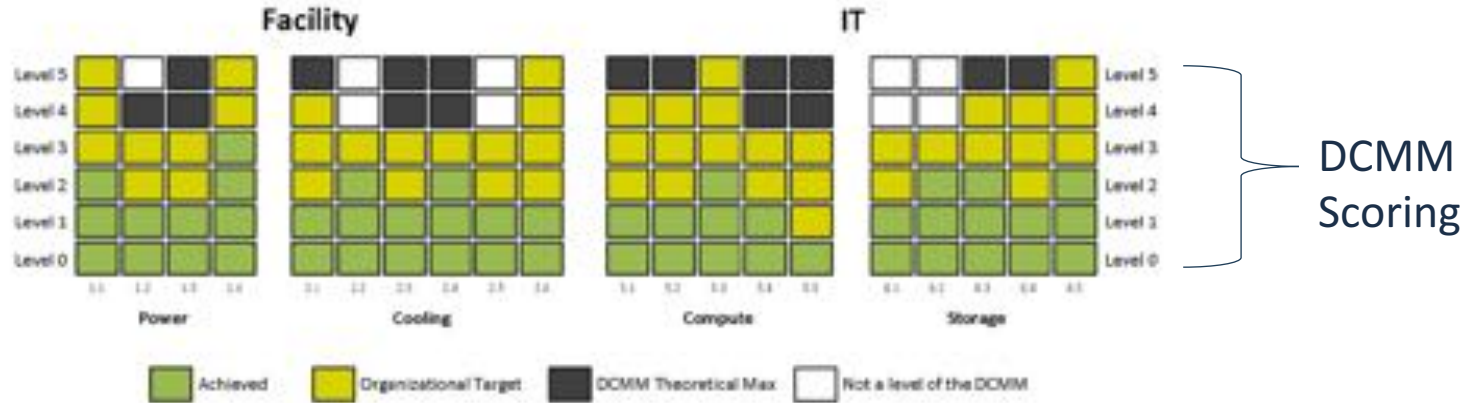
- Minimal/No Progress
- Part Best Practice
- Best Practice
- Reasonable Step (between Level 2 and 5)
- Reasonable Step (between Level 2 and 5)
- Visionary – 5 Year View



Projections for Data Center Efficiency & Sustainability



Introduction EURECA DCMM Module



Power	Compute
Cooling	Storage
Facilities	Network
Management	Other IT

DCMM Components

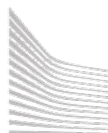
- Introduction EURECA Project
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EURECA Tool

Target Audience: Technical/DC



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Introduction EURECA Tool

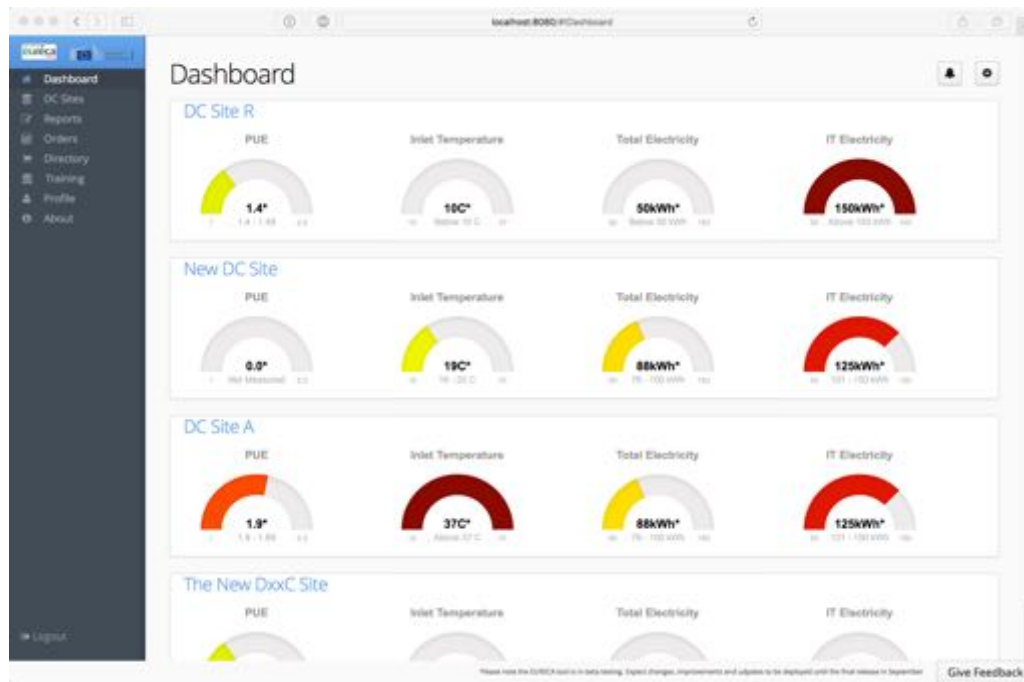
- DCMM
 - Assessment of your data centre(s) and ambitions using the Equalizer tool
 - Identify energy savings opportunities
- EURECA Tool
 - Use the EURECA tool
 - to identify relevant market parties in Market Directory
 - to find product and services solutions
 - See how public organisations others did it (available, exemplary case studies)



Introduction EURECA Tool

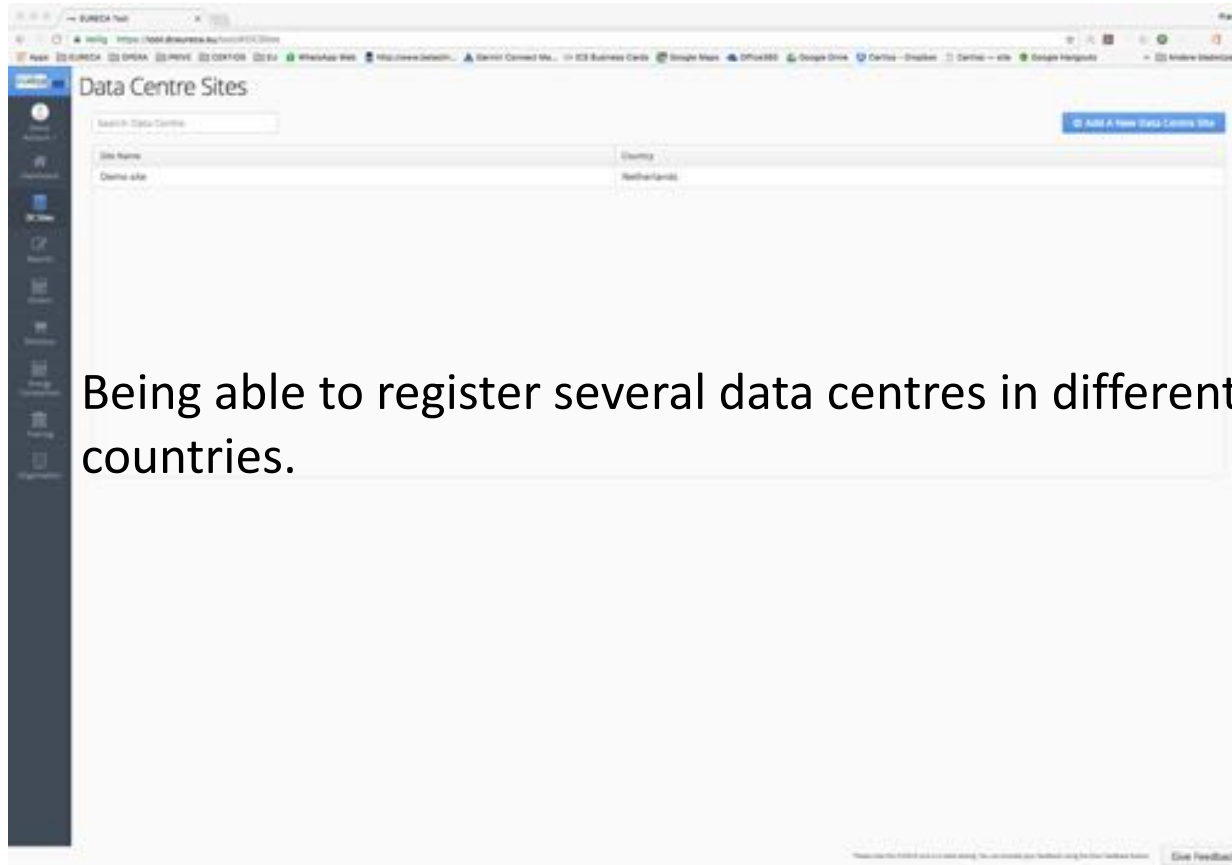
- To support public procurement, PPI
- Benchmark data centre, supports multiple and dispersed data centres
- Reports energy efficiency recommendations
- Identifying energy saving opportunities
- Identifying need for help areas
- “Should I stay or should I go?” – own DC vs. ext. alternatives
- Identifies input for tenders (certifications and or standards)
- Identifying market players, and Product and services directory.
- Please see: <https://tool.dceureca.eu>.

The EURECA tool



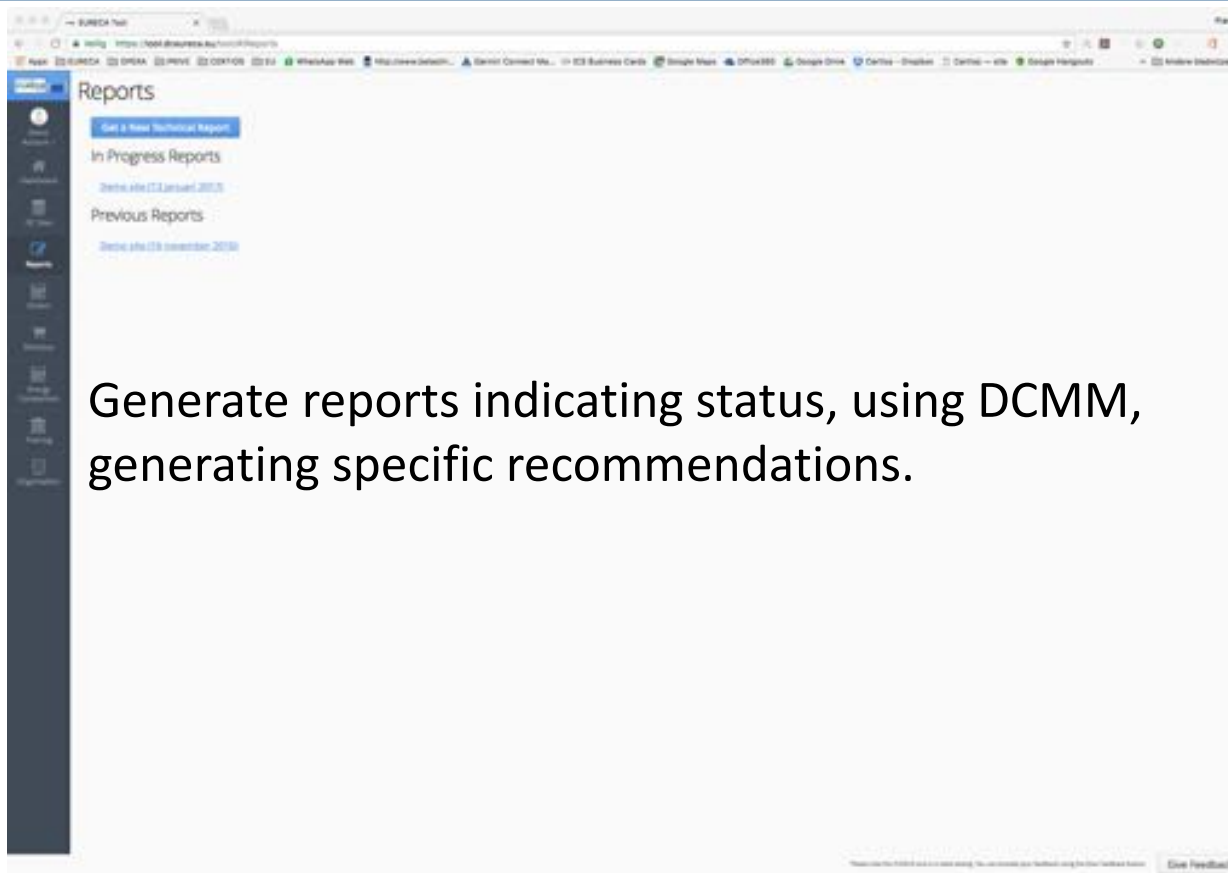
Having the overview over one or more Data centres, PUE, temperature, etc.

The EURECA tool

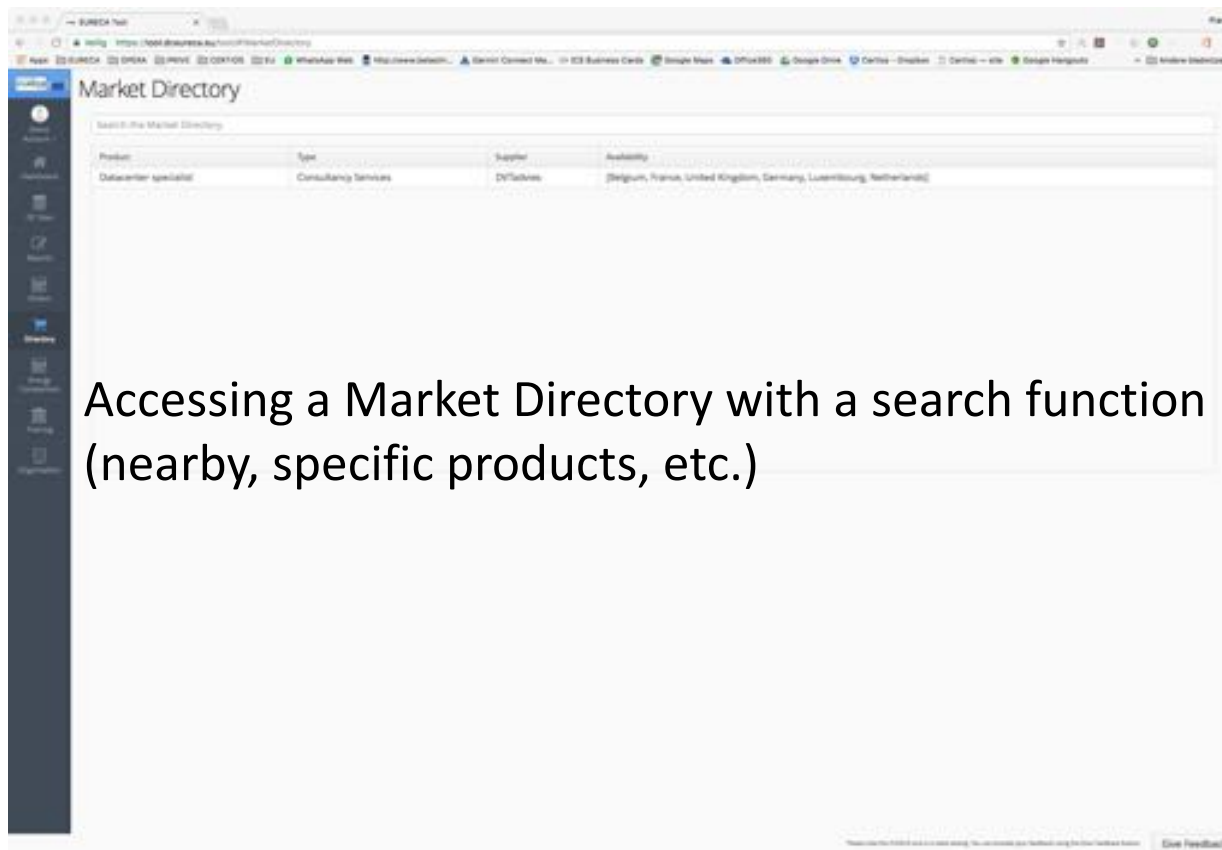


Being able to register several data centres in different countries.

The EURECA tool

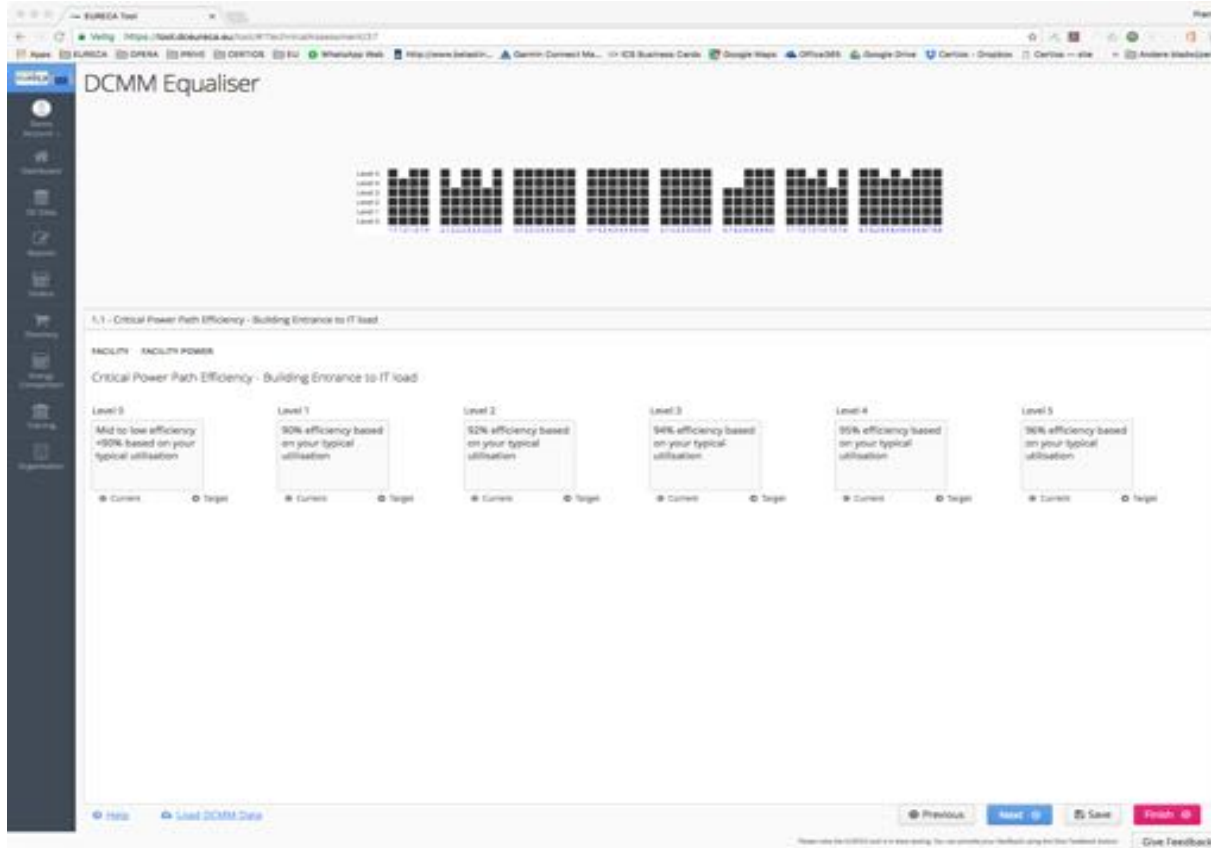


Generate reports indicating status, using DCMM,
generating specific recommendations.

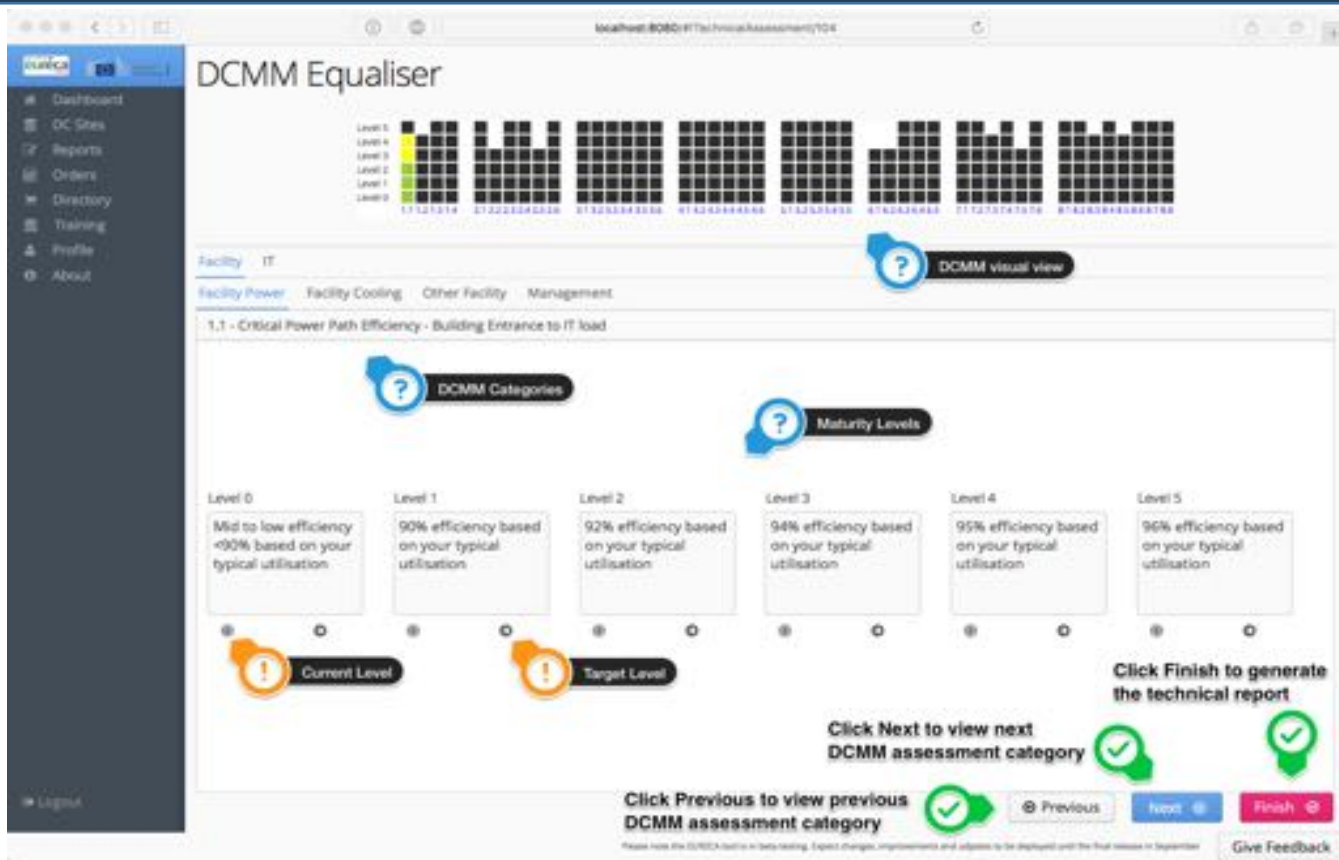


Accessing a Market Directory with a search function
(nearby, specific products, etc.)

DCMM and the EURECA tool



DCMM and the EURECA tool



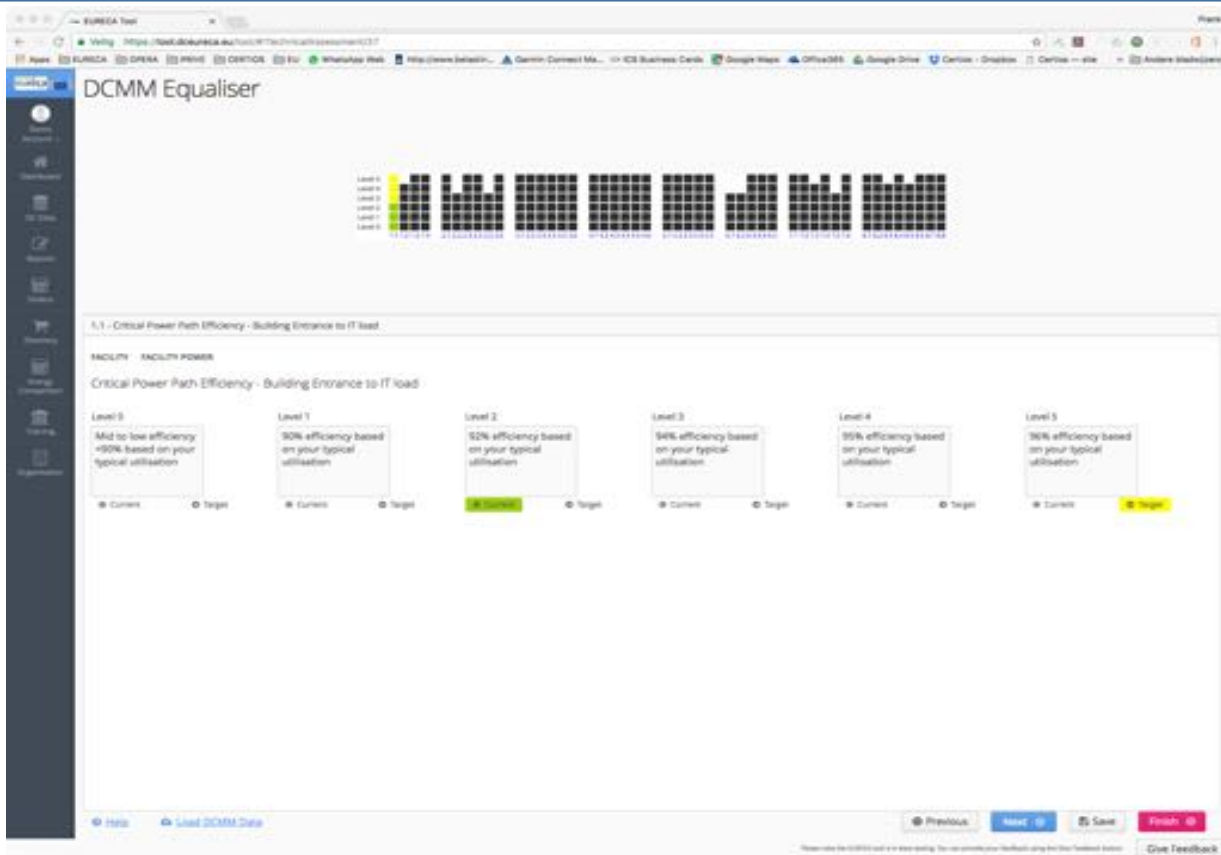
From the EURECA tool tutorial



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DCMM and the EURECA tool



DCMM and the EURECA tool

The screenshot displays the EURECA tool interface. At the top, the browser address bar shows the URL <https://tools.dcenter.eu/Tools/DCMM/assessment/1237>. The main header is "DCMM Equaliser". Below this, there is a grid of 10 DCMM maturity level icons, each represented by a 5x5 grid of dots. A pop-up window titled "DCMM Assessment Guide" is overlaid on the main content. This guide explains the DCMM model and provides instructions on how to use the tool. It includes a "Current" button and a "Target" button, both of which are highlighted in yellow. The guide also features a small diagram of the DCMM maturity levels, showing a progression from Level 1 to Level 5. The main content area shows a section for "Critical Power Path Efficiency - Building Entrance" with a "Current" button and a "Target" button. The bottom of the interface includes a "Previous" button, a "Next" button, a "Save" button, and a "Finish" button. A "Give Feedback" link is also present at the bottom right.

DCMM Equaliser

Level 1
Level 2
Level 3
Level 4
Level 5

1.1 - Critical Power Path Efficiency - Building Entrance

FACILITY - FACILITY POWER

Critical Power Path Efficiency - Building Entrance

Level 5
Mid to low efficiency
+50% based on your typical utilisation

Level 1
30% efficiency
on your typical utilisation

Current Target

Current Target

Level 5
90% efficiency based
on your typical utilisation

Current Target

DCMM Assessment Guide

The Data-Centre Maturity Model (DCMM) provides a self-benchmarking tool for data centres. In the EURECA implementation of the model, you select your current maturity level and your target levels. The tool will generate a report including recommended actions for improving from your current to your target levels.

Current Target

Current: click on the current button at the appropriate maturity level to indicate what current actions are employed at your data centre. This indicates the achieved goals.

Target: click on the target button at the appropriate maturity level to indicate the target maturity level you are aiming at. This indicates your organisation target for energy efficiency for the area in question.

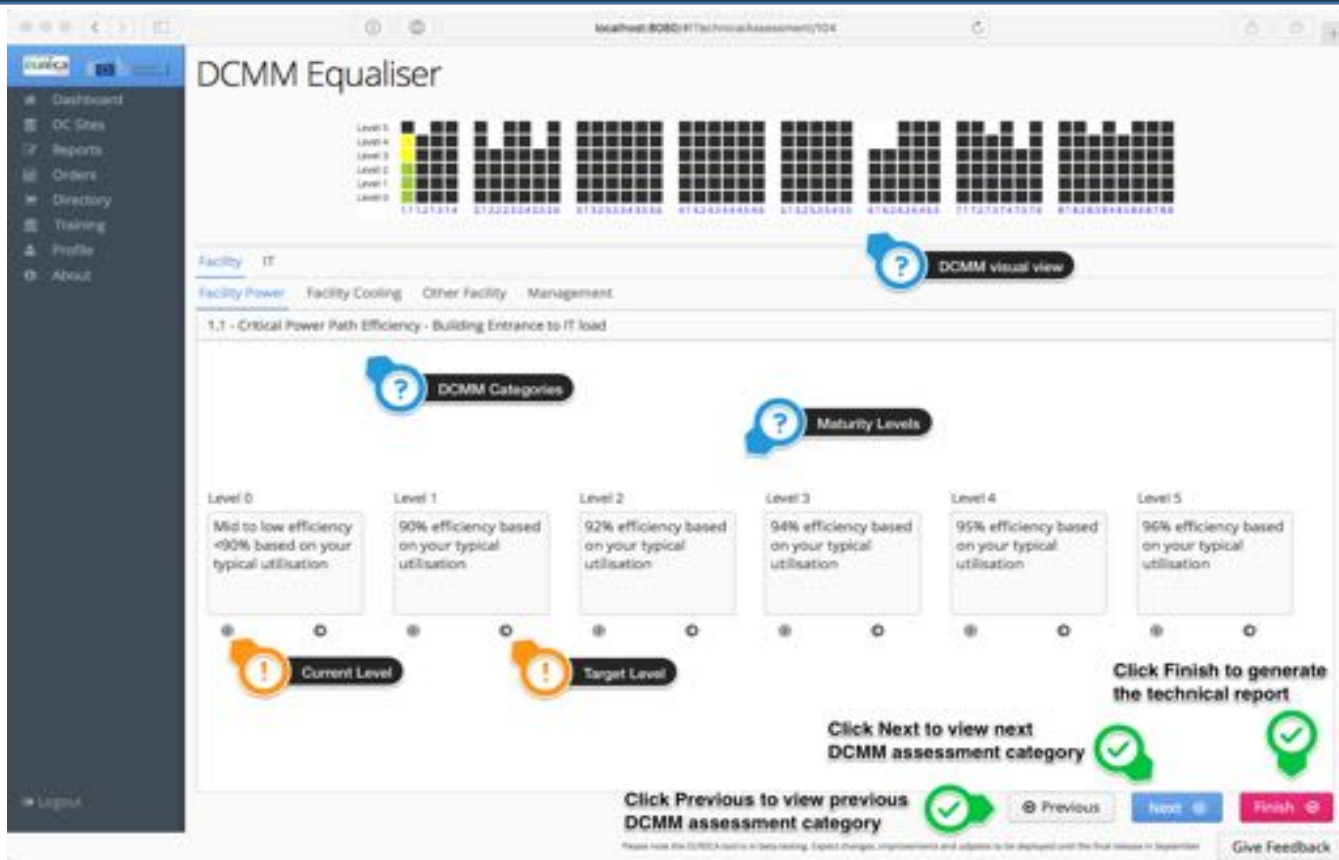
Level 1
Level 2
Level 3
Level 4
Level 5

The DCMM equaliser presents an overview of your current areas: green for current/achieved goals and yellow for your organisation target. White is not a level of the DCMM while black is levels of DCMM not selected or the theoretical max of the DCMM.

Previous Next Save Finish

Give Feedback

DCMM and the EURECA tool



From the EURECA tool tutorial

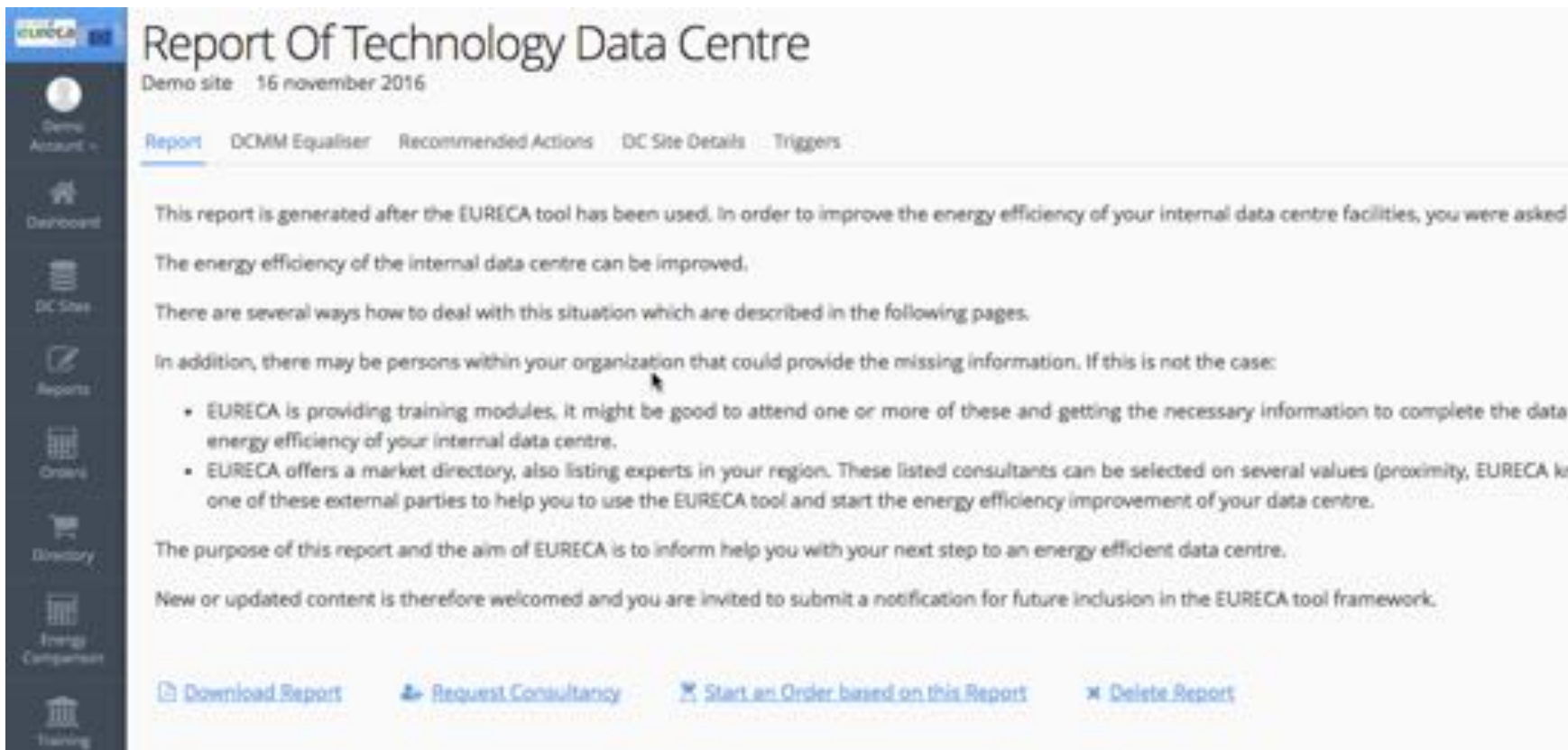


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DCMM and the EURECA tool





Report Of Technology Data Centre
Demo site 16 november 2016

[Report](#) [DCMM Equaliser](#) [Recommended Actions](#) [DC Site Details](#) [Triggers](#)

This report is generated after the EURECA tool has been used. In order to improve the energy efficiency of your internal data centre facilities, you were asked

The energy efficiency of the internal data centre can be improved.

There are several ways how to deal with this situation which are described in the following pages.

In addition, there may be persons within your organization that could provide the missing information. If this is not the case:

- EURECA is providing training modules. It might be good to attend one or more of these and getting the necessary information to complete the data energy efficiency of your internal data centre.
- EURECA offers a market directory, also listing experts in your region. These listed consultants can be selected on several values (proximity, EURECA is one of these external parties to help you to use the EURECA tool and start the energy efficiency improvement of your data centre.

The purpose of this report and the aim of EURECA is to inform help you with your next step to an energy efficient data centre.

New or updated content is therefore welcomed and you are invited to submit a notification for future inclusion in the EURECA tool framework.

[Download Report](#) [Request Consultancy](#) [Start an Order based on this Report](#) [Delete Report](#)

DCMM and the EURECA tool

The screenshot displays the EURECA tool's 'Energy Efficiency Comparison' interface. At the top, there are two dropdown menus for 'Select first report' and 'Select second report', both set to 'Demo site (16 november 2016)'. A 'Compare' button is located to the right of these menus. Below the dropdowns, the interface is divided into three columns: 'Demo site (16 november 2016)', 'Demo site (16 november 2016)', and 'Comparison Assessment'. The first two columns contain data for various metrics, while the third column shows the assessment score for each metric.

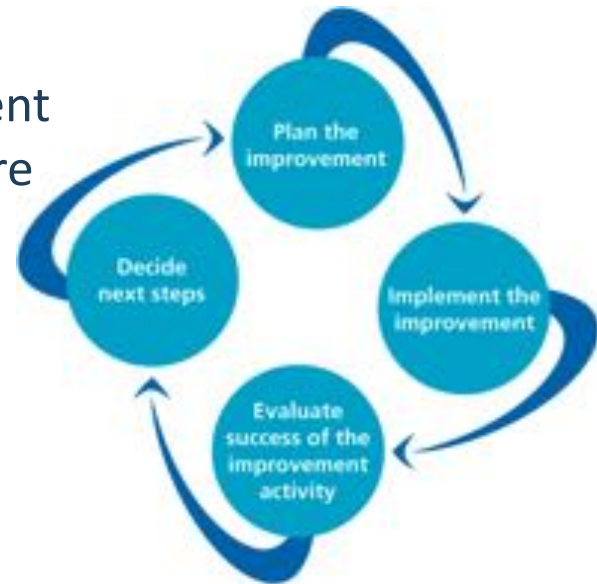
	Demo site (16 november 2016)	Demo site (16 november 2016)	Comparison Assessment
PUE	1.5 - 1.59	1.5 - 1.59	90
INLET TEMPERATURE	21 - 26 C	21 - 26 C	80
TOTAL ELECTRICITY	76 - 100 kWh	76 - 100 kWh	80
IT ELECTRICITY	50 - 75 kWh	50 - 75 kWh	80

At the bottom right of the interface, there is a 'Give Feedback' button and a small disclaimer: 'Remember the EURECA tool is in beta quality. You can provide your feedback using the Give Feedback button.'

- Evaluate success:
 - Use the DCMM Equalizer to benchmark your current level of energy efficient and sustainable data centre
- Decide next steps:
 - Set realistic targets for improvement



- Plan the improvement:
 - Knowing what to do, find out how to do it in your specific situation (technology, organisation)
 - Schedule activities to execute improvements
- Implement the improvement.



- Decide next steps:
 - Set realistic targets for improvement:
 - Costs vs. savings?
 - Organisational ability (for risk)?
 - Innovator or follower?
 - PPI or procure proven concepts?



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Datacenters and GDPR

The GDPR replaces the Data Protection Directive 95/46/EC and is designed to support the single market, to harmonize data privacy laws across Europe, to protect and empower European Union (EU) citizens' data privacy and reshape the way organizations approach data privacy for EU citizens wherever they work in the world.



- The GDPR requires that you have a process for regularly testing, assessing and evaluating the effectiveness of technical and organisational measures for ensuring the "security of the processing"
- To most, 'security' here can refer to the need to defend against cyber criminals. However, to the data centre manager, 'security' will refer to protection against power outages, network disruptions and natural disasters as well
- Data processors (i.e. datacenters) will also have significantly more legal liability under the GDPR than was the case under the prior Directive.

Source: [https://7safe.com/audit-and-compliance/general-data-protection-regulation-\(gdpr\)](https://7safe.com/audit-and-compliance/general-data-protection-regulation-(gdpr))

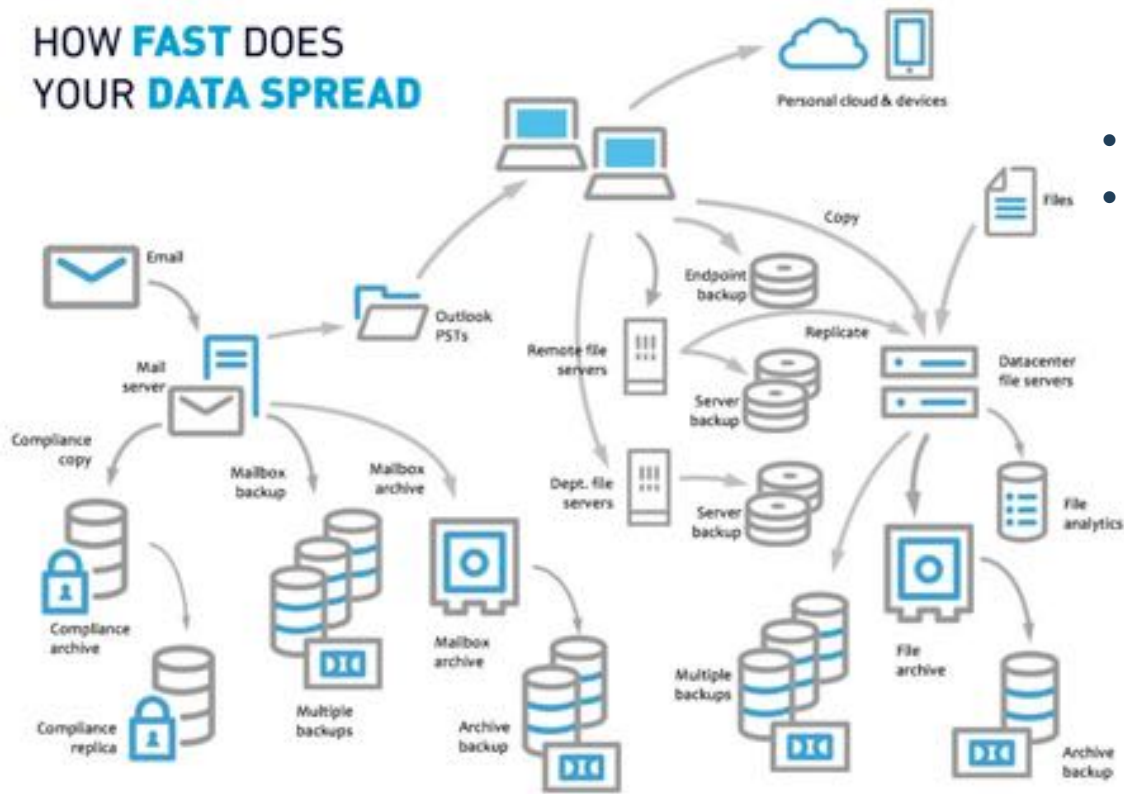
- **Review privacy notices and policies** - GDPR compliant? Do they provide for the new rights individuals have?
- **Prepare/update the data security breach plan (PIA)** - To ensure new rules can be met if needed.
- **Audit your consents** - Are you lawfully processing data? Will you be permitted to continue processing data under the GDPR?
- **Set up an accountability framework** - e.g., monitor processes, procedures, train staff.
- **Appoint a DPO** - where required.
- **Consider if you have new obligations as a processor** - Is your contractual documentation adequate? Review contracts and consider what changes will be required.
- **Audit your international transfers** - Do you have a lawful basis to transfer data?

Source: <http://www.datacenterdynamics.com/content-tracks/security-risk/prepare-for-the-eu-gdpr/98024.fullarticle>



Need to know where data sits!

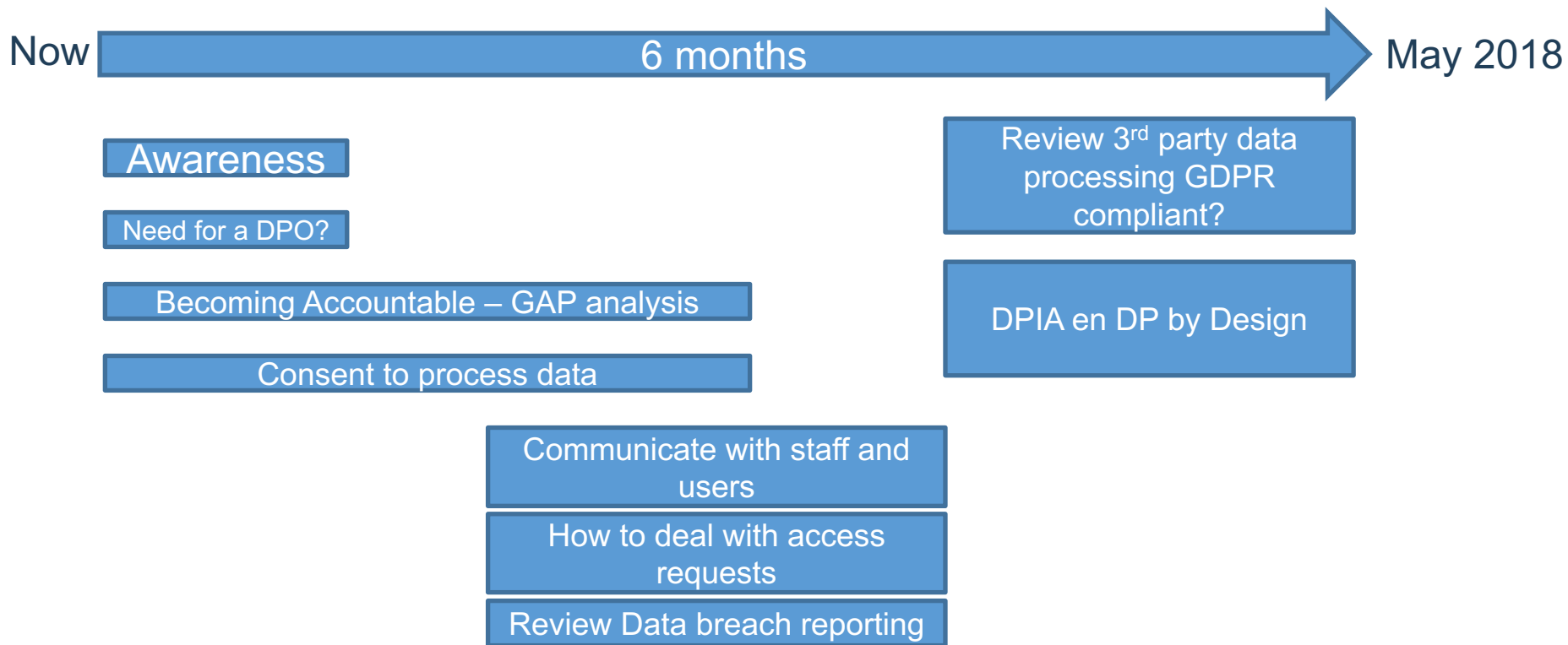
HOW **FAST** DOES
YOUR **DATA SPREAD**



- “Right to be forgotten”
- Free inquiries what data organization has on me (30 days)

Source: Commvault

Make a plan if you haven't got one, now



Source: LeMan Sollicitors

GDPR Compliance as a Product Feature/Selling point

By selling:

- Increased physical data security
- Conducting risk assessments
- A compliance track record
- Being able to identify what data was affected by a data breach within a 72-hour window
- Functionality to allow the right to erasure for datacenter storage of personal data

Source: <http://www.datacenterknowledge.com/security/what-europe-s-new-data-protection-law-means-data-center-operators>



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Never a dull moment - summary

Take away when you are involved in the datacenter industry:

- Please have a further look at the EURECA Training
 - 9 training modules available on website: <https://www.dceureca.eu/>
 - It's free, after registration
- GDPR for datacenter industry

Training Certificates

- 1) Register/login: <https://www.dceureca.eu>
- 2) Scan code below and request certificate
(code and URL are also on the back of the leaflet)



https://www.dceureca.eu/?page_id=3055



Thank you



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