



Lucerne University of
Applied Sciences and Arts

**HOCHSCHULE
LUZERN**



Business Impact der Digitalisierung

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The New Industrial Revolution

Schweizer KMU unterschätzen Digitalisierung

Revolution Zwischen Schweizer Grosskonzern Graben: Die Grossen beschäftigen sich seit Jahren mit Herausforderungen der Digitalisierung, die hinterher.

Schweizer Firmen hinken bei der Digitalisierung hinterher



(10.02.2016) Die mittelständischen Schweizer Unternehmen sind mit der Digitalisierung im Verzug. Laut einer Umfrage von Ernst & Young (EY) bei 700 Firmen mit bis zu 2'000 Mitarbeitenden

durchgeführten Umfrage haben digitale Technologien in mehr als der Hälfte der Fälle nur eine marginale Bedeutung.

Revolution

Schweizer KMU und die Digitalisierung

In der Schweiz klafft ein digitaler Graben: Während die Digitalisierung unlängst die Grosskonzerne erreicht hat, spielt sie für KMU kaum eine Rolle. Was das für den Wirtschaftsstandort bedeutet.

16.03.2016 Mittelstand kämpft mit Digitalisierung

Digi-wie bitte?

18th Century
(1784)

19th Century
(1870)

20th Century
(1969)

Today

Steam

Electric Power

Information Technology

Digitization



Winners will be organizations agile enough to innovate rapidly and unbridle their capacity to create cost value, experience value, or platform value for their customers.



The Value of Digital Business

- Cost** – consumption, buyer aggregation
- Experience** – anywhere, anytime, automated
- Platform** – Marketplaces, Crowdsourcing



Four of today's top 10 Incumbents in each industry will be displaced by digital disruption in the next five years.¹⁾

¹⁾ 941 business leaders in 12 industries and 13 countries



Data Centre ▶ Cloud

Public enemies: Azure, Amazon, Google, Oracle, OpenStack, SoftLayer will murder private IT

The dirty half dozen

16 Feb 2016 at 21:16, [Chris Mellor](#)



Analysis On-premises IT is facing decimation by six public cloud enemies: Amazon, Azure, Google, OpenStack, Oracle and SoftLayer, who are on course to have the majority of customers' IT spend by 2018.

An Internet retailer, started up as an online book store, and a website search facility have kickstarted an IT phenomenon which could utterly destroy the on-premises data center business. As far as the entire on-premises IT supplier industry is concerned, Amazon and Google, accompanied by Microsoft Azure, are Public Enemies 1, 2 and 3.

IDC forecasts that public IT cloud services spending will reach more than \$127bn in 2018, accounting for more than half of worldwide software, server, and storage spending growth. The CAGR growth from \$56.6bn in 2014 to \$127bn in 2018 will be 22.8 per cent, about six times the growth rate of the overall IT market.

In other words Amazon, Azure and Google, plus some smaller fish, will siphon off \$127bn from the on-premises IT suppliers, up from the \$56.6bn they sucked off in 2014. The on-premises IT supply industry is now half the size in revenue terms it would have been if the public cloud did not exist.

Amazon boss Jeff Bezos, laughing all the way to the on-premises IT graveyard



By 2017, **75%** of IT organizations will have a bimodal capability.

50% will make a mess of IT.

Bimodal IT is **NOT** a "nice to have."

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Gartner

think
sprinter



think
marathon



What if you Could...

EFFICIENCY



SPEED



DISRUPTION



Infrastructure Silo's!

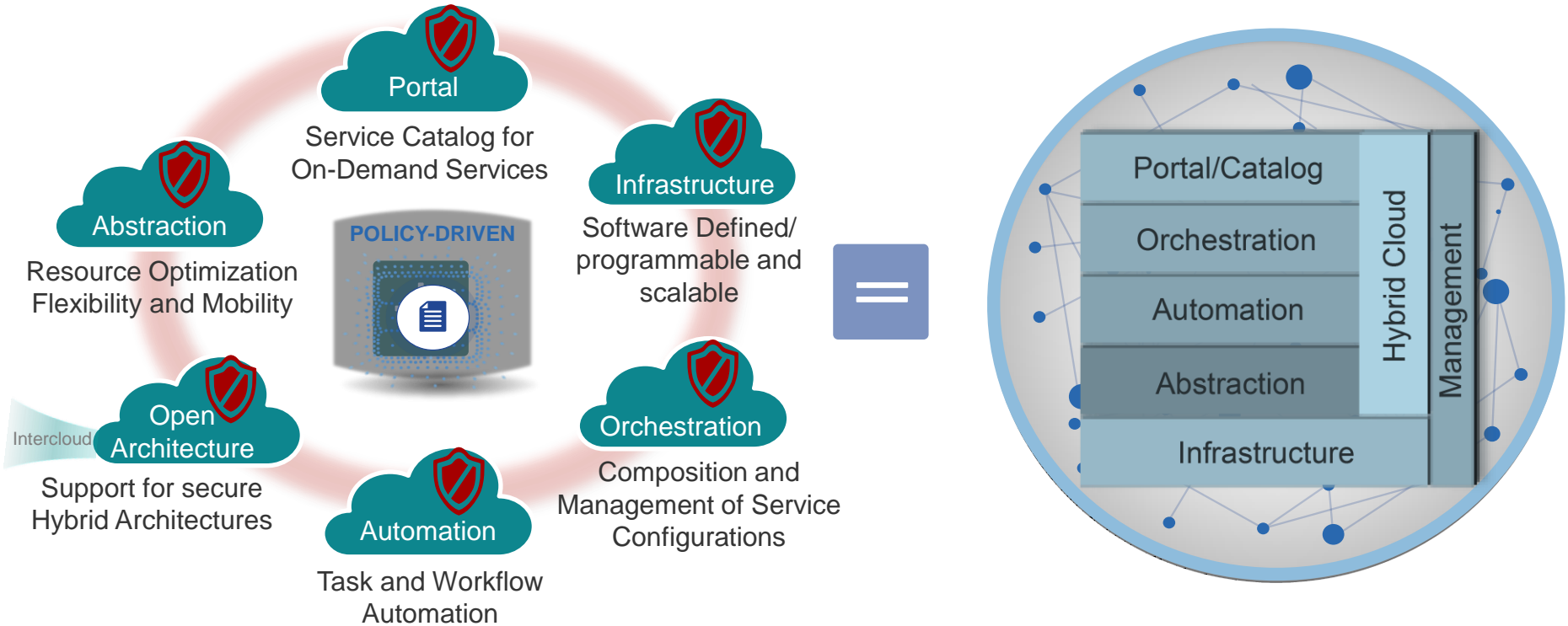


We have seen this before...

- Portal is **what type** of car to build
- Orchestration is **how** to build the car and **what variants** of it
- **Automation** is building the car
- Software Defined Infrastructure is the logistic allocating the required **parts on demand**



Elements Required to Make Cloud Simple



Policy: Links Application Language to Infrastructure

Application Language

- Application tier policy and dependencies
- Security requirements
- Service level agreement
- Application performance
- Compliance
- Geo dependencies



Policy-Driven
Infrastructure



Network Language



Compute Language



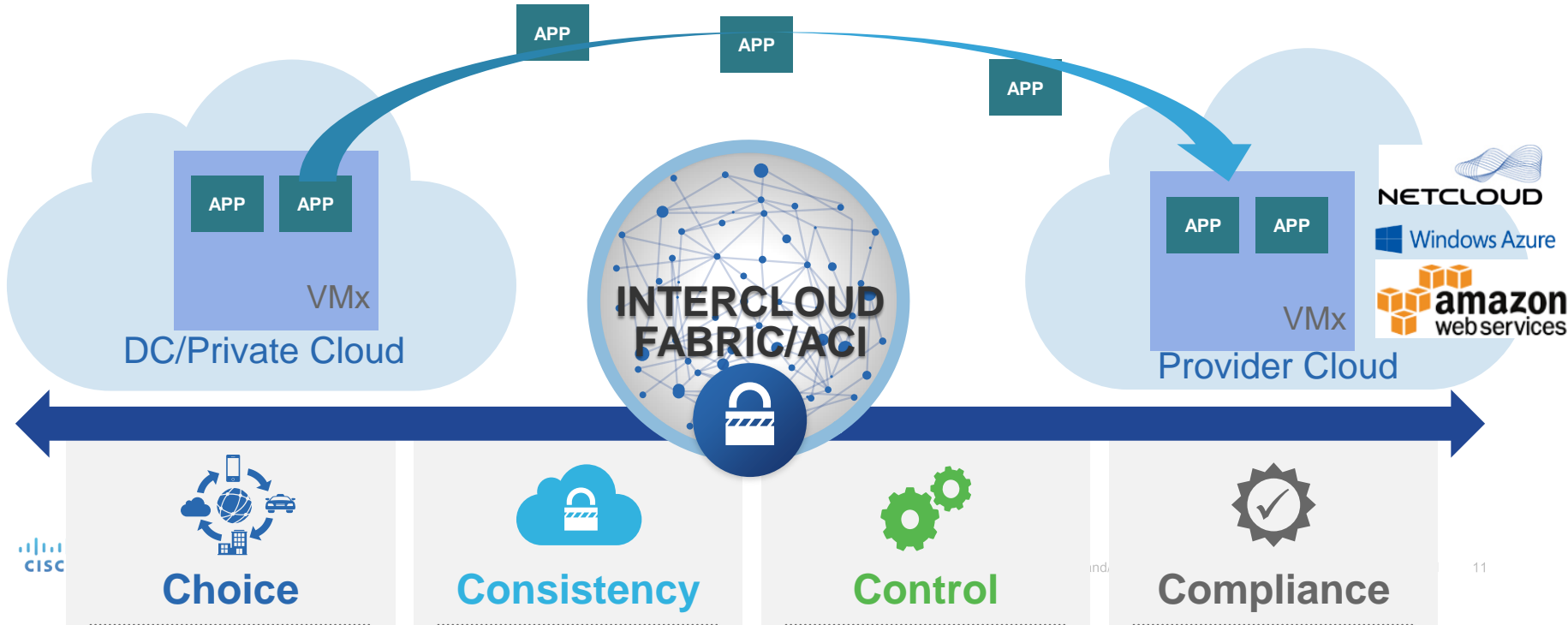
Storage Language



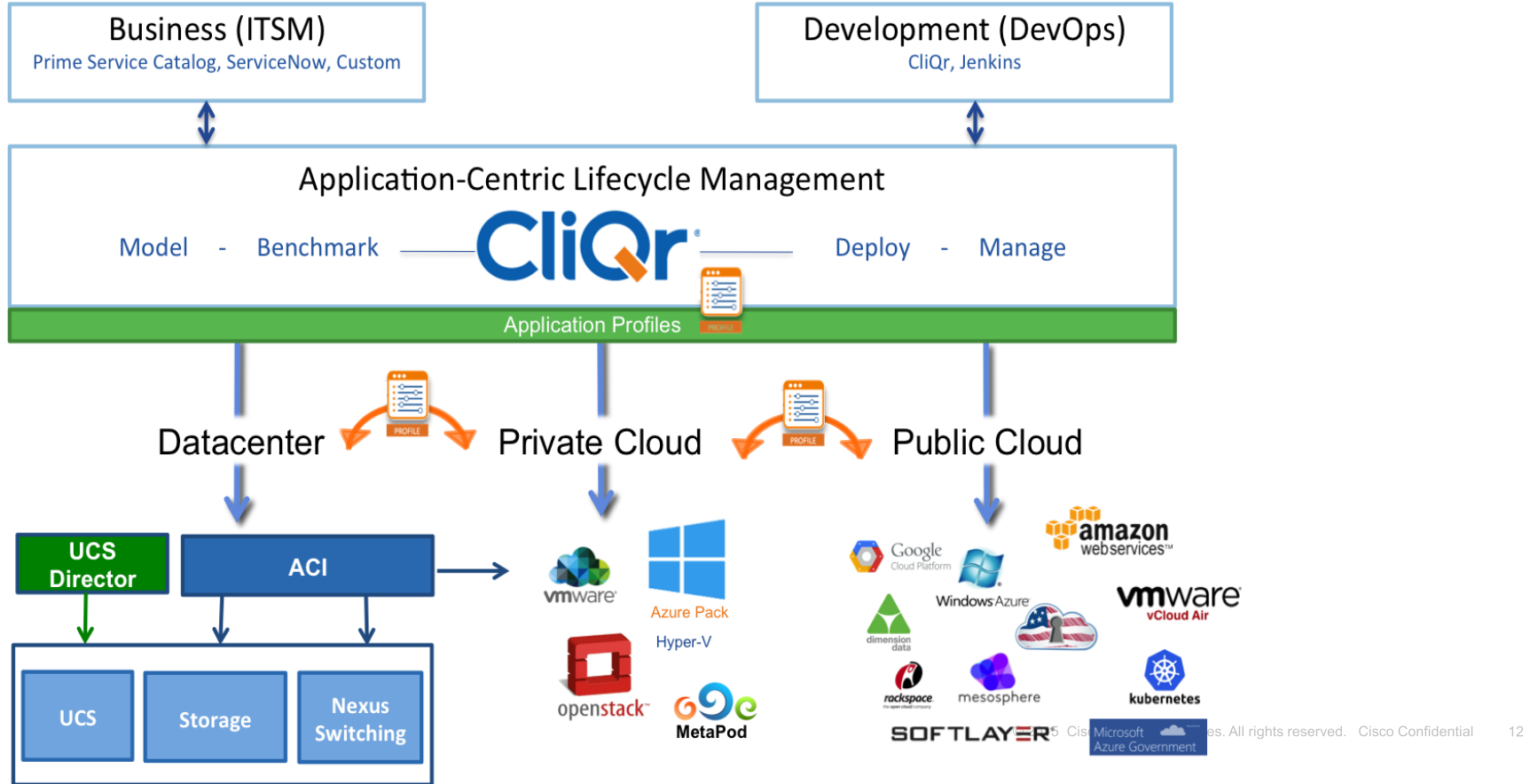
Security Language

Cisco's Multi-Cloud Orchestration

CliQr®



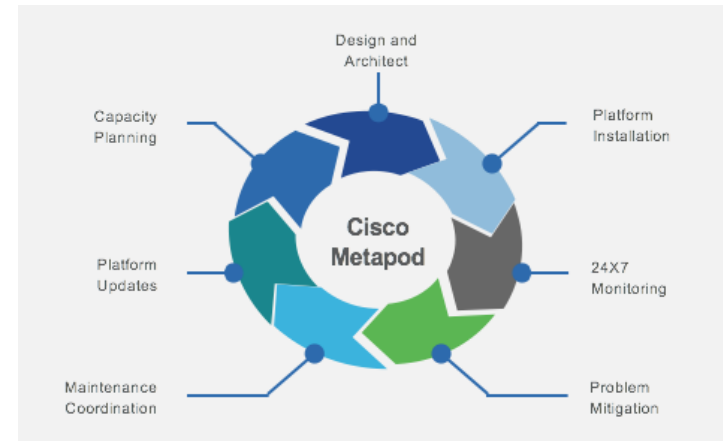
Multi-Cloud end-end orchestration



PaaS-Application modernization



- OpenStack is hard; but a good base for PaaS
- Serves 2 Audiences: IT & Developers
- Single pane of glass for Linux and Windows
- Abstracts infrastructure from developers
- Spin up various types of infrastructure on demand



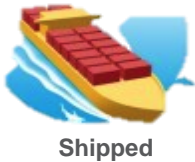
Next generation Microservice based PaaS



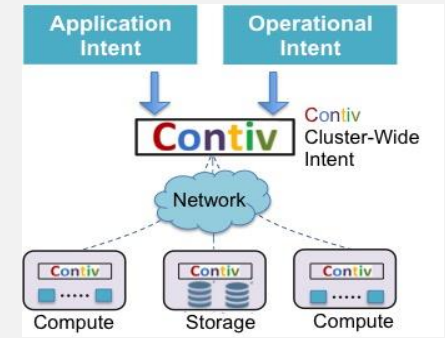
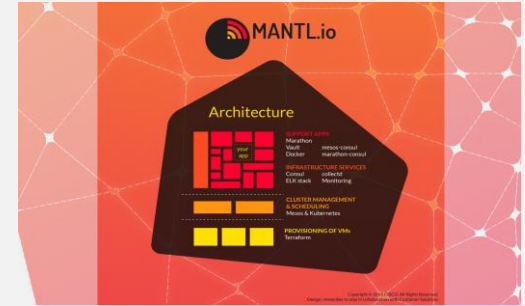
- Fully functional, portable, container-based service at the push of a button
- Deploys apps consistently across internal/private, public, or hybrid IT and cloud environments
- No lock-in



- Open source project defining infrastructure operational policies for container-based application deployment



- For Developers to get their application running locally and deployed in production
- Offers point-and-click method to configure an app, write application code, and deploy



Putting the Full Stack Together

