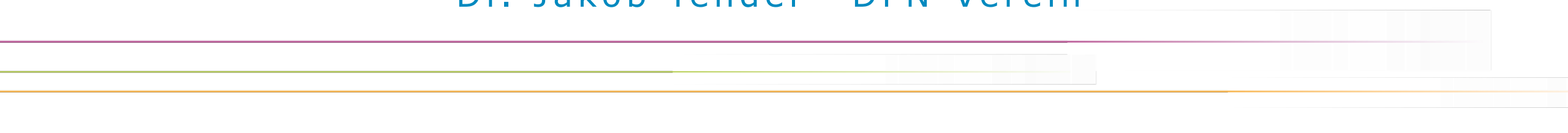


77. DFN-Betriebstagung Forum Clouddienste

DFN-Cloud Unterstützung Informationsmaterial und Tools

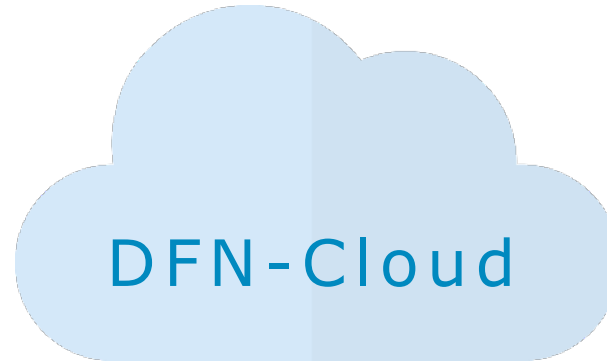
Dr. Jakob Tendel DFN-Verein



Externe Dienste der DFN-Cloud

DFN

- ▶ GÉANT / OCRE
Rahmenvereinbarungen



Externe Cloud-Dienste (Public Cloud)



Framework Mehrwerte

DFN



- ▶ **Öffentlich ausgeschriebene Dienste**
mit minimalem Eigenaufwand für Einrichtungen zu beschaffen



- ▶ **Finanzielle Vergünstigungen**
prozentuale Rabatte, Erlass Datentransfergebühren, diverse weitere



- ▶ **Energie-Effizienz**
Auskunft über Effizienz, PuE Wert der Rechenzentren



- ▶ **Lizensierung**
Mitnutzung Einrichtungs-Fremder, Auskunft über Portierung bestehender Lizenzen



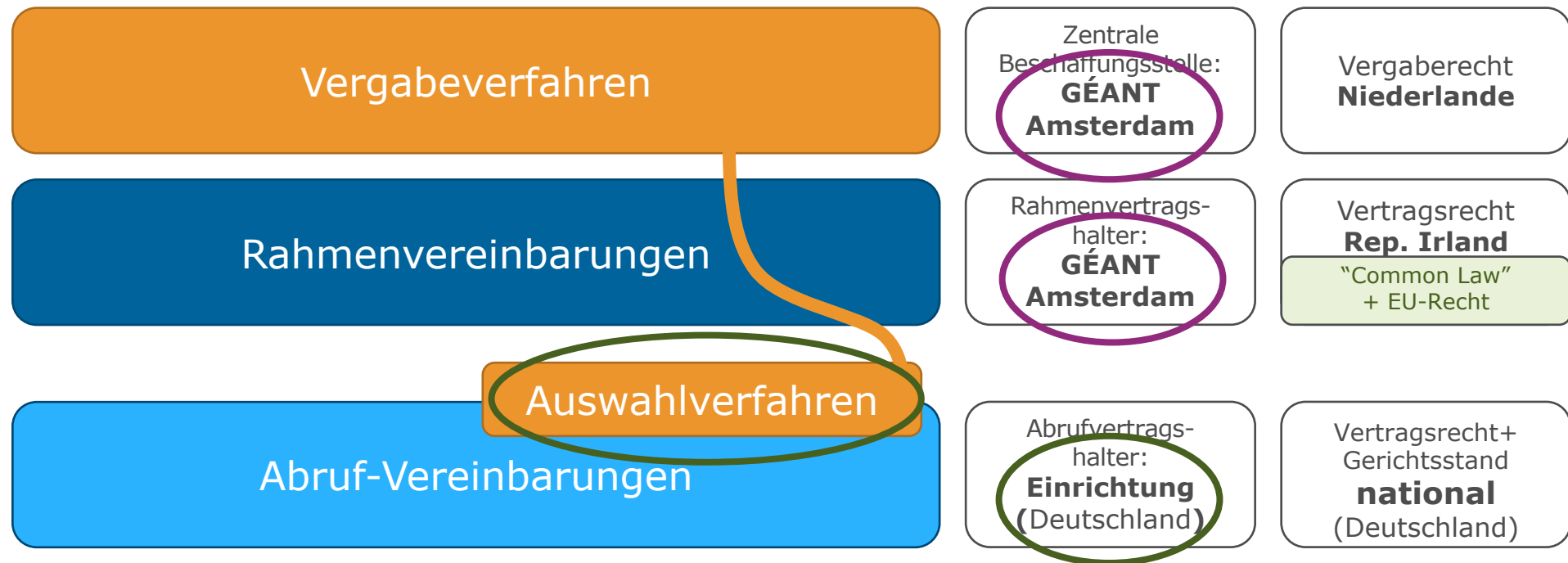
- ▶ **Datenschutz**
DSGVO gilt für alle Anbieter, Datenhaltung in EU ist Standard



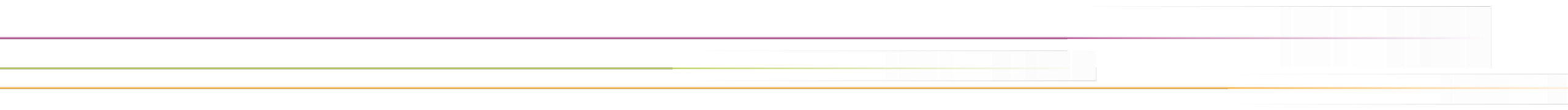
- ▶ **Beratungsdienstleistungen**
Beschaffung von Beratungsdienstleistungen
von Anbietern unter dem Rahmenvertrag ist ebenfalls möglich

Aufgaben der beschaffenden Einrichtung

► Offenes Verfahren nach Beschaffungsrichtlinie **2014/24/EU**



Anwendung des Beschaffungsverfahrens



Das Auswahlverfahren, drei Varianten

Direktabruf

- Wenn **genau ein** Angebot dem Bedarf entspricht
- Ohne erneuten Wettbewerb
- Ausreichende Begründung muss vorliegen
- GÉANT liefert Tool zur Unterstützung der Auswahl

„Schreibtisch“- Miniwettbewerb

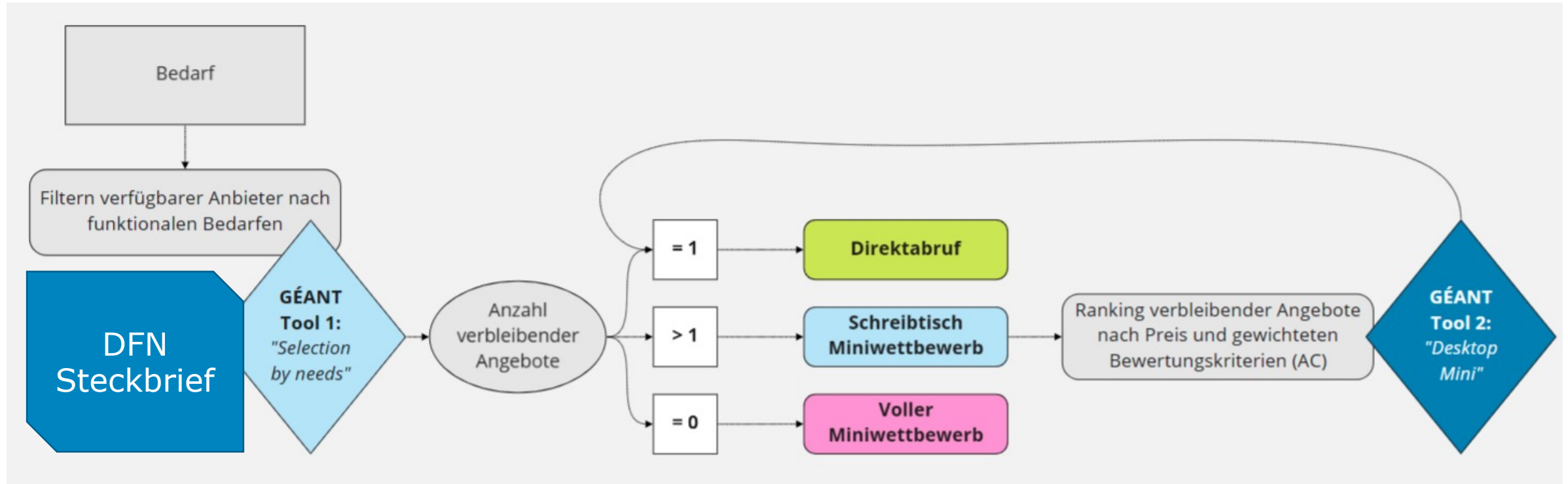
- Wenn **mehr als ein** Angebot dem Bedarf entspricht
- Angeleiteter Vergleich anhand vorliegender Informationen
- Selbst durchzuführen
- Wählbare Neu-Gewichtung der Wertungspunkte aus dem Vergabeverfahren
- GÉANT liefert Tool zur Unterstützung der Auswahl

Miniwettbewerb

- Wenn **kein** Angebot dem Bedarf entspricht
- Erneuter Wettbewerb unter den Anbietern
- Nach angepassten Konditionen oder Geschäftsbedingungen
- Erlaubt eine Anpassung der Abrufvereinbarung (Call-off)

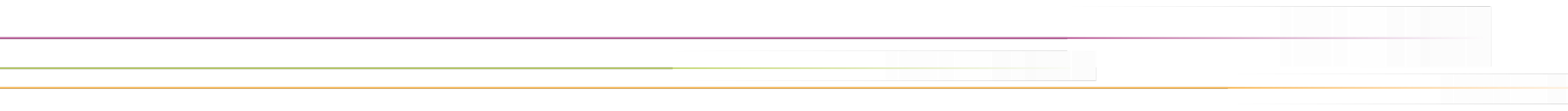
Auswahlentscheidung

DFN



Aus dem Ergebnis von Tool 2 "DesktopMini" lassen sich Angebote für einen dann sehr solide und objektiv begründeten Direktabruf auswählen.

Externe Dienste Provider-Steckbrief



► Zielsetzung:

- Schaffung einer vereinfachten Übersicht über die Angebote der externen Dienste
- Gegenüberstellung relevanter Merkmale der einzelnen Angebote
- Unterstützung der Community bei der Auswahl von Cloud-Angeboten

Steckbrief

DFN



The infographic is titled "DFN-Cloud Service Factsheet" and features the DFN logo in the top right. It is organized into several blue and orange boxes. At the top, it lists "T-Systems International GmbH" and "Open Telekom Cloud". A central cloud icon contains the text "Open Telekom Cloud". The main content is divided into sections: "IaaS+ platform outline" (listing IaaS, PaaS, SaaS, Container, KI, HPC, Open Source, Domain Expertise, and 500+ PB customer data), "Charges" (Price models: Pay as you go, Reserved, Upfront reserved; Payment: electronic invoice, 30-day terms), "Training and Support" (Adoption support, System integration, Operation support, Exit and migration support), "GEANT / NREN peering" (GEANT peering, DFN peering, Special Network Services, AAI/eduGAIN support), "Additional services beyond IaaS" (Healthcare Services, Managed Services, Professional Services, Others), "Operating platform" (Open Stack including Bare Metal, KVM hypervisor, Linux and Windows), "Locations EU Datacentres" (EU-D, EU-NL), "OCRE Discounts" (Conditions for discount plans, OCRE-specific discounts), "Miscellaneous" (BSI C5 audit, Service Trial, Staff in Germany), and "Links" (Price models, Calculator, Training, Data Protection and certifications).

DFN-Cloud Service Factsheet

IaaS+ platform outline

- IaaS, PaaS, SaaS
- Container, KI, HPC
- Open Source, Domain Expertise in verschiedenen Wissenschaften
- mehr als 500 PB Kundendaten

Charges

Price models:

- Pay as you go
- Reserved
- Upfront reserved

Budget limits and quota can be configured with high granularity on each resource type

Payment

Payment by (electronic) invoice.
Billing period is monthly in arrears.
Payment terms 30 days.
Advance payments lead to additional discounts

Training and Support

- ✓ **Adoption support**
Initial onboarding support and several training courses are provided free of charge. Seminars and workshops are subject to charges
- ✓ **System integration**
- ✓ **Operation support**
- ✓ **Exit and migration support**

GEANT / NREN peering

- ✓ **GEANT peering**
- ✓ **DFN peering**
- ✓ **Special Network Services**
Use of dedicated network segments – MPLS (L3), Private Line Access (L2-Fiber) and Equinix Cloud Exchange are supported
- ✓ **AAI/eduGAIN Support**

Additional services beyond IaaS

Healthcare Services, Managed Services, Professional Services, Others

Operating platform

Open Stack including Bare Metal, KVM hypervisor, Linux and Windows

Locations EU Datacentres

EU-D (AZ1, 2 and 3)
EU-NL (AZ1, 2 and 3)

OCRE Discounts

Conditions for discount plans:
Discounts are available for reserved instances and upfront payments

OCRE-specific discounts:
Yes. A dedicated OCRE price list is made available on request
E.g., users do not have to pay for any network services

Miscellaneous

- ✓ **BSI C5 audit**
Reports are made available on a reasonable motivated request
- ✓ **Service Trial**
Standard vouchers of 250 Euro made available. Other vouchers on request
- ✓ **Staff in Germany**

Links

Price models
<https://open-telekom-cloud.com/en/prices/pricing-models-computing>

Calculator
<https://open-telekom-cloud.com/en/prices/price-calculator>

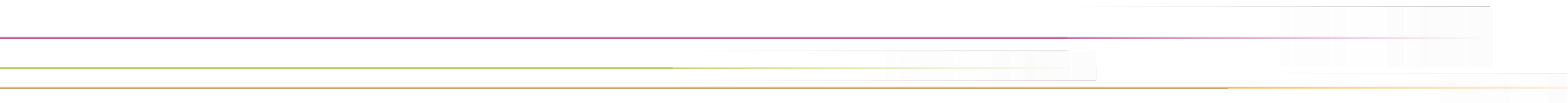
Training
<https://open-telekom-cloud.com/en/support/trainings-certifications>

Data Protection and certifications
<https://open-telekom-cloud.com/en/security/data-protection-and-compliance>

- ▶ Plattform-Name, Anbieter
- ▶ Plattform-Beschreibung
- ▶ Weitere Dienste in Ausschreibung enthalten
- ▶ Software-Plattform
- ▶ RZ-Standorte
- ▶ Entgelt- / Bezahl-Modelle
- ▶ Rabatte
- ▶ Training, Support
- ▶ GÉANT / DFN Anbindungen
- ▶ Weiteres
- ▶ Links

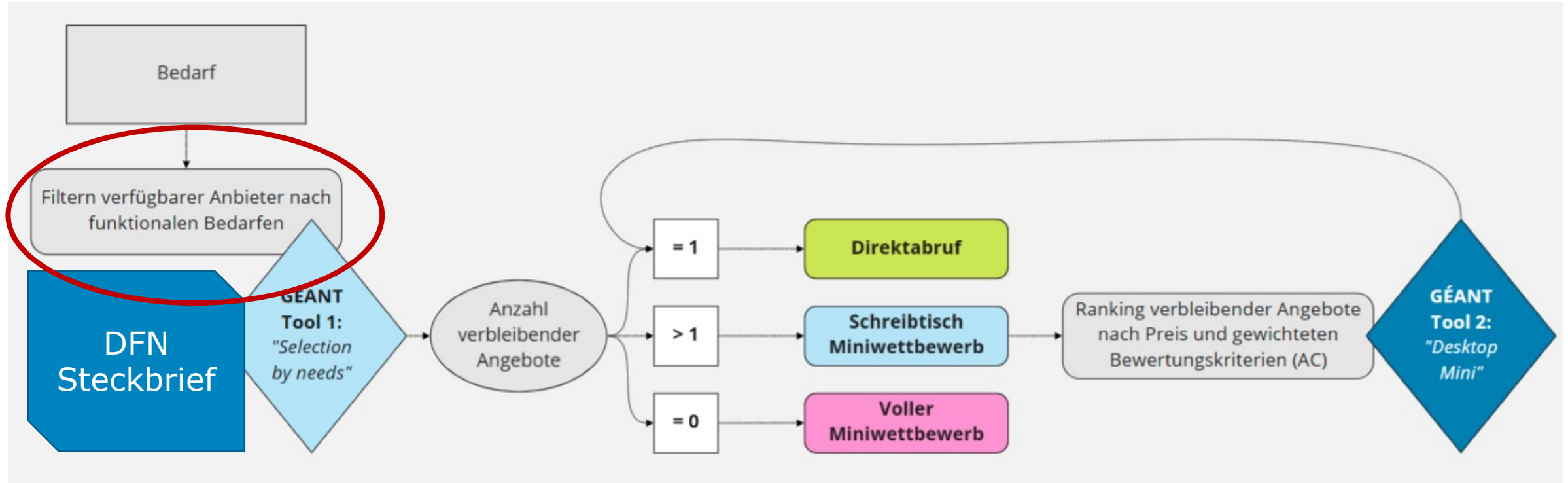
DFN

Demo

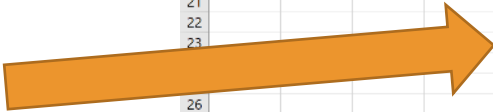


Auswahlentscheidung

DFN



► Tool zur Provider-Auswahl



Vorauswahl – DFN-Steckbriefe

DFN



DFN-Cloud Service Factsheet







IaaS+ platform outline

IaaS, PaaS, SaaS
Container, KI, HPC
Open Source, Domain Expertise in verschiedenen Wissenschaften
mehr als 500 PB Kundendaten

Charges

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Additional services beyond IaaS

Healthcare Services, Managed Services, Professional Services, Others

Operating platform

Open Stack including Bare Metal, KVM Hypervisor, Linux and Windows

Locations EU Datacentres

EU-D	(AZ1, 2 and 3)
EU-NL	(AZ1, 2 and 3)

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Links

Price models
<https://open-telekom-cloud.com/en/prices/pricing-models-computing>

Calculator
<https://open-telekom-cloud.com/en/prices/price-calculator>

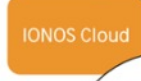
Training
<https://open-telekom-cloud.com/en/support/trainings-certifications>

Data Protection and certifications
<https://open-telekom-cloud.com/en/security/data-protection-and-compliance>



DFN-Cloud Service Factsheet







IaaS+ platform outline

- Compute, RAM, Block Storage, Traffic (IaaS)
- S3 Storage (IaaS)
- Managed Kubernetes (CaaS)
- Database as a Service (PaaS)
- Backup as a Service (PaaS)
- Managed Network Load Balancer (IaaS)
- Managed NAT Gateway (IaaS)
- DDoS Protect (IaaS)
- Monitoring-as-a-Service

Charges

Price models

- In general pay-as-you-go
- Compute: hourly
- Storage: monthly

Payment

- Invoice from Bechtle
- monthly

Training and Support

- ✓ **Adoption support**
via Bechtle - individually tailored
- ✓ **System integration**
via Bechtle - individually tailored
- ✓ **Operation support**
via Bechtle - individually tailored
- ✓ **Exit and migration support**
via Bechtle - individually tailored

GEANT / NREN peering

- GEANT peering
- DFN peering
- Special Network Services
- AAI/eduGAIN Support

Additional services beyond IaaS

o

Operating platform

o

Locations EU Datacentres

Berlin (DE)	Logrono (ES)
Frankfurt Main (DE)	Las Vegas (US)
Karlsruhe (DE)	Newark (US)
London (UK)	

OCRE Discounts

- o Conditions for discount plans:
- o OCRE-specific discounts

Miscellaneous

Certifications

<https://cloud.ionos.de/zertifikate>

- o BSI C5 audit
- ✓ **Service Trial**
There are several possibilities to do trials, proof-of-concepts without any or less costs
- ✓ **Staff in Germany**

Links

Product website
<https://cloud.ionos.de/>

Price models
<https://cloud.ionos.de/preise>

Support
<https://cloud.ionos.de/hilfe#support>

Compliance
<https://www.ionos.de/terms-gtc/terms>

Data Protection
<https://www.ionos.de/terms-gtc/terms-privacy/>

Vorauswahl – DFN-Steckbriefe

DFN

DFN

DFN-Cloud Service Factsheet

Bechtle **Microsoft Azure**

IaaS+ platform outline

IaaS, PaaS, Container, FunctionsaaS, (ready to deploy SaaS within the Azure marketplace, see "Additional services")

Charges

Price models:

- Pay as you go: <https://azure.microsoft.com/de-de/pricing/calculator/>
- Set limits with budget management, cost trend analysis, etc.

Payment

- Creditcard
- Invoice
- PrePayment

Training and Support

- ✓ **Adoption support**
Free Basic Trainings at Microsoft Learn Platform / Paid individual Trainings over Bechtle
- ✓ **System Integration**
Individual Prof. Services with Bechtle
- ✓ **Operation support**
<https://www.bechtle.com/it-services/managed-services/azure-operations>
- ✓ **Exit and migration support**
Through service partner

Additional services beyond IaaS

Express Route 62%, no data egress charges

Operating platform

Fully automated IaaS, PaaS and SaaS Platform based on Microsoft Technology. Additionally there are possible Vendors like VMware Solutions, NetApp what is directly bookable.

Locations EU Datacentres

Frankfurt: 3 AZ	Frankreich: 3 AZ
Ireland: 3 AZ	Norwegen: 3 AZ
NL: 3 AZ	Schweden: 3 AZ
Schweiz: 3 AZ	UK: 3 AZ

OCRE Discounts

Conditions for discount plans:

- reserved instances
- spot instances
- MCC

OCRE-specific discounts

- ExpressRoute 62%
- no data egress charges
- More details can be shared on request.

Miscellaneous

Certifications
<https://docs.microsoft.com/de-de/azure/compliance>

- ✓ BSI C5 audit
- ✓ Service Trial
<https://azure.microsoft.com/de-de/free/>
- ✓ Staff in Germany

Links

Product website
<https://azure.microsoft.com/de-de/services/>

Price models
<https://azure.microsoft.com/de-de/pricing/calculator/>

Support
<https://azure.microsoft.com/de-de/support/plans/>
<https://www.bechtle.com/it-services/managed-services/azure-operations>

Compliance, Data Protection
<https://docs.microsoft.com/de-de/azure/compliance>

GEANT / NREN peering

- ✓ GEANT peering
- ✓ DFN peering
- ✓ Special Network Services
ExpressRoute
- ✓ AAI/eduGAIN Support

DFN-Cloud Service Factsheet

Rackspace **Amazon Web Services**

IaaS+ platform outline

IaaS, CaaS, PaaS, FunctionsaaS, (ready to deploy SaaS within the AWS marketplace, see "Additional services")

Charges

Price models

- In general PAYG
- Additional possibilities around total or partial upfront billing for the customers' selected services

Payment

- Payment by invoice is possible
- No advanced or upfront payments needed
- Monthly billing

Training and Support

- ✓ **Adoption support**
Rackspace and AWS take care of the service adoption by training
- ✓ **System Integration**
Need to be paid and clarified
- ✓ **Operation support**
<https://www.rackspace.com/en-gb/cloud/elastic-engineering>
- ✓ **Exit and migration support**
The user/customer can receive support for data migration, if even necessary

Additional services beyond IaaS

- Rackspace Optimizer+ Service
- Rackspace Professional and Managed Services

Operating platform

AWS Nitro System is the underlying platform for next gen of EC2: older instances use core KVM technology. Also VMware Cloud on AWS service, with full support from both vendors.

Locations EU Datacentres

Frankfurt: 3 AZ	Ireland: 3 AZ
London: 3 AZ	Milan: 3 AZ
Paris: 3 AZ	Stockholm: 3 AZ

OCRE Discounts

Conditions for discount plans:

- Enterprise Discount Program (through Rackspace)
- Reserved Instances
- Spot Instances
- Saving Plans

OCRE-specific discounts:

- Discounts for professional services start at 8% and end with 20%.
- Discounts for managed services start at 3% and end with 16%.
- More details can be shared on request.

Miscellaneous

Certifications
<https://aws.amazon.com/compliance/iso-certified/>

- ✓ BSI C5 audit
- ✓ Service Trial
There are several possibilities to do trials, proof-of-concepts without any or less costs.
- ✓ Staff in Germany

Links

Product website & contact
<https://ocre.rackspace.com/>

Price models
<https://aws.amazon.com/pricing/>

Support
<https://www.rackspace.com/de/cloud/aws>

Compliance
<https://aws.amazon.com/de/artifact/>

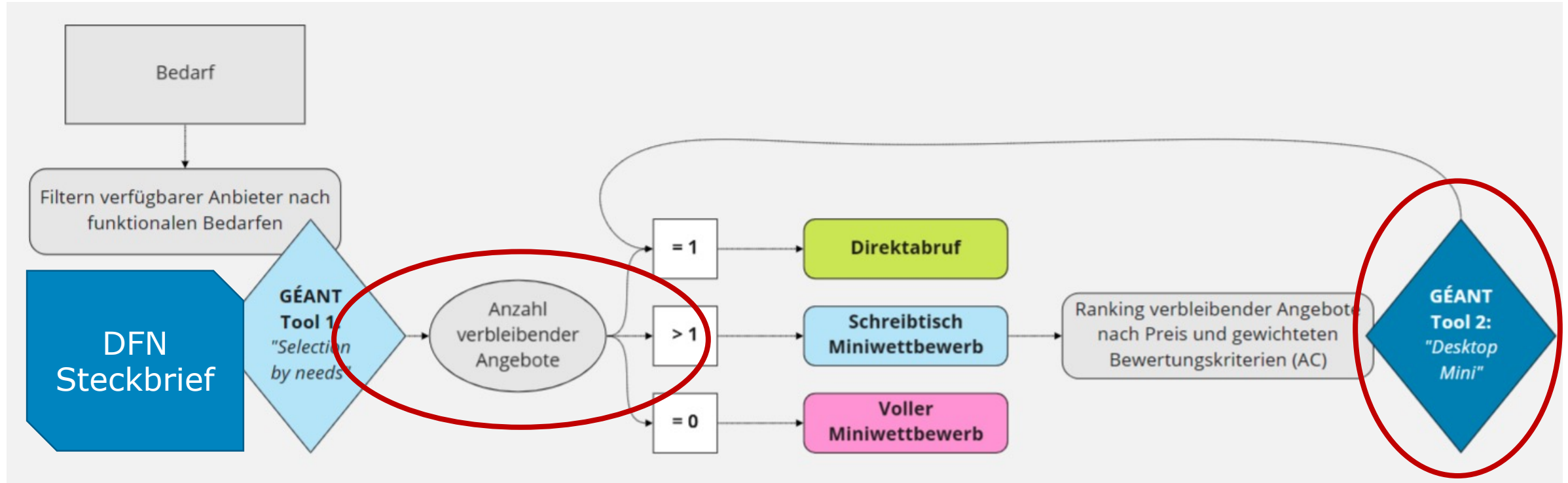
Data Protection
<https://aws.amazon.com/privacy/>

GEANT / NREN peering

- ✓ GEANT peering
- ✓ DFN peering
- ✓ Special Network Services
<https://aws.amazon.com/ypoc/>
- ✓ AAI/eduGAIN Support
Supported, but not (pre-)integrated

Auswahlentscheidung

DFN



Schreibtisch Miniwettbewerb

Germany

(1) Determine a price including discounts, for a cloud configuration representative of your use case, from any provider that is capable in principle. Leave empty where not applicable.

(2) Insert a price for any professional services you wish to procure, at rates listed in table. Leave empty if not needed.

Desktop Mini Competition

AC4 Costs Platform Compute Storage etc.

AC6 Costs Additional Services

AC4 Discount Percent

AC6 Junior PM Per hour

AC6 Senior PM Per hour

AC6 Junior Cloud Architect Per hour

AC6 Senior Cloud Architect Per hour

AC6 Junior Consultant Per hour

AC6 Senior Consultant Per hour

Cost Calculation

Orange NL

Rackspace GmbH (AWS)

Sparkle (Google)

Blue Safespring AB

Logicalis GmbH (Oracle)

City Network

Bechtle AG (IONOS)

Proact Netherlands BV

SoftwareONE NL (IBM)

Bechtle AG (MS Azure)

T-Systems (OTC)

x-ion GmbH

OVHcloud

CloudFerro sp. z o.o.

Cloud and Heat

VSHN AG (Exoscale)

CloudSigma AG

Setcor d.o.o.

17000

12000

15000

6000

Lowest cost AC4 Platform costs

15000

Lowest cost AC6 Additional Services

6000

Populate the costs in columns B and E above. If no cost please leave blank

AC1 Service and Support

AC2 Marketing and Adoption Support

AC3 Exit Support

AC4 Cost

AC6 Cost

AC7 Sustainability

Award Criteria

Original Weight in GEANT tender (in %)

Minimum Weight Range (in %)

Maximum Weight Range (in %)

Mini Comp Weight (in %)

Total%

20%

15%

25%

25%

100%

25%

15%

25%

25%

10%

5%

5%

5%

0%

0%

35%

20%

50%

40%

0%

5%

0%

15%

5%

5%

10%

5%

25%

10%

0%

--

(3) Adjust weights

AC1 Service and Support

AC2 Marketing and Adoption Support

AC3 Exit Support

AC4 Cost

AC6 Cost

AC7 Sustainability

Total

Provider

Orange NL

Rackspace GmbH (AWS)

Sparkle (Google)

Blue Safespring AB

Logicalis GmbH (Oracle)

City Network

Bechtle AG (IONOS)

Proact Netherlands BV

SoftwareONE NL (IBM)

Bechtle AG (MS Azure)

T-Systems (OTC)

x-ion GmbH

OVHcloud

15.94

15.94

15.94

9.38

18.75

15.94

15.94

15.94

9.38

18.75

15.94

3.75

15.94

15.00

15.00

12.75

12.75

12.75

12.75

12.75

12.75

12.75

12.75

12.75

7.50

12.75

4.25

4.25

1.00

4.25

2.50

4.25

2.50

4.25

2.50

2.50

2.50

4.25

2.50

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

35.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

6.21

0.00

0.00

3.00

0.00

0.00

7.45

2.22

9.01

7.41

10.00

7.50

8.93

6.21

2.15

5.03

7.69

10.00

2.66

42.64

37.41

38.7

33.7

44.0

40.2

40.5

39.5

26.7

39.0

76.8

25.50

33.85

4

10

9

12

3

5

6

7

14

8

1

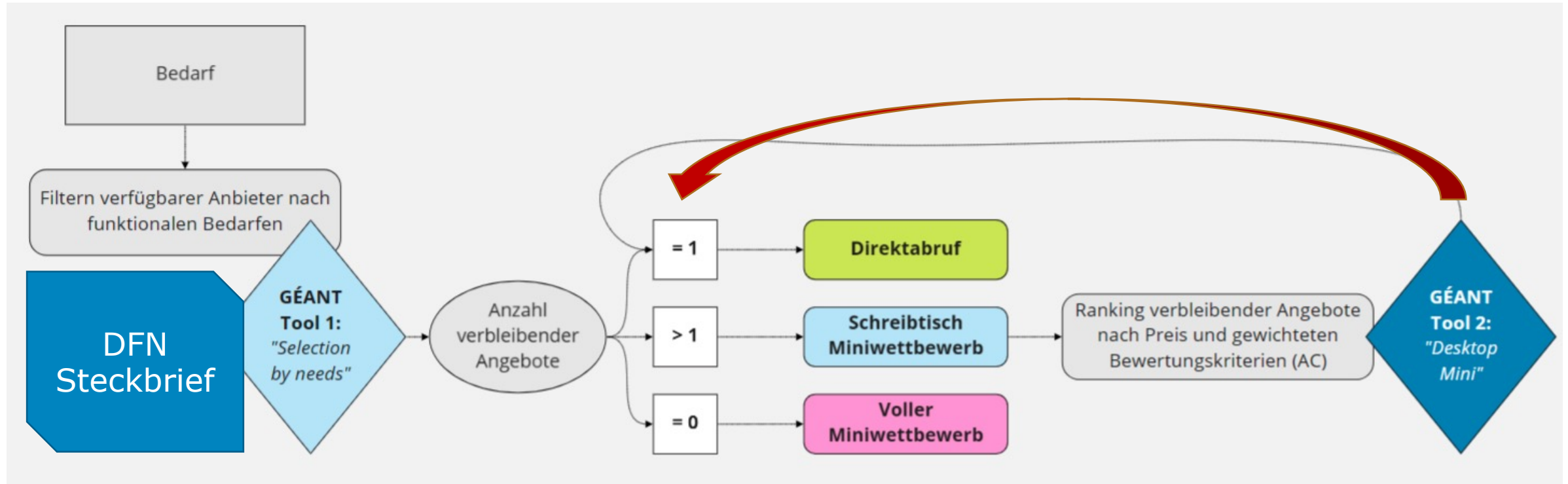
17

11

DesktopMiniComp

Auswahlentscheidung

DFN



Aus dem Ergebnis von Tool 2 "DesktopMini" lassen sich Angebote für einen dann sehr solide und objektiv begründeten Direktabruf auswählen.

Haben Sie noch Fragen ... ?

DFN

► Kontakt

► Jakob Tendel, Michael Röder

E-Mail: cloud@dfn.de

Telefon: 0049 30 884299-9129

Fax: 0049 30 884299-370

Anschrift:

DFN-Verein, Geschäftsstelle

Alexanderplatz 1

10178 Berlin

