



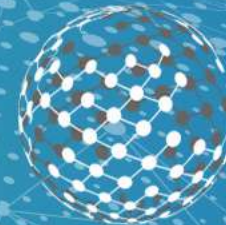
Based on EPI's DCCF[©] - Data Centre Competence Framework

Working in the Data Center Industry:

30+ different job roles based on
40 data centre competences for life

Presented by
Bastiaan Janssen
EPI Europe

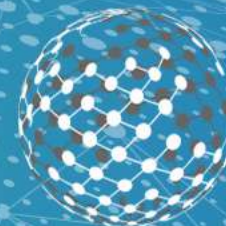
Starting
soon!



DATACENTER
FORUM

CFO:
What if we train our people
and they'll LEAVE?

CEO:
What if we don't train them
and they'll STAY?



DATACENTER
FORUM

Learning: Skills, competences and more

The Data Centre market

DCCF® - Data Centre Competence Framework

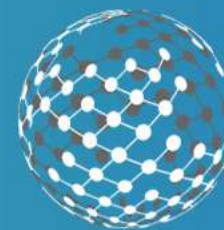
- The first and only competence framework for data centres
- Based on the "e-Competence Framework (e-CF)"
- As well very useful for management / HR
- Describes competences and job roles (>30)
- Download for free: www.epi-ap.com/dccf

3 free resources

- 1 DCCF (Data Centre Competence Framework)
- 2 Data Centre Training Quick Guide
- 3 DCPT (Data Centre Career Planning Tool)

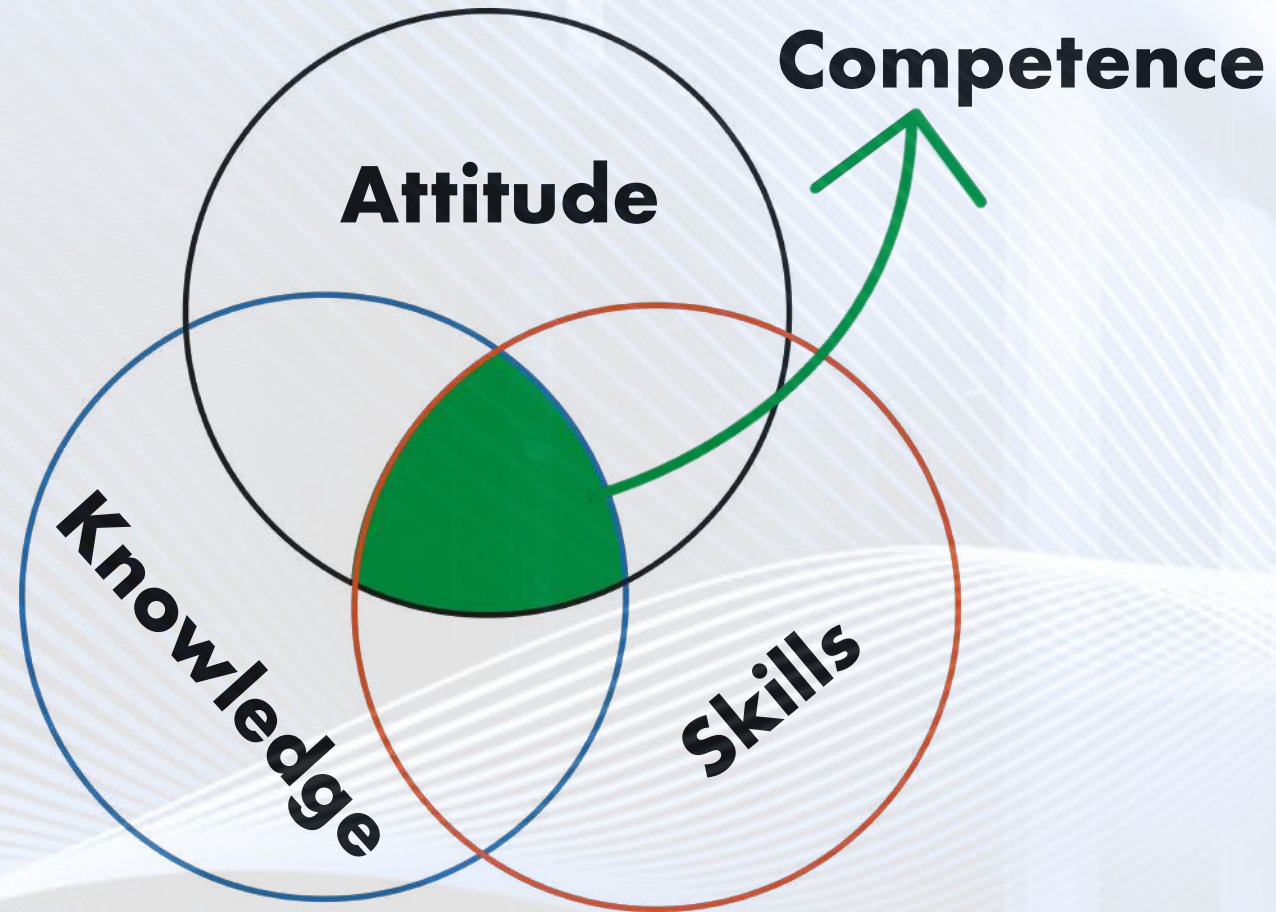
Data Centre training

Closing remarks



Learning: Skills, competences and more





Four stages of competence

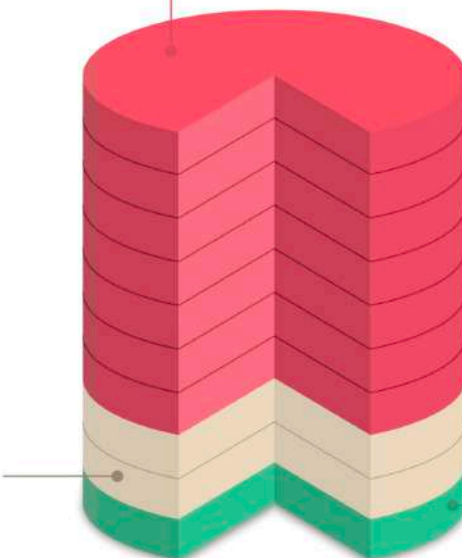


The 70:20:10 model



70%
**WORK PLACE
LEARNING**
Experiential Learning

20%
SOCIAL LEARNING
Informal Learning



70: 20: 10
**Human Resource
Learning and Development**

10%
**STRUCTURED
LEARNING**
Formal Learning

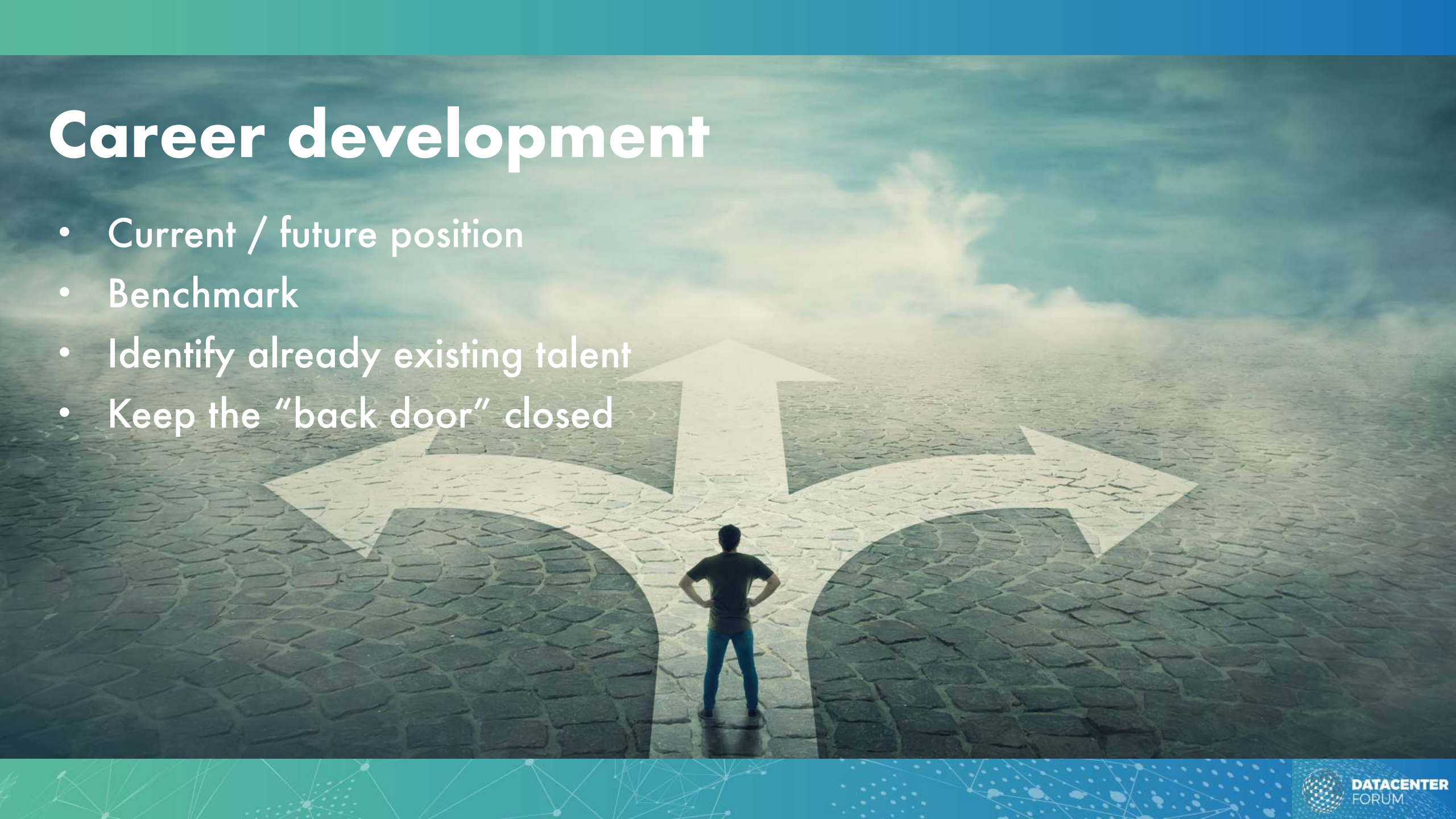
Why professional training

- Performance
- Culture
- Reduction of employee turnover



Career development

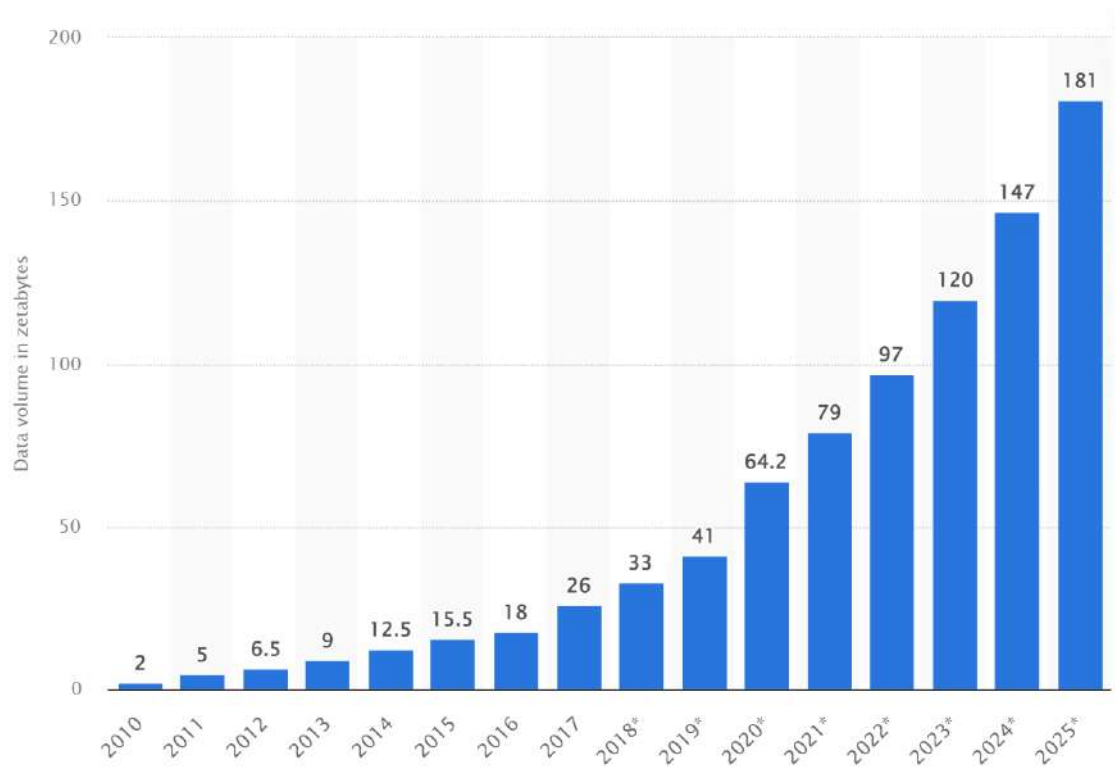
- Current / future position
- Benchmark
- Identify already existing talent
- Keep the “back door” closed



The Data Centre market



Exponential data growth



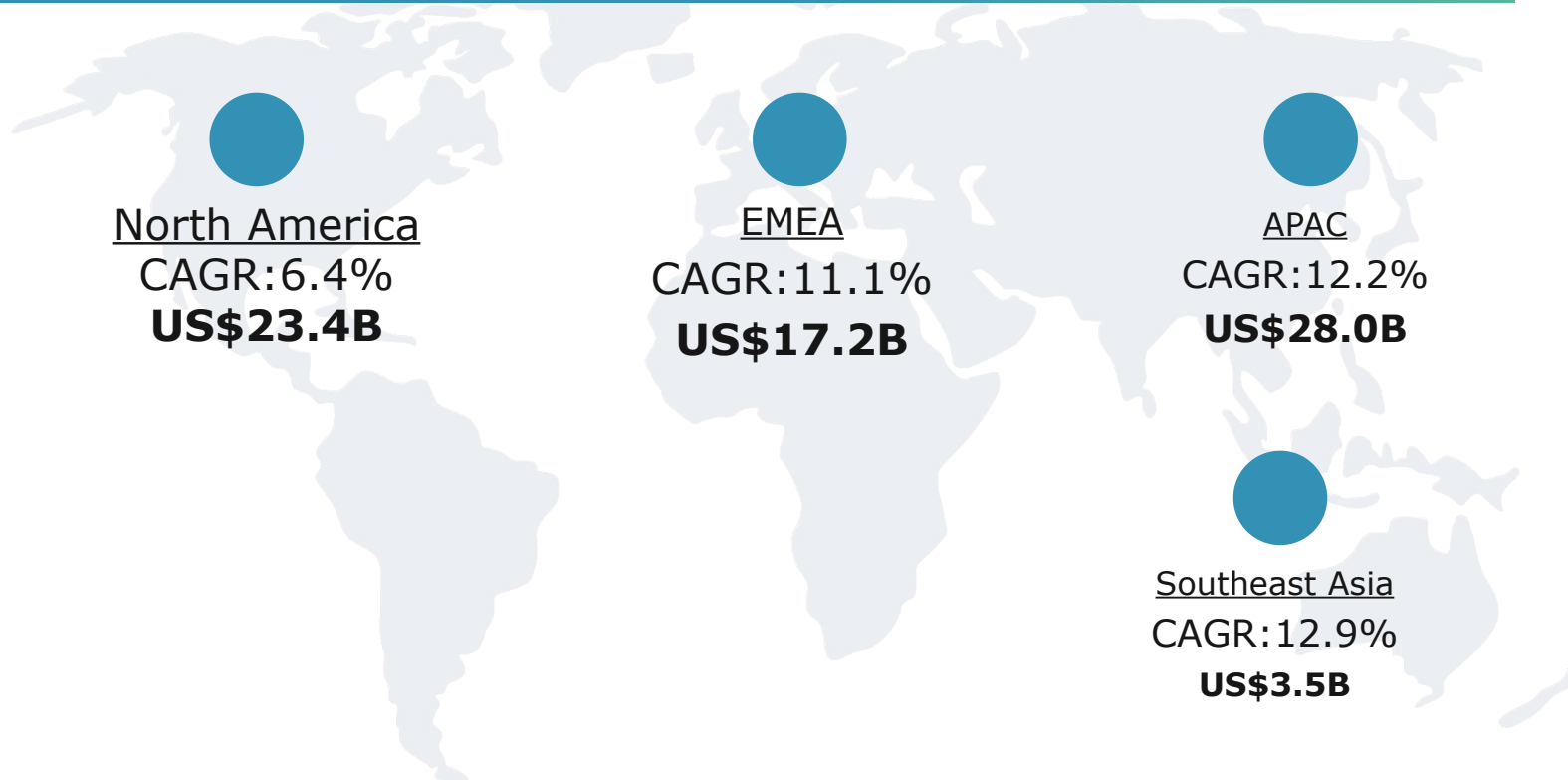
Global data
growth projected
> **180 zettabyte**

Source: Statista 2022

The Data Centre market



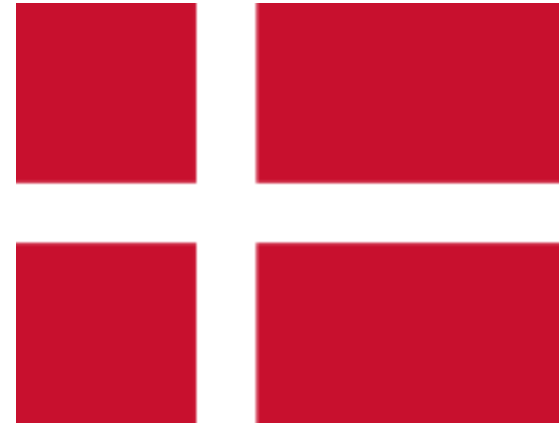
Data Centre Growth and Co-location Market Size by Region in 2024



The market: Denmark



1. Growth
2. More people are needed
3. Bridging the skills gap
4. More integration facilities / IT needed
5. Many IT certifications but where are the Data Centre certifications?

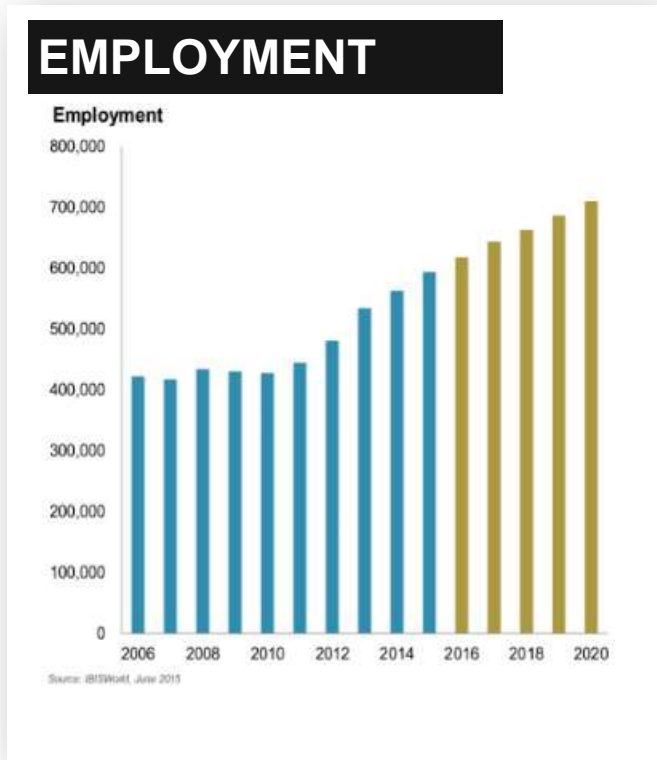


Source: DDI Skills & Education report 2022

Causes of Data Centre downtime



The “war” on talent



- Lack of Data Centre skilled talent
- New technologies drive the need for new skills (skills gap)
- Numerous IT professionals are placed into the Data Centre
- High employee turnover

Competences are on the move



Trends in competences:

1. New competences are **emerging**
2. Competences are **evolving**
3. Yesterday's competences are **expiring**

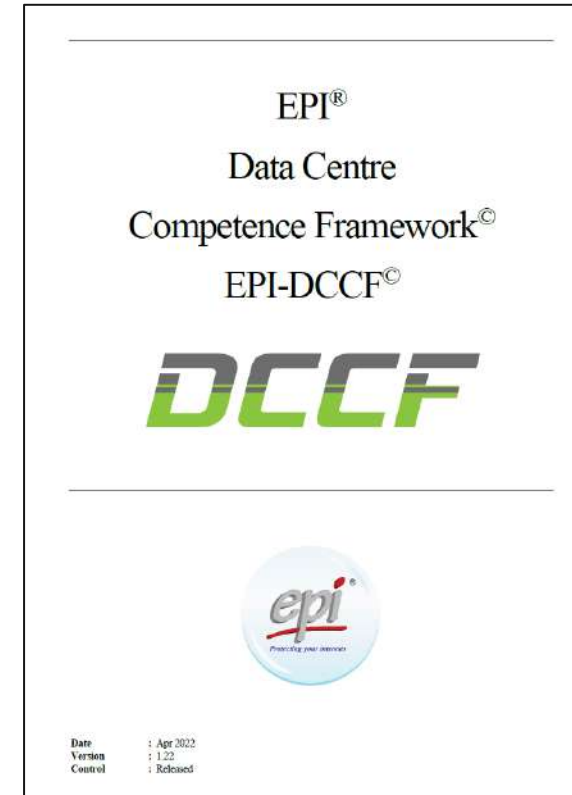
Complacency lurks!



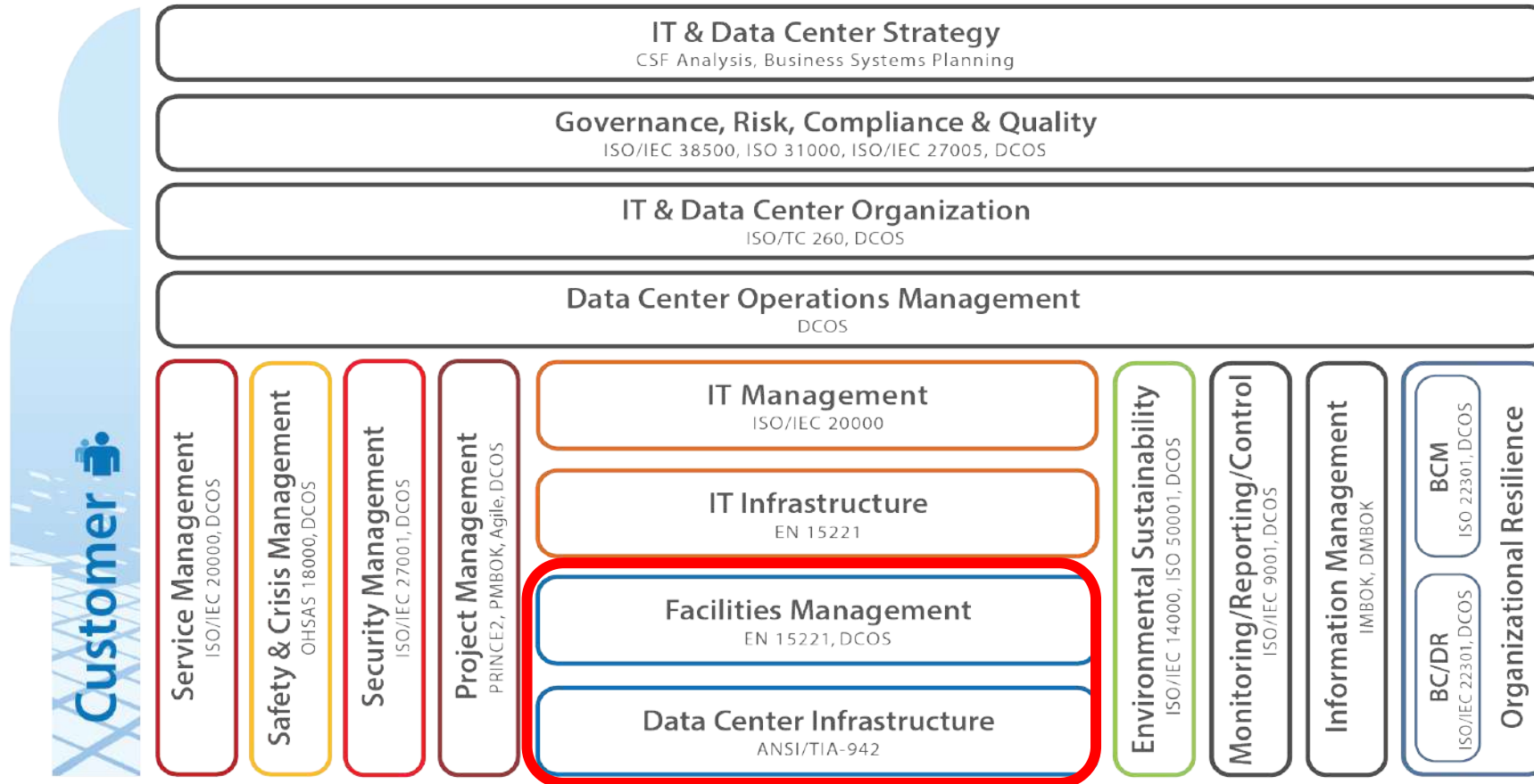
DCCF [®] Data Centre Competence Framework



- The first and only competence framework for data centres
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- Describes competences and job roles (>30)
- Download for free: www.epi-ap.com/dccf



EPI – IT Data Centre Framework[©]



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What is the e-CF?

The European e-Competence Framework (e-CF)

- a reference framework of ICT competences
- developed with and for the industry



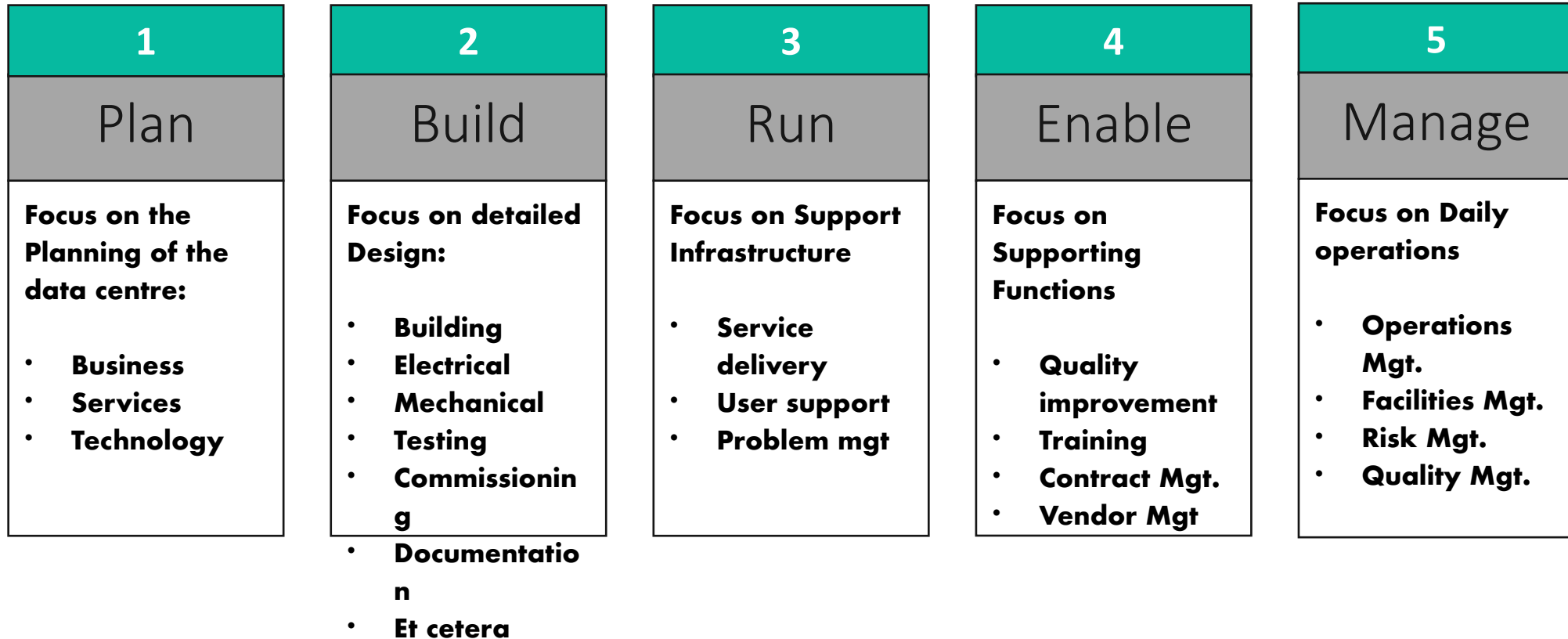
What is EPI-DCCF[©]

- Describes **40 competences** required at various stages of the life cycle of a Data Centre:



- Examples of over 30 job profiles with full details
- 5 proficiency levels

5 High level competence area's



Proficiency definitions



Snapshot 1: The full framework



Dimension-1 5 - DCCF areas (A-E)	Dimension-2 DCCF-Competences identified	Dimension-3 DCCF-Competence proficiency levels e-1 to e-5				
		e-1	e-2	e-3	e-4	e-5
A. Plan	A.1. Data Centre and Business Strategy Alignment					
	A.2. Business plan development					
	A.3. Service Level Management					
	A.4. Technology trend monitoring					
	A.5. Site Planning					
	A.6. Architecture Design					
	A.7. Sustainable development					
B. BUILD	B.1. Architectural					
	B.2. Electrical engineering					
	B.3. Mechanical engineering					
	B.4. Telecommunication engineering					
	B.5. Fire and safety engineering					
	B.6. Physical Security engineering					
	B.7. Test and Commissioning					
	B.8. Documentation production					
C. RUN	C.1. Service delivery					
	C.2. User support					
	C.3. Problem management					
	C.4. Change support					
D. ENABLE	D.1. Quality strategy development					
	D.2. Human resource management					
	D.3. Education and Training					
	D.4. Information management					
	D.5. Knowledge management					
	D.6. Sales management					
	D.7. Sales proposal development					
	D.8. Purchasing					
	D.9. Contract management					
	D.10. Vendor management					
E. MANAGE	E.1. Data centre operations management					
	E.2. Facilities Management					
	E.3. Risk Management					
	E.4. Project and port...					
	E.5. Relationship ma...					
	E.6. Quality manage...					
	E.7. EH&S managem...					
	E.8. Process manage...					
	E.9. Information sec...					
	E.10. Asset managem...					
	E.11. Governance					

5 Proficiency Levels

Competences Required

**5 Areas
Plan, Build,
Run, Enable,
Manage**

Snapshot 2: Competence description



4.1 A.1. Data centre and Business Strategy Alignment

Dimension-1 DC-Competence area	A. PLAN				
Dimension-2 DC-Competence Title + Generic Description	A.1. Data Centre and Business Strategy Alignment Anticipates long term business requirements, influences improvement of organisational process efficiency and effectiveness. Determines the data centre model and the facilities architecture in line with the organisation's policy and ensures a secure environment. Makes strategic data centre policy decisions for the enterprise, including sourcing strategies.				
Dimension-3 DC-Competence proficiency levels e-1 to e-5	Level-1 -	Level-2 -	Level-3 -	Level-4 Provides leadership for the construction and implementation of long term innovative data centre solutions.	Level-5 Provides data centre strategic leadership to reach consensus and commitment from the management team of the enterprise
Dimension-4 Knowledge examples <i>(Knows/aware of/ familiar with)</i>	K1	business strategy concepts			
	K2	trends and implications of data centre internal or external developments			
	K3	the potential and opportunities of relevant business models			
	K4	the business aims and organisational objectives			
	K5	the issues and implications of sourcing models			
	K6	the new emerging data centre technologies, designs and life cycles			
	K7	architectural data centre frameworks (e.g. electrical, Mechanical, telecom, building)			
	K8	security (physical and logical)			
	K9	data centre standards and guidelines (e.g. TIA-942, Tier, TMS, ISO-2000-24762)			
Skill examples <i>Is able to</i>	S1	analyse future developments in business process and data centre technologies			
	S2	determine requirements for processes related to data centre services			
	S3	identify and analyse long term user /customer/ market needs			
	S4	contribute to the development of data centre strategy and policy			
	S5	contribute to the development of the business strategy			
	S6	analyse feasibility in terms of costs, cost of ownerships and benefits			
	S7	review and analyse effects of implementations (e.g. risk analyses)			
	S8	understand the impact of new technologies on business (e.g. opportunities and strategies)			
	S9	understand the business benefits of new technologies and how this can add value and provide competitive advantage (e.g. opportunities and strategies)			
	S10	understand the enterprise data centre architecture (roadmap in relation to innovation)			
	S11	understand the legal, local, tax, regulatory landscape in order to factor into business requirements			

- Each competency has a full detailed description:
- Competence level requirements
- Knowledge and skills examples
- Information can be used directly for job descriptions as well as performance plans

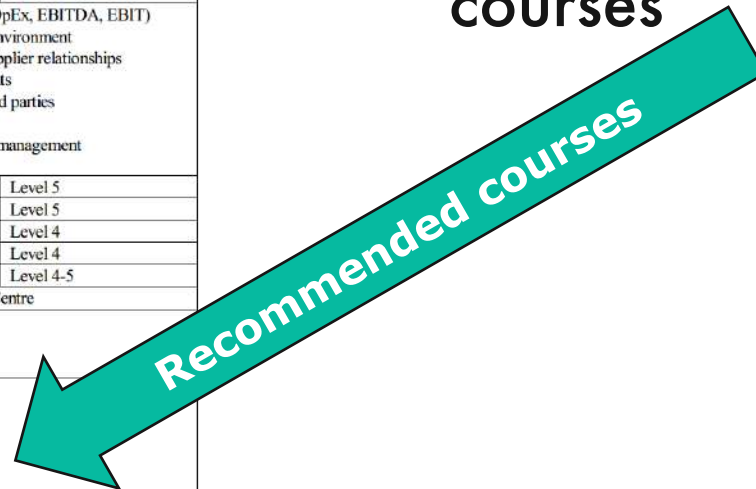
Snapshot 3: Job description



9.1 Data Centre Manager

Profile title	Data Centre Manager		
Summary statement	Develops, operates, guides and maintains a data centre which is compliant to relevant standards/codes and meets the business needs.		
Mission/general skills description	Specifies the strategic direction for the data centre (organization) and converts it into a strategic business plan. Translates the mission and vision, together with his management team and sets the tactical strategy and operational objectives. Has overall responsibility and accountability for the strategy, the financials and the operational result.		
Deliverables	Accountable	Responsible	Contributor
	<ul style="list-style-type: none"> Strategic business plan 	<ul style="list-style-type: none"> Business requirements Financials Management business review 	<ul style="list-style-type: none"> ICT strategy
Main task/s	<ul style="list-style-type: none"> Budget control and responsibility: Profit and Loss (CapEx, OpEx, EBITDA, EBIT) Define the data centre business strategy to support the ICT environment Responsible for the quality and management of customer-supplier relationships Define and ensure compliance with Service Level Agreements Negotiate complex contracts with vendors, suppliers and third parties Make recommendations to general ICT management Responsible for the operational results and human resource management 		
DC-Competence <i>(From DCCF[©])</i>	A.1. Data centre business and Strategy Alignment	Level 5	
	A.2. Business Plan development	Level 5	
	D.2. Human Resource Management	Level 4	
	E.5. Relationship Management	Level 4	
	E.11. Governance	Level 4-5	
KPI area	Overall added value, efficiency and effectiveness of the Data Centre		
EPI-DC Framework[®] Disciplines	<ul style="list-style-type: none"> All disciplines 		
EPI courses	<p>Required;</p> <ul style="list-style-type: none"> CDCP CDCS CFOM <p>Added value;</p> <ul style="list-style-type: none"> CDCE CTDC CDMS CDSM CITS 		

- Job description examples provides a good level of detail
- Including recommended data centre training courses





Application of EPI-DCCF[©]

The EPI-DCCF[©] is applicable to any type of data centre.



The value of the EPI-DCCF[®]



MANAGERS

- The EPI-DCCF[®] will allow managers and human resource departments to:
 - **Plan** resource requirements
 - Establish well defined **job descriptions** including competence requirements
 - **Recommend training** for well designed career plans and ensuring **competent resources supporting the business**

INDIVIDUALS

- The EPI-DCCF[®] will allow individuals to:
 - Understand **job requirements**
 - Plan their **career** and **motivate management** on recommended training courses

3 free resources



1 DCCF (Data Centre Competence Framework)



2 Data Centre Training Quick Guide

3 DCPT (Data Centre Career Planning Tool)

Data Centre Training Quick Guide



DCCF



Data Centre Training Quick Guide

A quick guide for data centre career development

Extracted from the EPI-DCCF[®] (Data Centre Competence Framework[®])

Job Role/Function	Short Description	Required Training	Optional Training
Data Centre Manager	Develops, operates, guides and maintains a data centre which is compliant to relevant standards/codes and meets the business needs.	CDCP CDCS CNCDP CDFOM	CDCE CDRP CTDC CDMS CITM
Finance Manager	Provides financial advice and support to the data centre business, clients and colleagues to enable them to make financially sound business decisions.		DCFC CITM
Lawyer / Legal Advisor	Provides legal protection and service by advising corporations on their legal rights and duties, including the duties and responsibilities of management.		DCFC CDRP CITM

- Extracted from DCCF[®]
- List of 38 job titles and training recommendations
- Available in 9 languages



Job Role/Function	Short Description	Required Training	Optional Training
Data Centre Manager	Develops, operates, guides and maintains a data centre which is compliant to relevant standards/codes and meets the business needs.	CDCP CDCS CNCDP CDFOM	CDCE CDRP CTDC CDMS CITM
Finance Manager	Provides financial advice and support to the data centre business, clients and colleagues to enable them to make financially sound business decisions.		DCFC CITM
Lawyer / Legal Advisor	Provides legal protection and service by advising corporations on their legal rights and duties, including the duties and responsibilities of management.		DCFC CDRP CITM
HR Manager (Human Resource)	Develops, advises on and implement policies and executes effective management of personnel within an organisation.		DCFC

3 free resources



1 DCCF (Data Centre Competence Framework)



2 Data Centre Training Quick Guide



3 DCPT (Data Centre Career Planning Tool)

DCPT[®]



- Data Centre Career Planning Tool
- Create personalized Data Centre career plans
- Career planning for current and future job roles
- Provides a detailed report with job role descriptions and training recommendations





Data Centre Career Plan

BASTIAAN JANSSEN

Netherlands

Current Job Role(s) & Competences Requirement

Project Manager

Manages projects to achieve optimal performance conforming to original specifications

Competences required:

E.2	Facilities management	Level 3
E.3	Risk management	Level 2
E.4	Project and portfolio management	Level 4-5
E.5	Relationship management	Level 3
E.8	Process management	Level 3

Future Job Role(s) & Competences Requirement

Data Centre Manager

Develops, operates, guides and maintains a data centre which is compliant to relevant standards/codes and meets the business needs.

Competences required:

A.1	Data centre business and Strategy Alignment	Level 5
A.2	Business Plan development	Level 5
D.2	Human Resource Management	Level 4
E.5	Relationship Management	Level 4
E.11	Governance	Level 4-5

Note: For the complete job descriptions, please refer to the Appendix document.

REQUIRED TRAINING (Click on course titles for more information)

For Current Role(s)

[CDCP](#), [CDFOS](#)

For Future Role(s)

[CDCP](#), [CDCS](#), [CNCDP](#), [CDFOM](#), [CDSS](#)

OPTIONAL TRAINING (Click on course titles for more information)

For Current Role(s)

[CNCDP](#), [CDMS](#), [CTDC](#), [CDRP](#), [CITM](#)

For Future Role(s)

[GDCE](#), [CDRP](#), [CTDC](#), [CDMS](#), [CITM](#)

Contact your preferred EPI training partner more information.
If you do not have a preferred EPI training partner, please [click](#) here to make an enquiry.

References

About DCCF



The EPI Data Center Career Plan is generated based on the EPI-DCCF® (EPI-Data Centre Competence Framework). The EPI-DCCF® is the world's first and currently the only competence framework specific for the data centre industry.

About EPI



EPI is a global company of European-origin that offers data centre expert services. With over 35 years of experience, we operate worldwide in over 60 countries and 130 cities through direct operations and a large partner network. EPI offers an extensive range of data centre expert services which includes accredited data centre and IT training, data centre audit and certification on design, facility and operations, DCOS® (Data Centre Operations Standard), and CRUR® (Computer Room Utilization Ratio).

EPI's reputation has been built on delivering high-quality technical expertise with a continuous drive for excellence and innovation. Always on the leading edge, EPI has released many world's first innovations including the IT and Data Centre Framework®, DCCF® (Data Centre Competence Framework®), Data Centre and IT Career Planning Tools, Data Centre and IT Training Frameworks, DCOS®, and CRUR®.

EPI is the world's largest provider of accredited data centre training, and ANSI/TIA-942 conformity audit and certification services. EPI is also a registered Certification Body (CB).



Personalised career plan



Dimension-1 5 - DCCF areas (A-E)	Dimension-2 DCCF-Competences identified	Dimension-3 DCCF-Competence proficiency levels e-1 to e-5				
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	A.5. Site Planning					
	A.6. Architecture Design					
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	B.4. Telecommunication engineering					
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	B.8. Documentation production					
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	E.5. Relationship management					
	E.6. Quality management					
	E.7. EH&S management					
	E.8. Process management					
	E.9. Information security management					
	E.10. Asset management					
	E.11. Governance					

Competence table from DCCF[®]

®



9.17 Project Manager

Profile title	Project Manager		
Summary statement	Manages projects to achieve optimal performance conforming to original specifications		
Mission/general skills description	Provides the owner/investor organization with a single point of management accountability for project outcomes. Creates the project plan, establishes the implementation team, develops project budgets and manages the schedule. Although contractual relationships might vary, the single point of responsibility will ensure appropriate accountability for performance and progress.		
Deliverables	Accountable	Responsible	Contributor
	<ul style="list-style-type: none"> Project Plan Validated Solution 	<ul style="list-style-type: none"> Solution documentation 	<ul style="list-style-type: none"> Integrated Solutions Quality Plan
Main task/s	<ul style="list-style-type: none"> Supervise project progress Organize, coordinate and lead project team Coordinate, record and ensure quality compliance Implement the new service or equipment or environment, etc. Comply with budgets and delivery times Plan maintenance and customer support 		
DC-Competence <i>(From DCCF®)</i>	E.2. Facilities Management	Level 3	
	E.3. Risk Management	Level 2	
	E.4. Project and Portfolio Management	Level 4-5	
	E.5. Relationship Management	Level 3	
	E.8. Process Management	Level 3	
KPI area	Project scope achievement, timing and budget		
EPI-DC Framework® Disciplines	<ul style="list-style-type: none"> Project Management ICT Infrastructure Physical Infrastructure 		
EPI courses	Required; <ul style="list-style-type: none"> CDCP CDFOS Added value; <ul style="list-style-type: none"> CNCDP CDMS CTDC CDRP CITM 		

9.1 Data Centre Manager

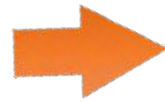
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Main task/s	<ul style="list-style-type: none"> Budget control and responsibility: Profit and Loss (CapEx, OpEx, EBITDA, EBIT) Define the data centre business strategy to support the ICT environment Responsible for the quality and management of customer-supplier relationships Define and ensure compliance with Service Level Agreements Negotiate complex contracts with vendors, suppliers and third parties Make recommendations to general ICT management Responsible for the operational results and human resource management 		
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	D.2. Human Resource Management	Level 4	
	E.5. Relationship Management	Level 4	
	E.11. Governance	Level 4-5	
KPI area	Overall added value, efficiency and effectiveness of the data centre		
EPI-DC Framework® Disciplines	<ul style="list-style-type: none"> All disciplines 		
EPI courses	Required; <ul style="list-style-type: none"> CDCP CDCS CNCDP CDFOM CDESS Added value; <ul style="list-style-type: none"> CDCE CDRP CTDC CDMS CITM 		

Full job description from DCCF®

Where to find the DCPT[®]

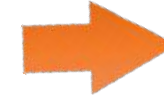


The screenshot shows the EPI website homepage. At the top, there is a navigation menu with links for Home, About Us, Training, Audit, Standards, Promotions/Events, Articles/Webinars, Resources, Vacancy, and Contact. Below the menu, there is a section for "EPI Training in 14 Languages" with flags for Dutch, English, French, Japanese, Mandarin, Cantonese, Korean, Spanish, Portuguese, German, Czech, Italian, Polish, and Russian. A "About Us" section follows, describing EPI's services. Below that are three featured articles: "Training", "Audit Certification", and "Standards". At the bottom, there are sections for "Tweets from @EPI_CDCC" and "News".



A vertical list of EPI training and framework options, each with a brief description and a small icon:

- TOD Training On Demand**: Easy To Use, Save Time & Money
- EPI Data Centre Framework**: The foundation behind the development of our services
- Data Centre Operations Standard (DCOS)**: A progressive approach to operational excellence
- EPI Data Centre Competence Framework**: Our guide for data centre job roles and competences
- EPI Data Centre Training Framework**: How our courses fit together
- Data Centre Career Planning Tool (DCPT)**: Your data centre career guidance tool
- EPI IT Training Framework**: A competency-based IT training framework for IT Professionals
- IT Career Planning Tool (ITCPT)**: Your IT career guidance tool



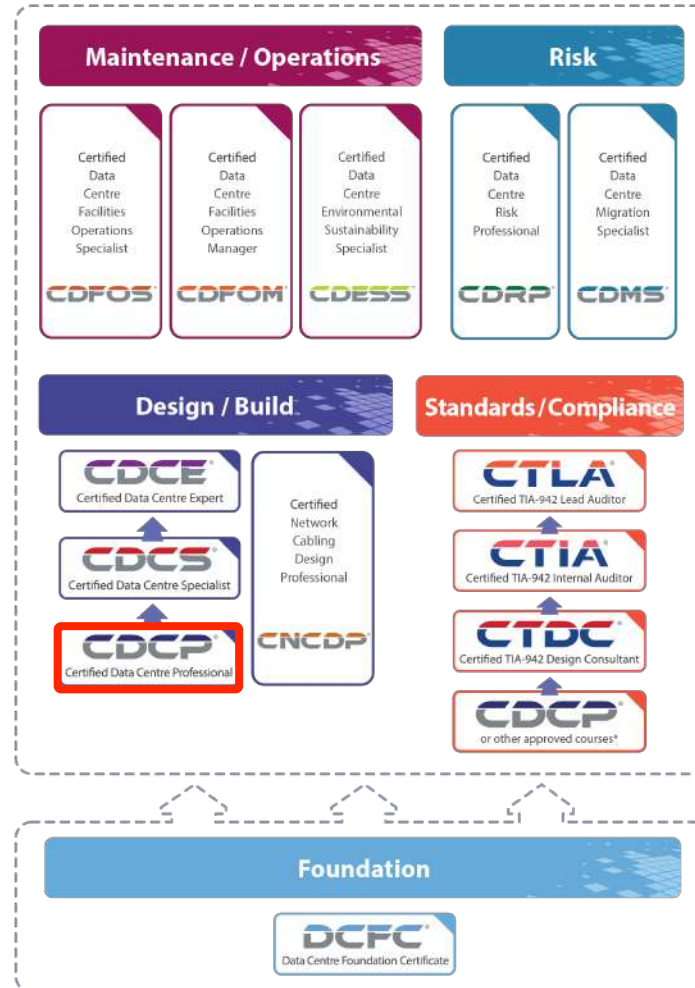
Data Centre Career Planning Tool (DCPT)
Your data centre career guidance tool

www.epi-ap.com/dcpt

Data Centre training



EPI Data Centre Training Framework



2-Day course



Hottest selling
course

What is CDCP[®]



- 2-Day course with **fundamental** knowledge related to **design, build** and **optimize** data centres
- Course address **standards** and all the technical matters
- A lot of **practical experience** from veterans in the data centre industry
- Exam: 1 hour, 40 questions, closed book
- Prerequisite: none

Course delivery – 3 options



ILT

Instructor Led
Training



VILT

Virtual
Instructor Led
Training



TOD

Training On Demand

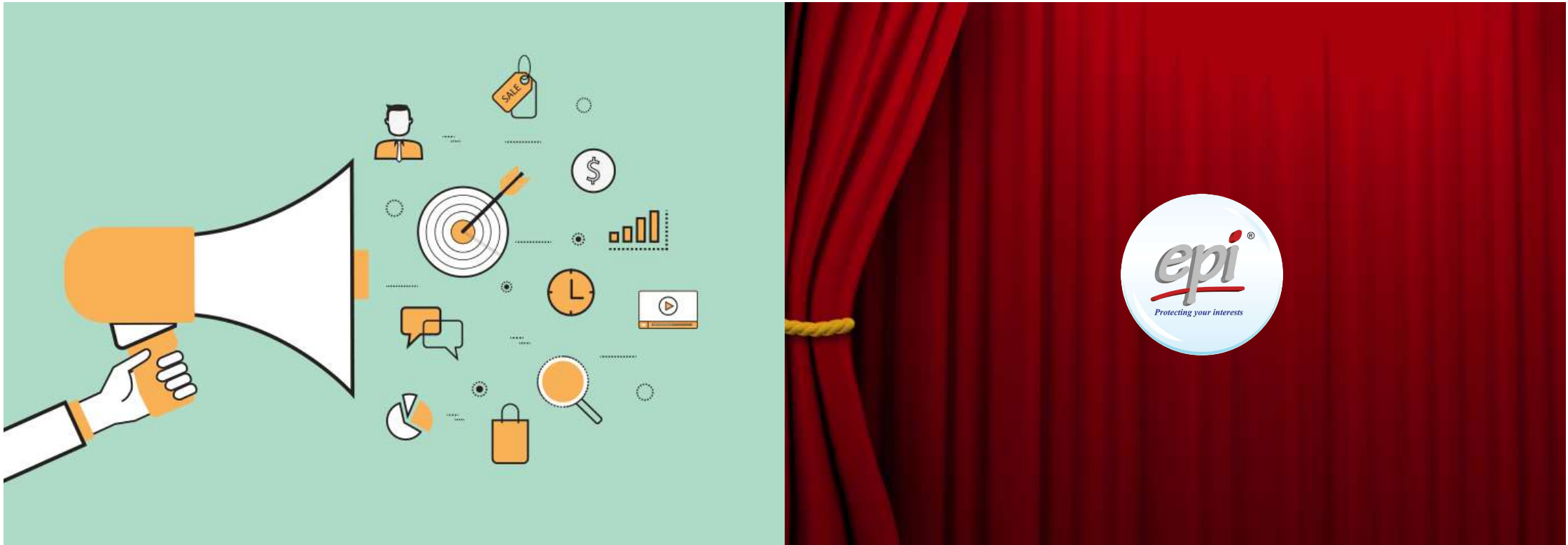


EPI® training partners in Denmark



FREDERICIA
MASKINMESTERSKOLE

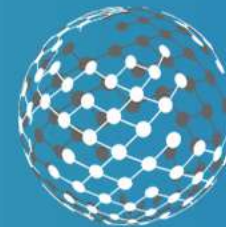
Closing remarks



The “war” on talent

- More people are needed
- Skills gap has to be closed
- Keep the “back door” closed

1

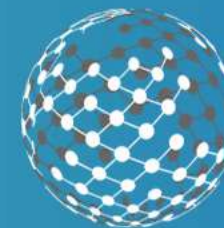


The Human factor

Training influences:

1. Performance
2. Culture
3. Reduction of employee turnover

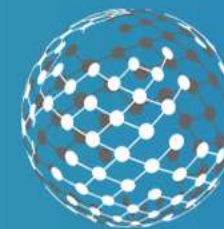
2



Use the FREE EPI tools

- 1 DCCF[®] (Data Centre Competence Framework)
- 2 Data Centre Training Quick Guide
- 3 DCPT[®] (Data Centre Career Planning Tool)

3



Thank you!



Bastiaan Janssen

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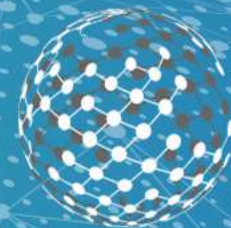


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