DCMM

Digital Capabilities Management Model

overview

"the next generation IT management model"

Zdenek Kvapil, Q4IT, lead author

Jonathan Boyd, Q4IT, co-author

Barrie Clarke, Q4IT, contributor

WHY DCMM

Paradigms encoded in IT management models

- **ITIL** 1990 – processes, services, value
- **SCRUM** 1993 – product, speed, autonomy of developers
- **Agile** 2001 – principles, iterative SW development, fast feedback loop

Since 2001, have we seen anything really new and innovative, supporting the many changes like AI, complex systems, digital economy?

How can IT be perceived as progressive and future focused when its still being managed with 2 decades old models?

Problem of existing models

- Dogmatic ie. ITIL says "every IT organization should act as a **service provider**" without explaining why

- Agile says that speed of SW development is critical, relying on the customer knowing what is needed, providing continual **feedback and decisions**.

    "Customer knows what is needed"

Problem of existing models

ITSM and Agile are constructed with the similar logic

- Customer **specifies** the requirement

- Customer **makes** all decisions

- Customer **knows the future**

If adopted by CIO, then this approach means **order-taking** role, separation from **colleagues, expensive** practices to manage IT, **no focus on innovation**.

"External"

ISO/IEC 20000:2018, ITSM
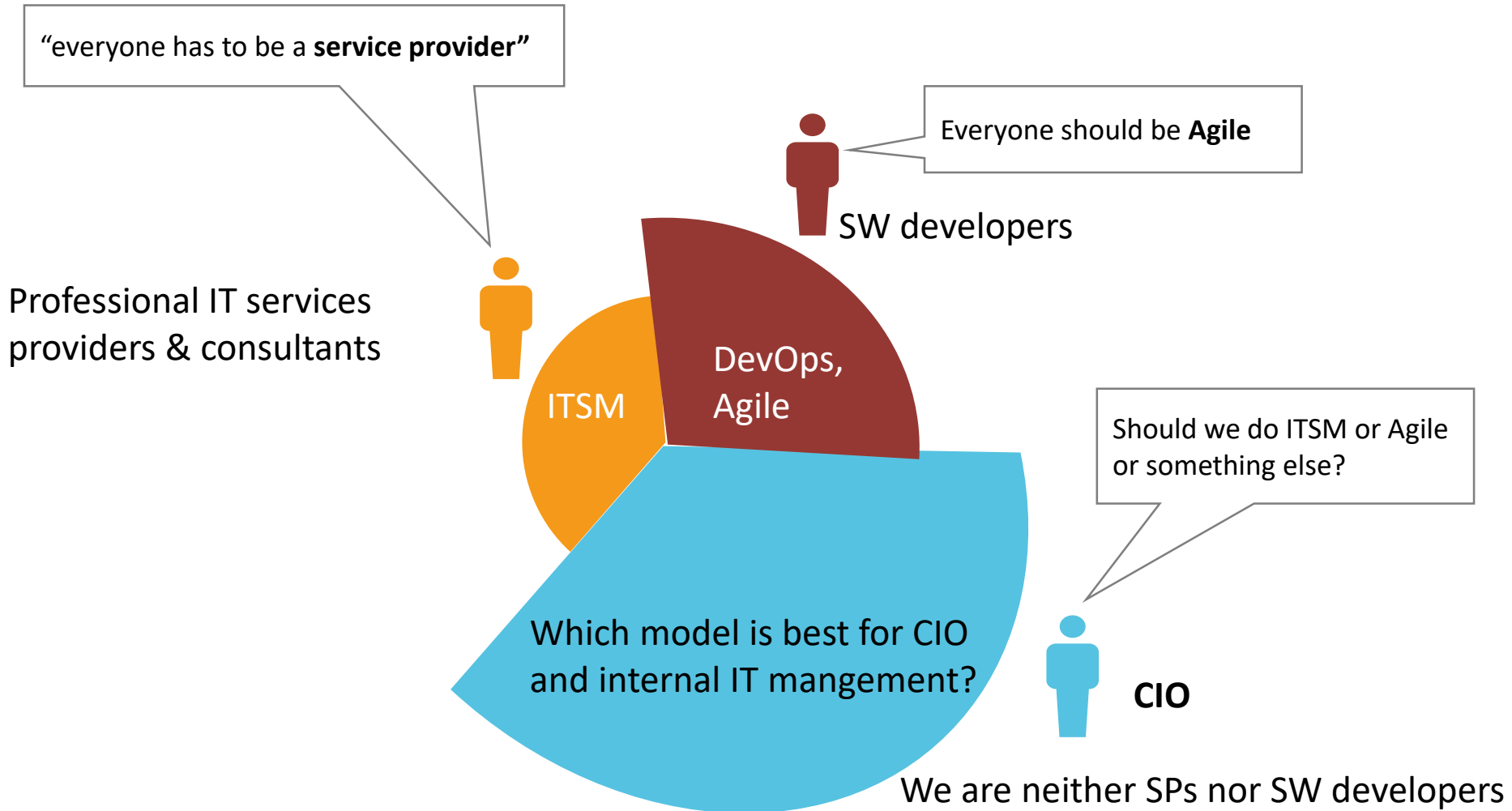IT is a service provider meeting customer's requirements
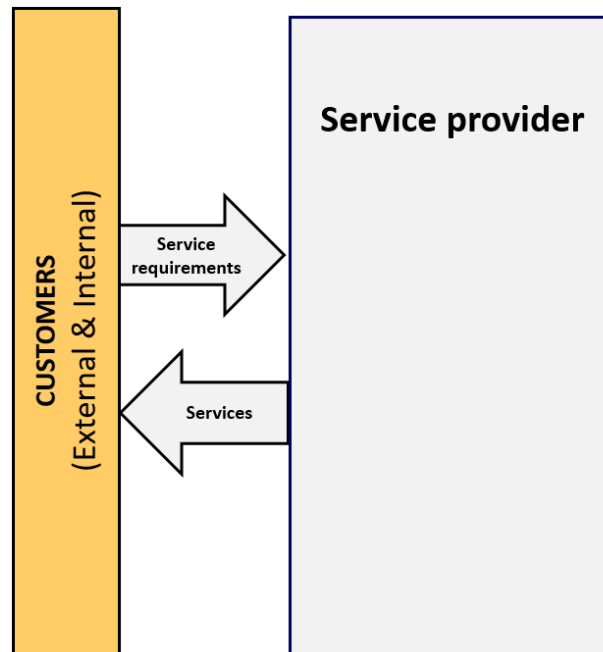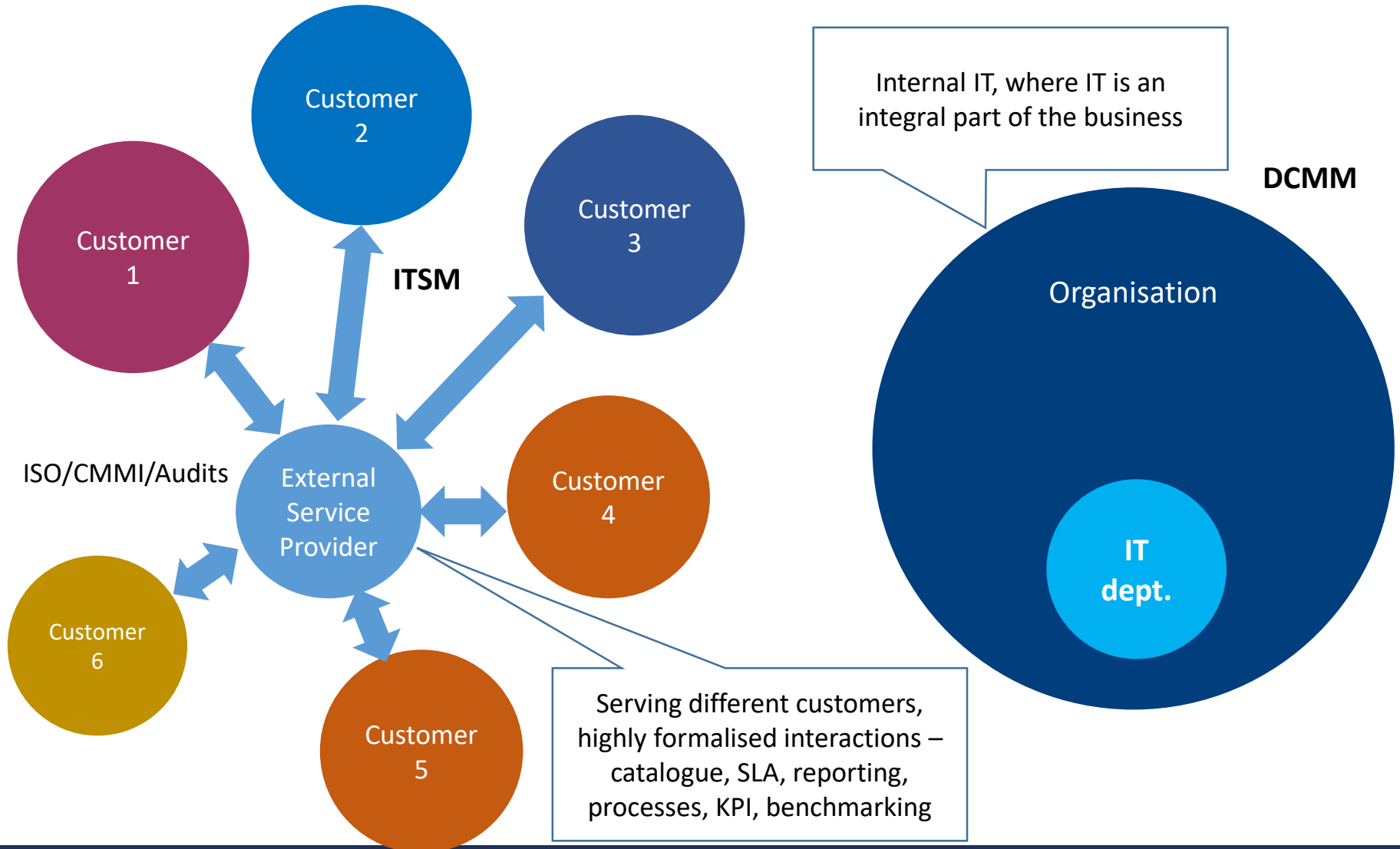
So the problem is

- ITIL emerged from the world of external service providers.

- Agile emerged from the world of software developers.

- Driving force is the economic transaction between 2 separate organisations – SP and Customer.

- Original context is lost and moved beyond its origins.

- Administrative overhead is not measured and understood.

- CIO now needs to solve other challenges.

Paradigm problem – who are authors?

DCMM – target context is int. IT

Customer 2

Customer 1

Customer 3

ITSM

Customer 4

ISO/CMMI/Audits

External Service Provider

Customer 6

Customer 5

Serving different customers, highly formalised interactions – catalogue, SLA, reporting, processes, KPI, benchmarking

Internal IT, where IT is an integral part of the business

DCMM

Organisation

IT dept.

CIO challenges in 2021-2022

- Play active role in digital transformation
- Understand IT capabilities / data / algorithms as a valued source for innovation and new business models
- Ecosystems, collaboration
- AI, constant adaptations, quantum computing
- No requirements, no clearly stated problem
- Incomplete information and unknown future
- No decisions

Context matters

SERVICES

External service providers
- Economy fundamentals, Service Management processes and practices
- Customer receiving services meeting requirements
- Administration overhead required due to underpinning financial transactions
- Providing services to B and C

Example: ITIL, ISO/IEC 20000, IT4IT, TRIM, VeriSM, FitSM, COBIT, SIAM

A

PRODUCTS

Software development
- Software development per customer requirements
- Iterative development and fast feedback loop
- Customer focused
- Software products development for A and C

Example: Agile, Scrum, DevOps, Continuous Delivery

B

DIGITAL CAPABILITIES

Internal IT / CIO
- Managing digital capabilities of the whole organisation
- Strategic role in digital transformation
- Adaptivity, exploration and innovation
- Digital ecosystems, resilience, accepting uncertainty and missing information
- Minimizing self-administration overhead
- Autonomy, self-improvements, collaboration across departments and with external partners
- Complex knowledge work, creativity
- Purchasing products and services from A and B

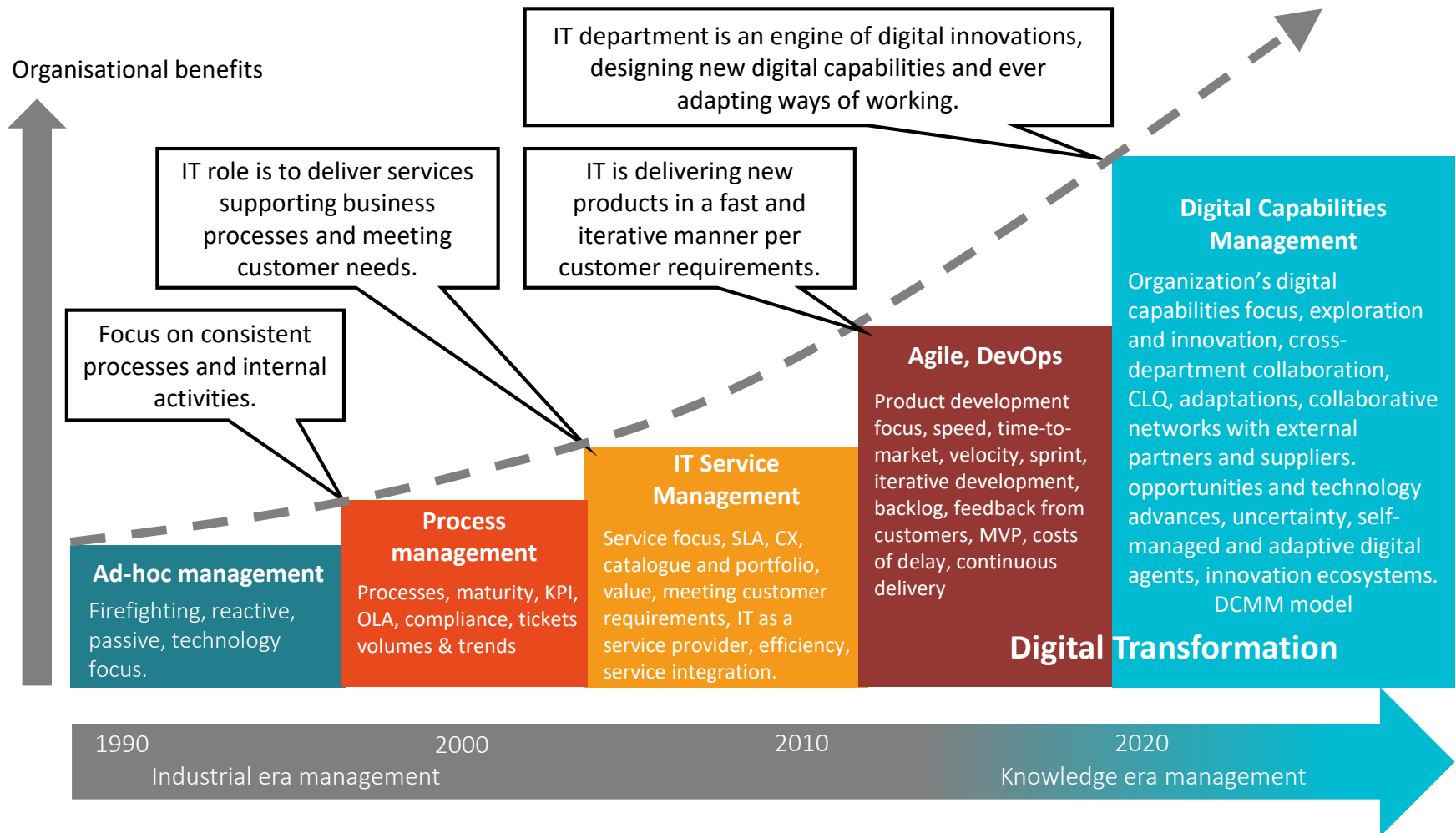Example: DCMM, ISO/IEC 44001, BRM

C

Model for CIO

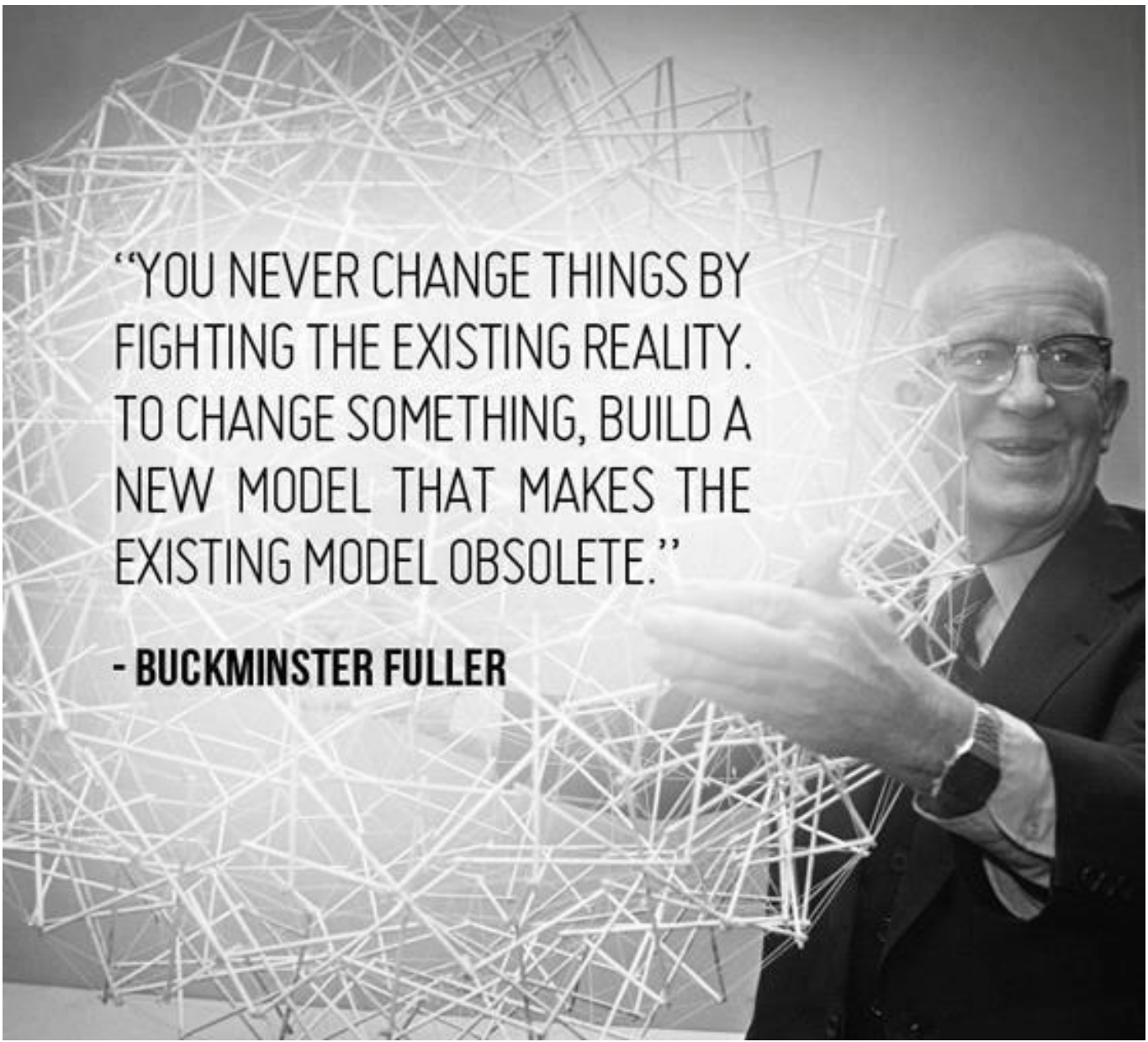None of IT management models were created from the CIO's perspective where:

- IT is **innovating** without request to innovate
- IT is **collaborating** inside and outside
- Many activities are **unpredicted, not requested**, simply have to happen

CIOs are not equipped with "their" management model, so they use what is available.

DCMM is the next generation model

## Development stages of IT management models

Organisational benefits

IT department is an engine of digital innovations, designing new digital capabilities and ever adapting ways of working.

IT role is to deliver services supporting business processes and meeting customer needs.

IT is delivering new products in a fast and iterative manner per customer requirements.

Focus on consistent processes and internal activities.

Digital Capabilities Management

Organization's digital capabilities focus, exploration and innovation, cross-department collaboration, CLQ, adaptations, collaborative networks with external partners and suppliers. opportunities and technology advances, uncertainty, self-managed and adaptive digital agents, innovation ecosystems. DCMM model

Agile, DevOps

Product development focus, speed, time-to-market, velocity, sprint, iterative development, backlog, feedback from customers, MVP, costs of delay, continuous delivery

IT Service Management

Service focus, SLA, CX, catalogue and portfolio, value, meeting customer requirements, IT as a service provider, efficiency, service integration.

Process management

Processes, maturity, KPI, OLA, compliance, tickets volumes & trends

Ad-hoc management

Firefighting, reactive, passive, technology focus.

Digital Transformation

1990	2000	2010	2020
Industrial era management			Knowledge era management

"YOU NEVER CHANGE THINGS BY FIGHTING THE EXISTING REALITY. TO CHANGE SOMETHING, BUILD A NEW MODEL THAT MAKES THE EXISTING MODEL OBSOLETE."

- BUCKMINSTER FULLER

New models

- All social networks (facebook, twitter, Linkedin) are hugely successful while not based on ITSM logic.

- How is that possible, if ITSM is the best practice but not used in the most growing and most innovative areas?

- Is AI a service or something else?
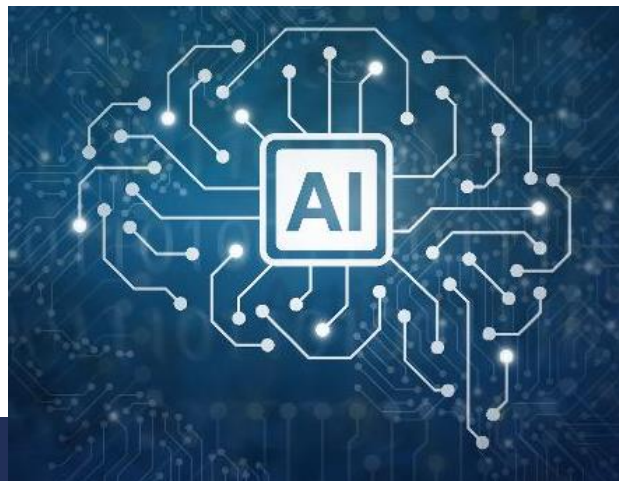
New economy paradigms

Topic	Samuelsonian benchmark as taught in intro	Contemporary economics and CORE's benchmark
People	are far-sighted and self-interested	are also cognitively limited and have motives other than self-interest, such as social norms of fairness and reciprocity
Interactions	are among price takers in competitive markets	include price-makers and interest rate and wage setters, strategic interactions and non-market interactions
Information	is complete	is usually incomplete, asymmetric, and non-verifiable
Contracts	are complete and enforceable at zero cost	are incomplete for effort and diligence in labour and credit markets, and for other external effects such as traffic congestion or knowledge
Institutions	include markets, private property, and government	also include informal rules (norms), firms, unions, and banks
History	is largely ignored	provides data about alternative rules of the game and the process of change
Differences	are confined to preference and budget constraint differences among buyers and sellers	also include asymmetric positions, for example as employers or employees, and as lenders or borrowers
Power	market power, political power	includes also a principal's power over an agent in labour, credit, and other markets
Economic rents	create inefficiencies through 'rent-seeking'	are also endemic in a well-functioning private economy, creating the incentive to innovate, or to work hard
Stability and instability	The economy is self-stabilizing	Stability and instability are both characteristics of the economy
Evaluation	is confined to the presence of unexploited mutual gains (Pareto-inefficiency)	also includes fairness

coreecon
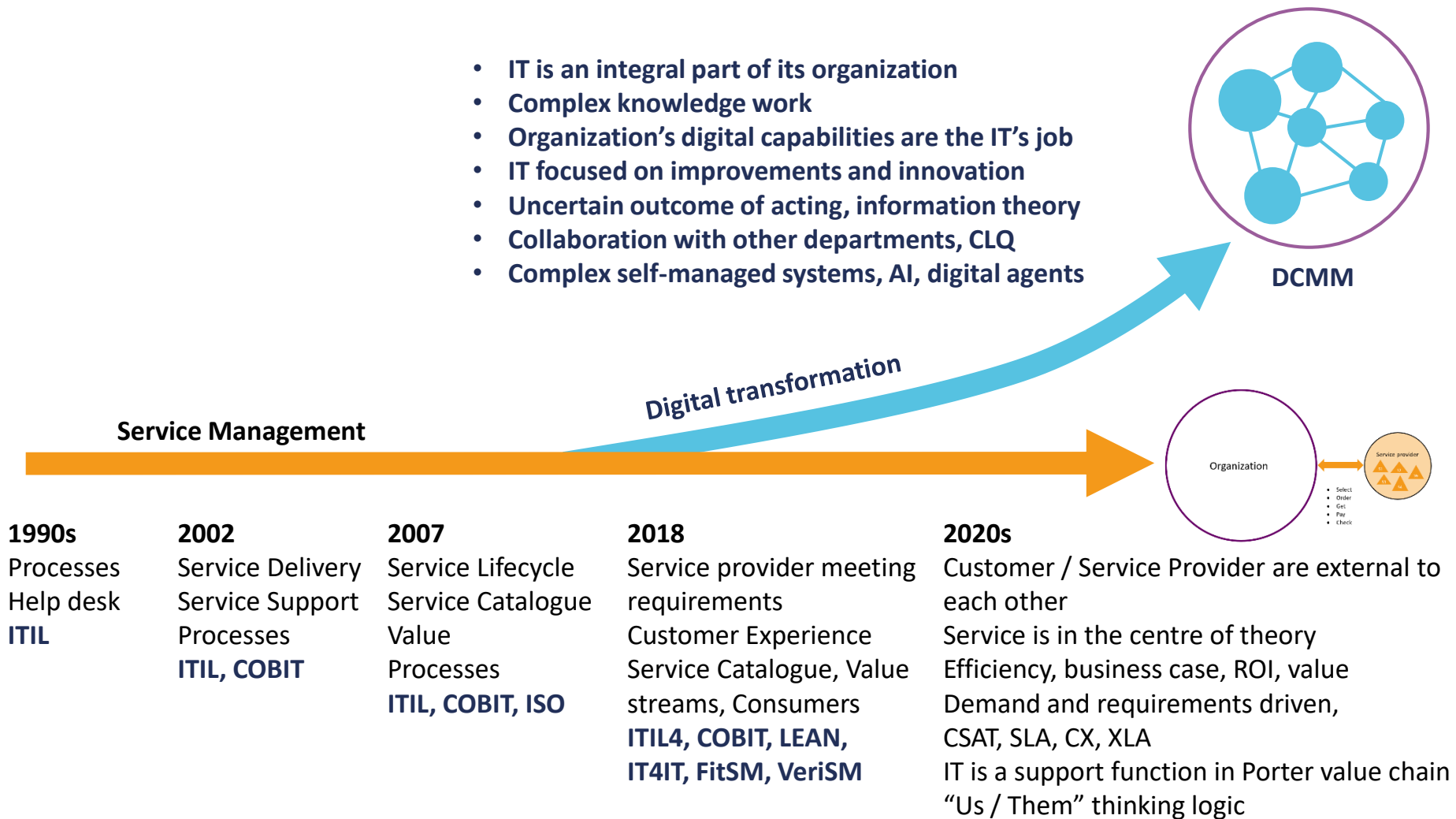
Economics for a changing world

New models

- ISO 44001:2017 Collaborative business relationship management systems

- DCMM constructed from the CIO's perspective (2019)

World of services is transitioned to collaborative efforts (networks), where economy transaction is not the primary driving force. Complex networks and complex systems.

Evolution path divergence

- **IT is an integral part of its organization**
- **Complex knowledge work**
- **Organization's digital capabilities are the IT's job**
- **IT focused on improvements and innovation**
- **Uncertain outcome of acting, information theory**
- **Collaboration with other departments, CLQ**
- **Complex self-managed systems, AI, digital agents**

DCMM

Digital transformation

Service Management

1990s	**2002**	**2007**	**2018**	**2020s**
Processes	Service Delivery	Service Lifecycle	Service provider meeting requirements	Customer / Service Provider are external to each other
Help desk	Service Support	Service Catalogue	Customer Experience	Service is in the centre of theory
ITIL	Processes	Value	Service Catalogue, Value streams, Consumers	Efficiency, business case, ROI, value
	ITIL, COBIT	Processes	**ITIL4, COBIT, LEAN, IT4IT, FitSM, VeriSM**	Demand and requirements driven, CSAT, SLA, CX, XLA
		ITIL, COBIT, ISO		IT is a support function in Porter value chain
				"Us / Them" thinking logic

Organization — Service provider — Select, Order, Get, Pay, Check

Q4IT QUALITY MATTERS

DCMM new paradigm

~~IT is a service provider~~

IT is department responsible for organization's digital capabilities developed through collaborative effort.

Digital Capabilities Management Model

Principles

| 1. Sharing | 2. Self-motivation | 3. Uncertainty | 4. Adaptations | 5. Fairness |

Techniques:
CVC
ADRA
RBA

DCMM

Stories
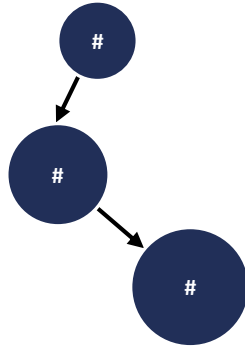
Activity

New component NC

Improvement IM

Normal status NS

Modification MO

Extension EX

Reduction RD

Emergency ER

Check CK

Recovery RC

Wrong going WG

Organization
Digital Agents enable Digital Capabilities

CA1 · CA2 · CA4 · CA6

DA 1 · DA 6 · DA 2 · DA 4 · DA 6 · DA 5 · A 5 · DA 3

IT Department

S1 · S2 · S3
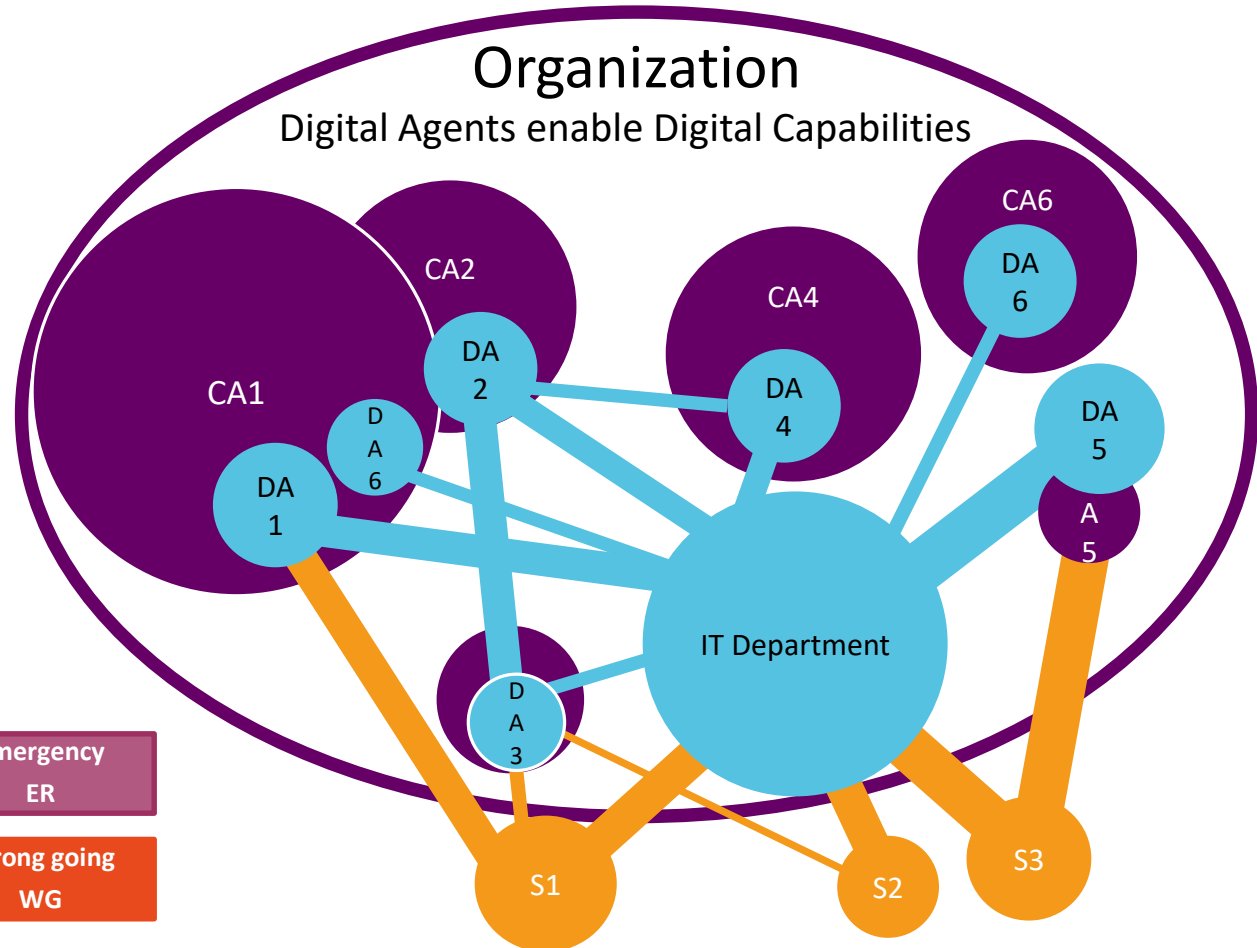
Digital agent / Algorithm

- Digital agent (sw, application, configuration, APIs, system, product, service…) is approached as algorithm + data

- Digital Intelligent Agent can self-modify its algorithm i.e. chatbots, Alexa, AI antivirus

- DA's exhibit similarities with living organisms – i.e. self-repair, self-manage, aging, transformation to the next generation of DA

- DA's are providing digital capabilities to the whole organization

- DA's are consuming resources of its organisations.

RBA

- Resource benefits analysis is providing practical asynchronous feedback loop and source of learning and adaptations.

- Analysis of organization's resources expensed and benefits gained - on the organization level.

- RBA is harnessing visual proportional model allowing understanding of the bigger picture and relative proportions.

Total resources versus Benefits of Capabilities
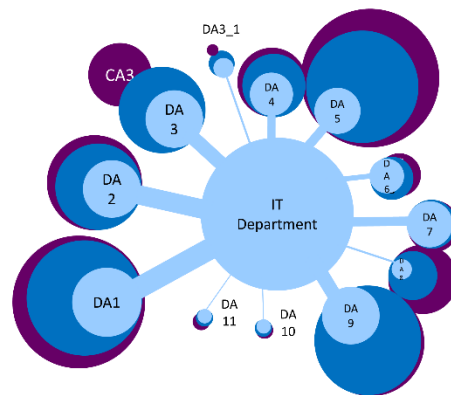
IT Annual Resources Total	3 500 000 GBP	Benefit versus resources	Actual Benefit of resources	D	D	D
A1	EPR Finance	21%	110%	2 656 500	2,4	4,38	4,60
A2	Logistics	14%	120%	1 356 000	2,0	3,00	3,29
A3	CRM in ERP	14%	80%	596 800	2,0	2,44	2,18
A3_1	CRM in cloud	2%	20%	20 400	0,7	0,90	0,40
A4	Personal and salary	8%	120%	720 000	1,5	2,19	2,39
A5	Email and collaboration	9%	150%	2 872 500	1,6	3,90	4,78
A6	Intranet	5%	110%	280 500	1,2	1,42	1,49
A7	Security	9%	170%	416 400	1,6	1,66	1,82
A8	E-learning	2%	200%	716 000	0,7	1,69	2,39
A9	Personal computing	14%	100%	1 770 000	2,0	3,75	3,75
A10	Smart Cameras	1%	100%	47 000	0,5	0,61	0,61
A11	Customer services AI	1%	100%	51 000	0,5	0,64	0,64
Total		100%	119%	11 503 100 GBP	5,2	8,76	9,57

IT as delivering value is discontinued

- The CIO is not COO, value to customers is mostly created by digital agents (i.e. www.amazon.com) or selling the core business products or services (cars, AWS, smartphone, ….)

- The CIO is providing their organization new and better digital capabilities which then enable creation of more value through better or new products.

- Value is created on the organization level, not on department level, value is created only when true customer is purchasing products.

Inside organisations we collaborate
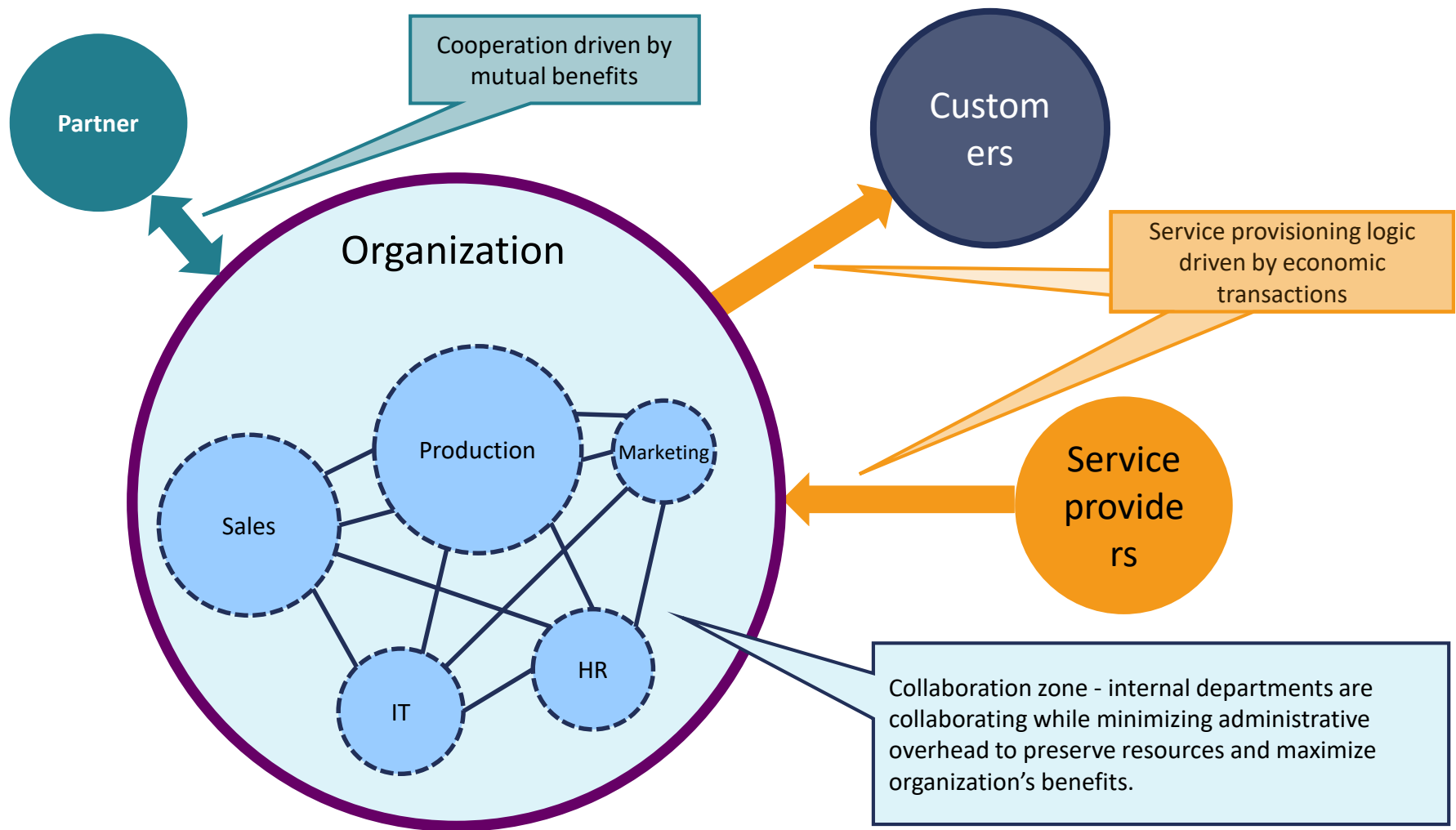
Activities and stories

- Only about 15% IT works is repetitive

- Most of activities are performed without explicit demand – similar to heart beat, brain and thoughts – complex knowledge work

- A story is a cluster of interrelated dynamic activities with uncertain outcome

  (not same as "user stories" used in agile)
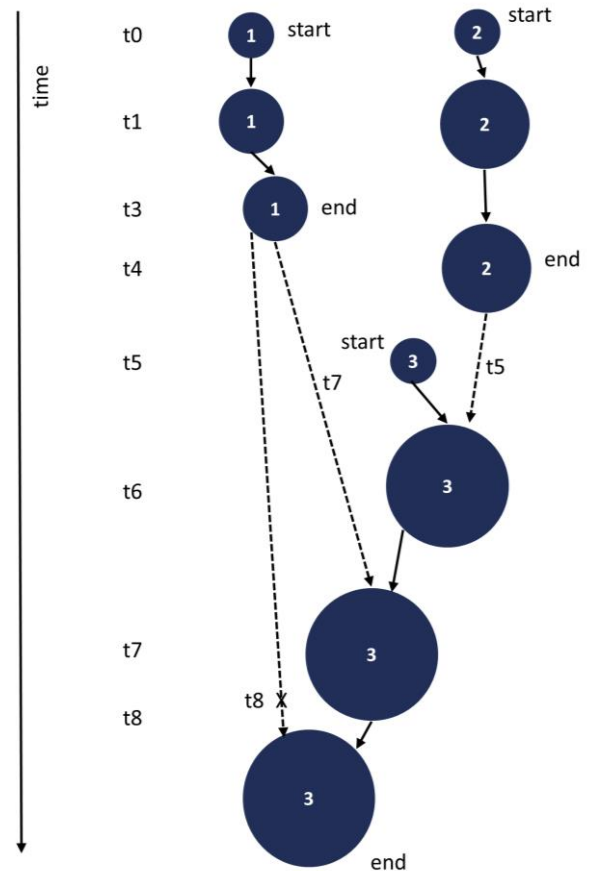
DCMM Organisation

- Shadow IT doesn't exist
- DCIB – IT focus on innovations and improvements
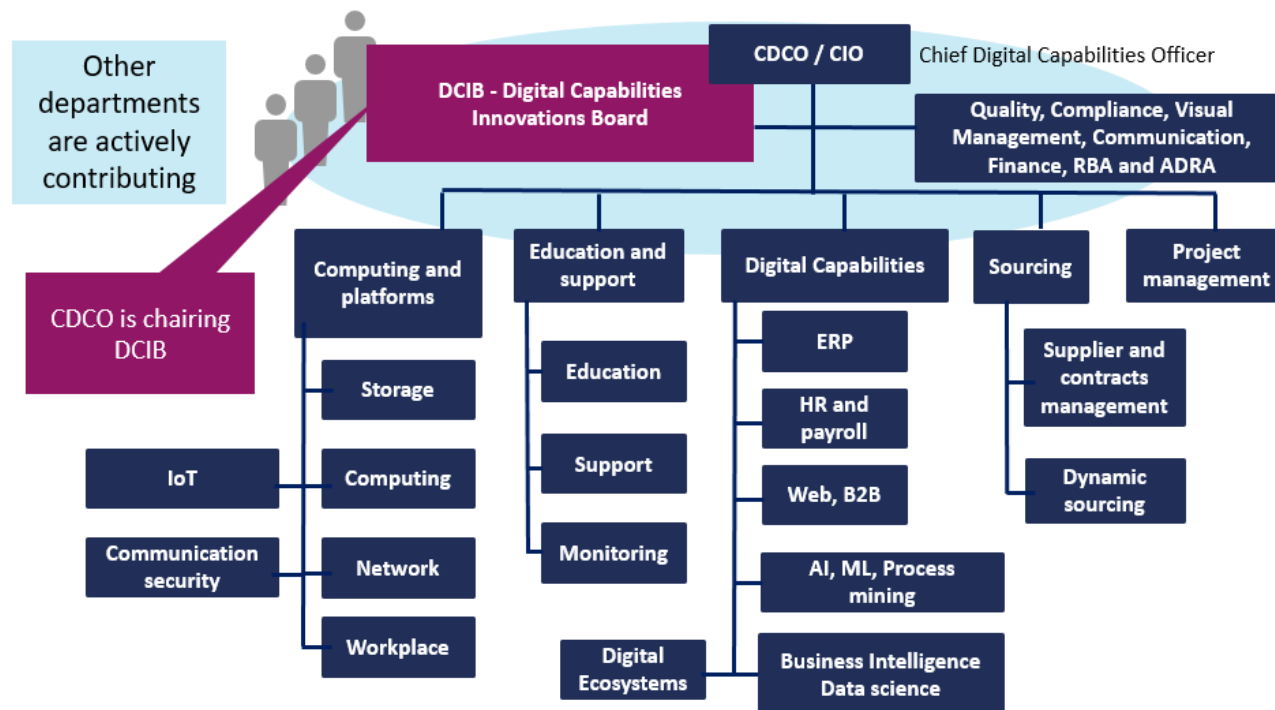
AI support

- DCMM supported by suitable tool constructed with DCMM logic – DA, Activities

- Activities, stories and RBA can collect data to help IT in decision making or triggering "required activities"

- Complexity of IT is suitable to explore AI also recursively for managing and decision making support in IT management.

DCMM
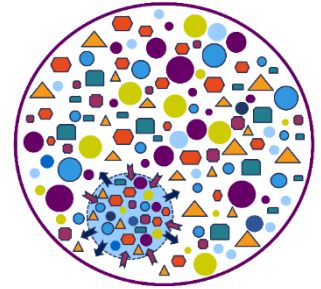
- Coherent model designed from the CIO's perspective.

- Based on collaboration, sharing and fairness.

- Minimizing self-consumed administrative resources.

- Self-managed digital agents, digital intelligent agents.

- Changed paradigm of the IT role inside organisations.

- Encoded constant adaptations and learning.

- Support for AI.

ITSM is good for	DCMM is good for
External service providers and shared service centers.	Internal IT departments and collaborating organizations like corporates, alliances.
Serving many different customers where consistency of services is the key parameter. Processes and KPI must be measured as a part of billing and SLA bounds.	IT is organization´s capability department, responsible for innovations and coping with competition. SLAs not critical. Processes are not core capability. **Adaptation** is.
Ensuring economy for service provider (profit) while service is reasonable priced.	Benefits of digital capabilities are measured only on the organization level.
Service desk, support processes, service delivery meetings agreed SLAs, change management etc.	Provide unique solutions, new business models. Orchestration of digital agents including digital intelligent agents i.e. AI, social media robots etc.
Decisions based on economy calculations and customers' demand.	Decisions based on opportunities and risk taking.
Key word: Profit, Efficiency	**Modern, Better, Innovation**

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DCMM: ISBN 9781723571923

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DCMM: Digital Capabilities Management Model

by Zdenek Kvapil (Author), Jonathan Boyd (Contributor)

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Navigate your organization through digital transformation with a modern, radically new IT management model, driven by collaboration, adaptability and energy efficiency

Why IT matters for your organisation's digital capabilities

DCMM

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Poster

DCMM Trainings

https://www.q4it.eu/en/dcmm-courses/

Course	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Badge
DCMM Masterclass	1 day course							DCMM MASTERCLASS
DCMM Professional		2 day course						DCMM CERTIFIED PROFESSIONAL
DCMM Manager				2 day course				DCMM CERTIFIED MANAGER
DCMM Expert	5 day course							DCMM CERTIFIED EXPERT
Digital Transformation for CIO						1 day course		Q4IT CERTIFICATION IN DIGITAL TRANSFORMATION
Digital IT Strategy							1 day course	Q4IT CERTIFICATION IN DIGITAL IT STRATEGY
Theme:	Why DCMM and key components	DCMM ROI and project phases	Transforming IT management to DCMM	Managing IT using DCMM pattern	Driving IT innovation	Digital transformation of IT management	IT strategy for digital era organizations	

What Next

- DCMM Masterclass – 1D course targeted to CIO

- DCMM Professional – 2D course

- DCMM Manager – 2D course

Sample DCMM project initiation document provided on request.
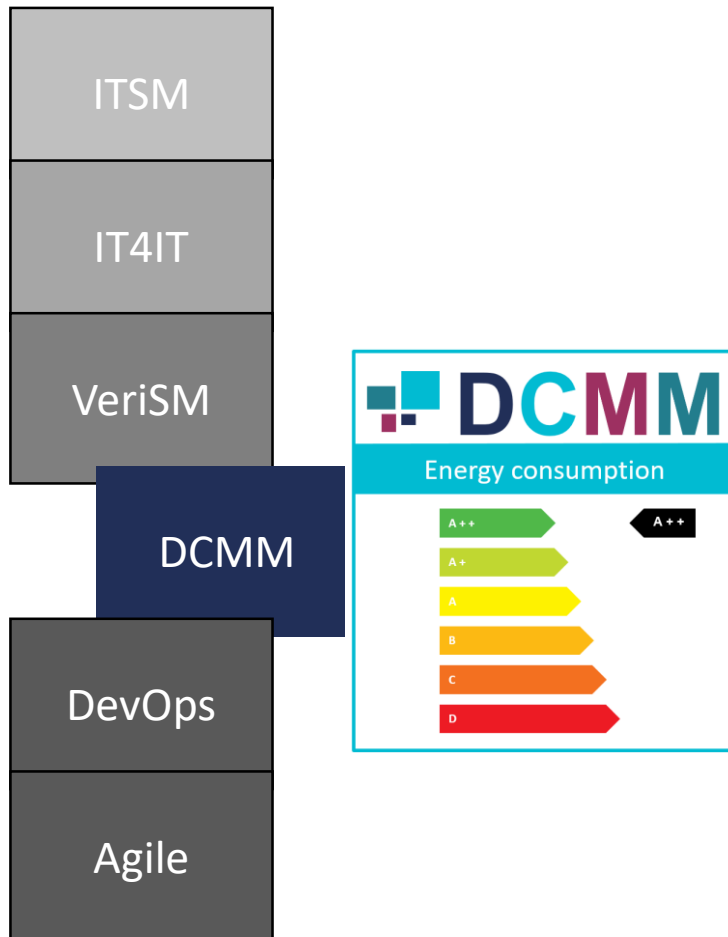
Future is a result of acting.

Questions

ZDENEK.KVAPIL@Q4IT.EU

CIOs are searching better models

Bringing scientific approach to IT management models

ITSM

IT4IT

VeriSM

DCMM

DevOps

Agile

DCMM
Energy consumption

A++
A+
A
B
C
D

A++

None of existing management models is providing method of measuring its own consumption of resources / energy efficiency.

Hypothesis: DCMM is providing the very most benefits for its organization from all existing IT management models with the minimum administrative resources consumed.

Do you know energy consumption of your management model?

SM

A60 E27 10W
220-240V~50/60Hz
3000K 806lm 270°

DCMM