



# Cloud Computing and the industrialisation of IT infrastructure

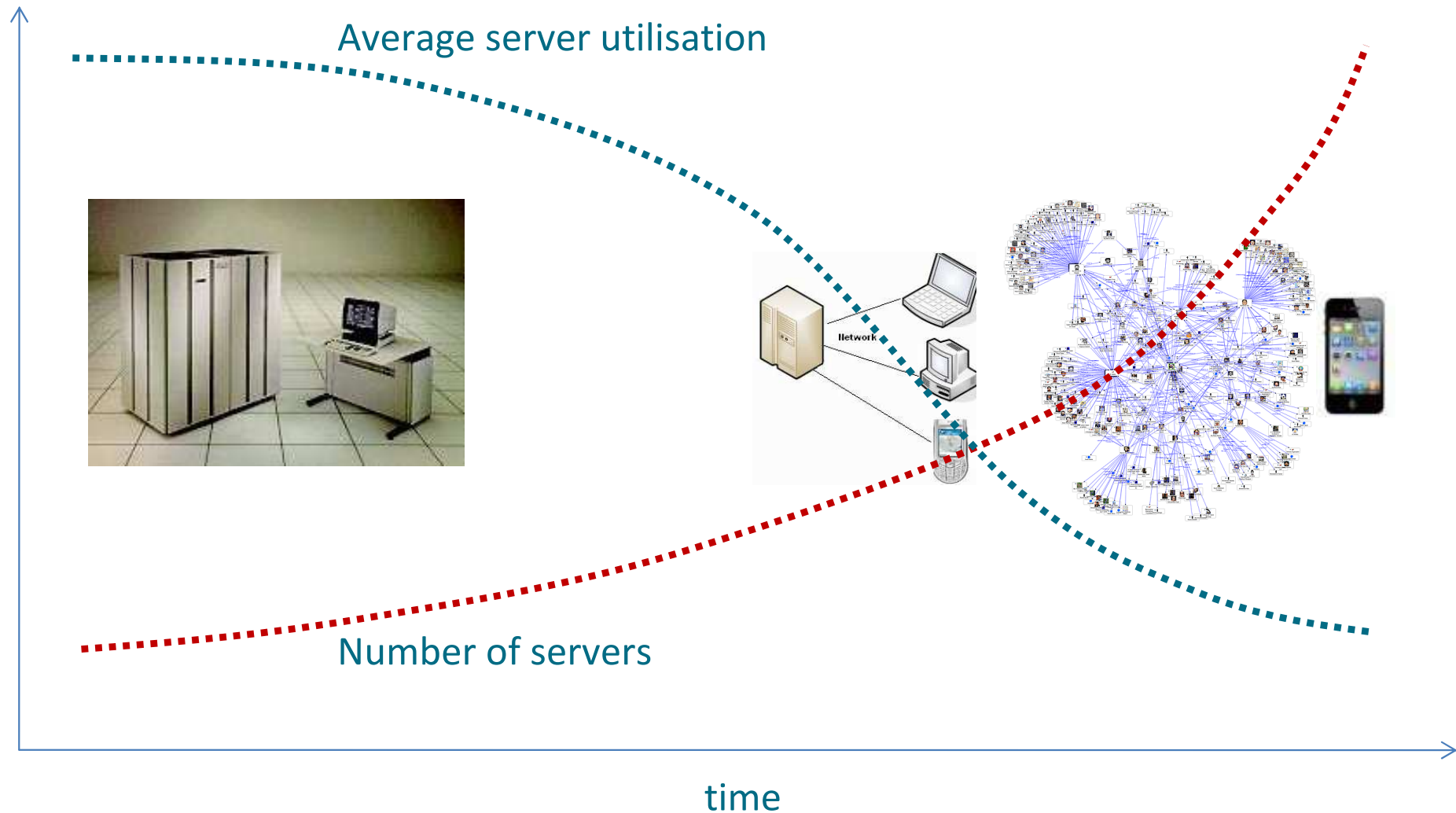
## IBM Cloud Computing roadshow

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advising on IT-business alignment

# A history of IT infrastructure: towards commodity hardware



# Where has commodity hardware got us?



- Vastly improved price-performance per unit
- Improved power consumption per unit
- Improved density



- Extreme server sprawl
- Complexity and risk drive massive over-provisioning
- Overall admin headcount, power, space, cooling requirements significantly greater

Big hardware efficiencies at the unit level; huge inefficiencies in the real world

# Two possible results in reality

Chaos



Rigidity



# The response:

## 2005-2010: a half-decade of virtualisation

Around 50% of organisations say they have virtualised over half their server estate

Around 20% say they've virtualised nearly all their server estate

# No silver bullet, though!

Virtualisation without the right management practices and tools is like buying a tiger to clear up a rodent problem.



# Enter Cloud Computing: the “plug-in-and-go” vision

Shared philosophy: “plug in and go” service



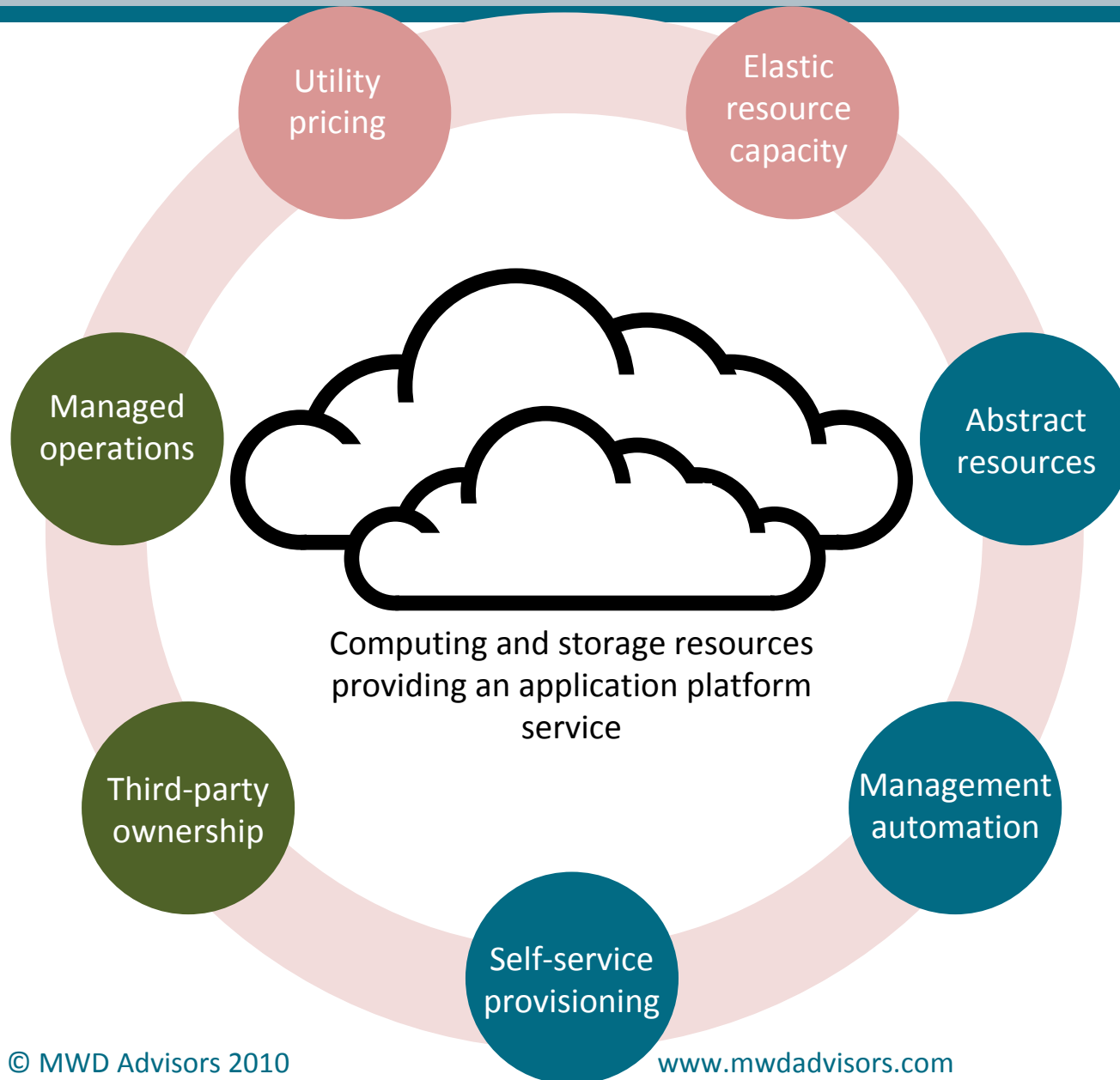
Software-as-a-service offerings (packaged application services)

Cloud Computing platforms (packaged computing and storage services)

“The Cloud” (the Internet)

# Value elements of Cloud Computing

## Architectural, economic, strategic

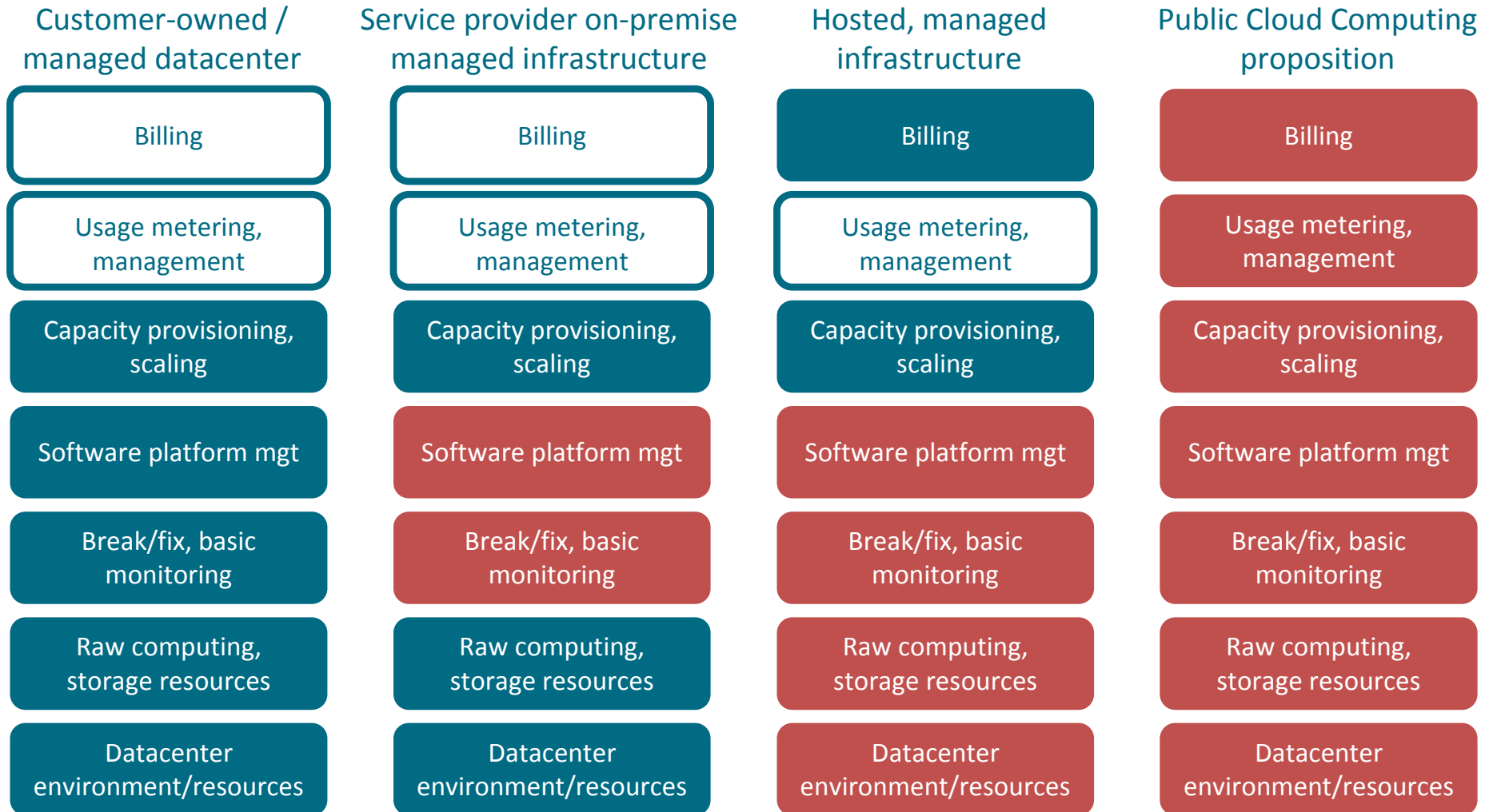


Building on a foundation of virtualisation

- Economic element:** Pay-as-you-go, pay-as-you-grow, no capex
- Architectural element:** Simple, abstract environment for development
- Strategic element:** Focus on what makes you better, leave the rest to someone else



# A sourcing perspective: evolution, not revolution



= customer's responsibility
  = service provider's responsibility
  = not a focus

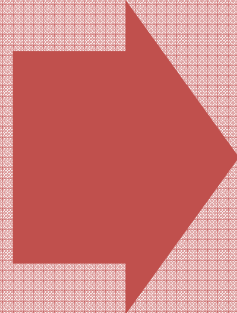
# Public Clouds: not for every workload

- Today's public Cloud Computing platforms are not the same as your on-premise platforms
  - Migration of like-for-like functionality is unlikely to be easy or even possible
- For new applications/workloads: look at workloads individually
  - Security / compliance constraints?
  - Integration constraints?

# Economic entry point: non-uniform workloads

## Economic elements

Utility pricing,  
elastic capacity



## Non-uniform workloads

- Where the expense of acquiring infrastructure to account for peak usage is difficult to justify
- Value is in removing investment overheads; removing cost barrier to new innovations
  - Variable cost model
  - Better risk management
- Examples:
  - Leaner application development, test, staging
  - Low-cost large-dataset batch analytics
  - Online promotional applications

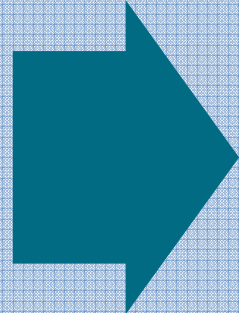
Pharma

Retail

# Architectural entry point: rapid time-to-market

## Architectural elements

Virtualisation,  
automation,  
provisioning



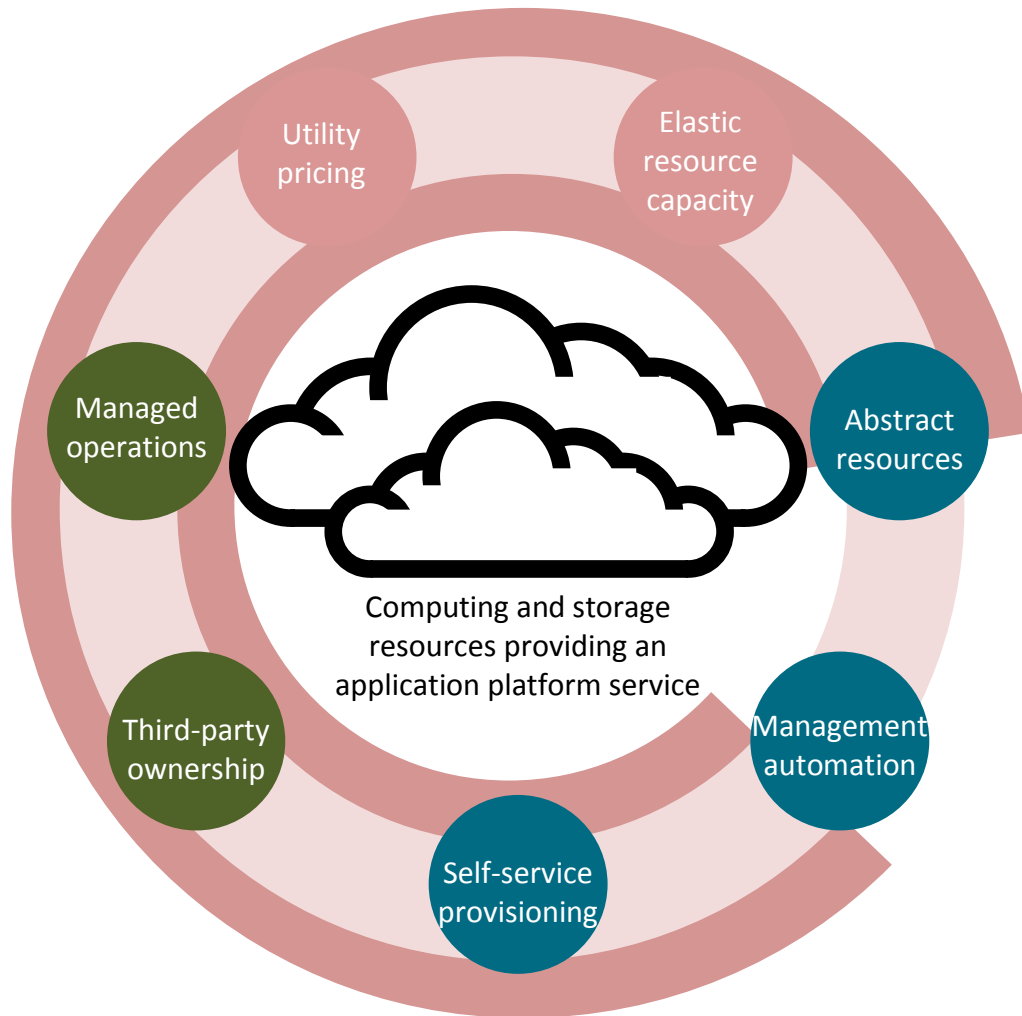
## Rapid time-to-market

- Where a ready-to-use platform is highly compelling
- Value is in being able to deliver / demonstrate results very quickly
  - No infrastructure purchase, commissioning, provisioning
- Examples:
  - Service/application prototyping
  - Serving high levels of “customer” demand for new tactical application functionality
  - Tactical competitive responses

Financial Svcs

# Private Clouds: complementary to Public Clouds!

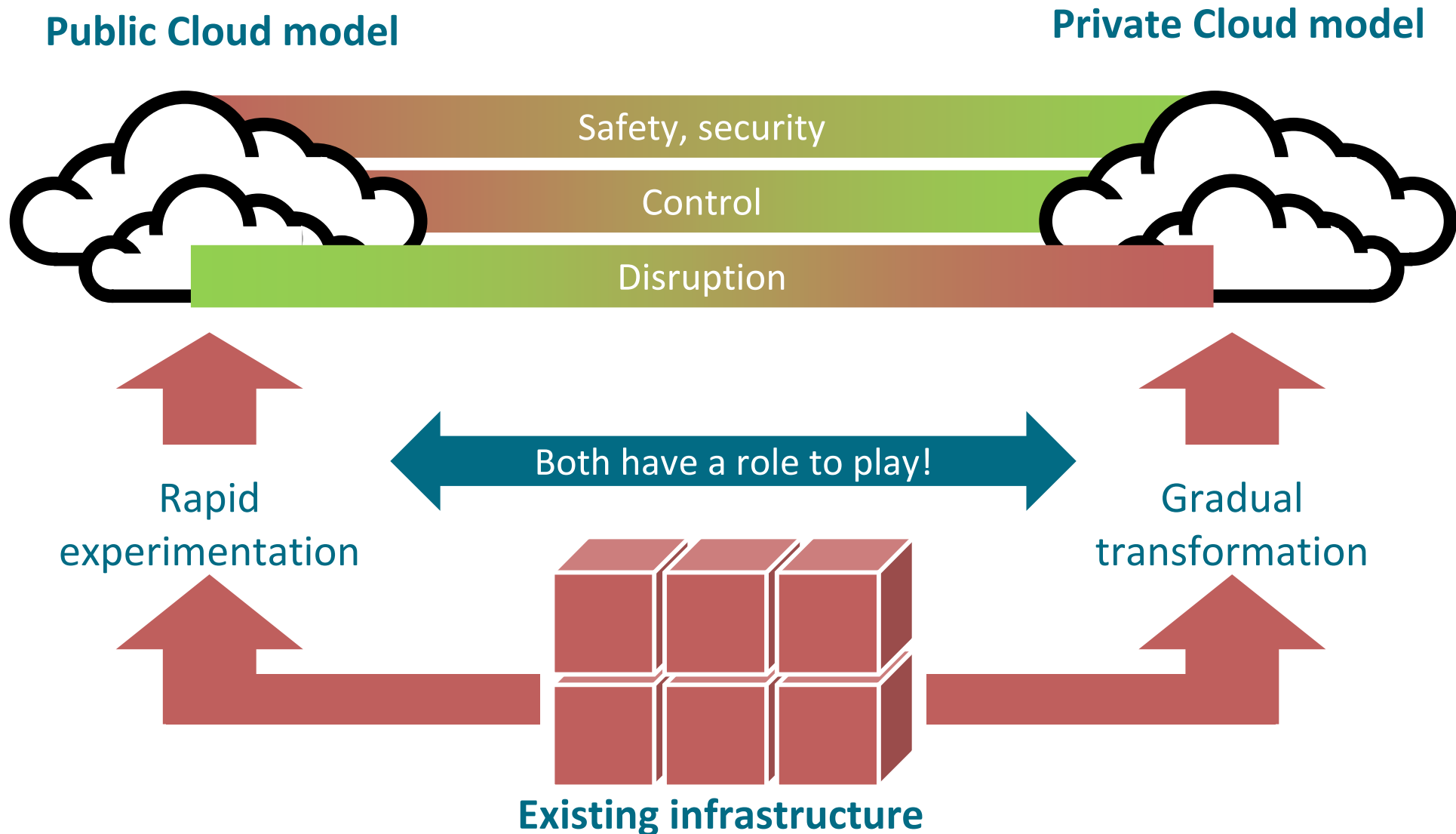
## Public Cloud model



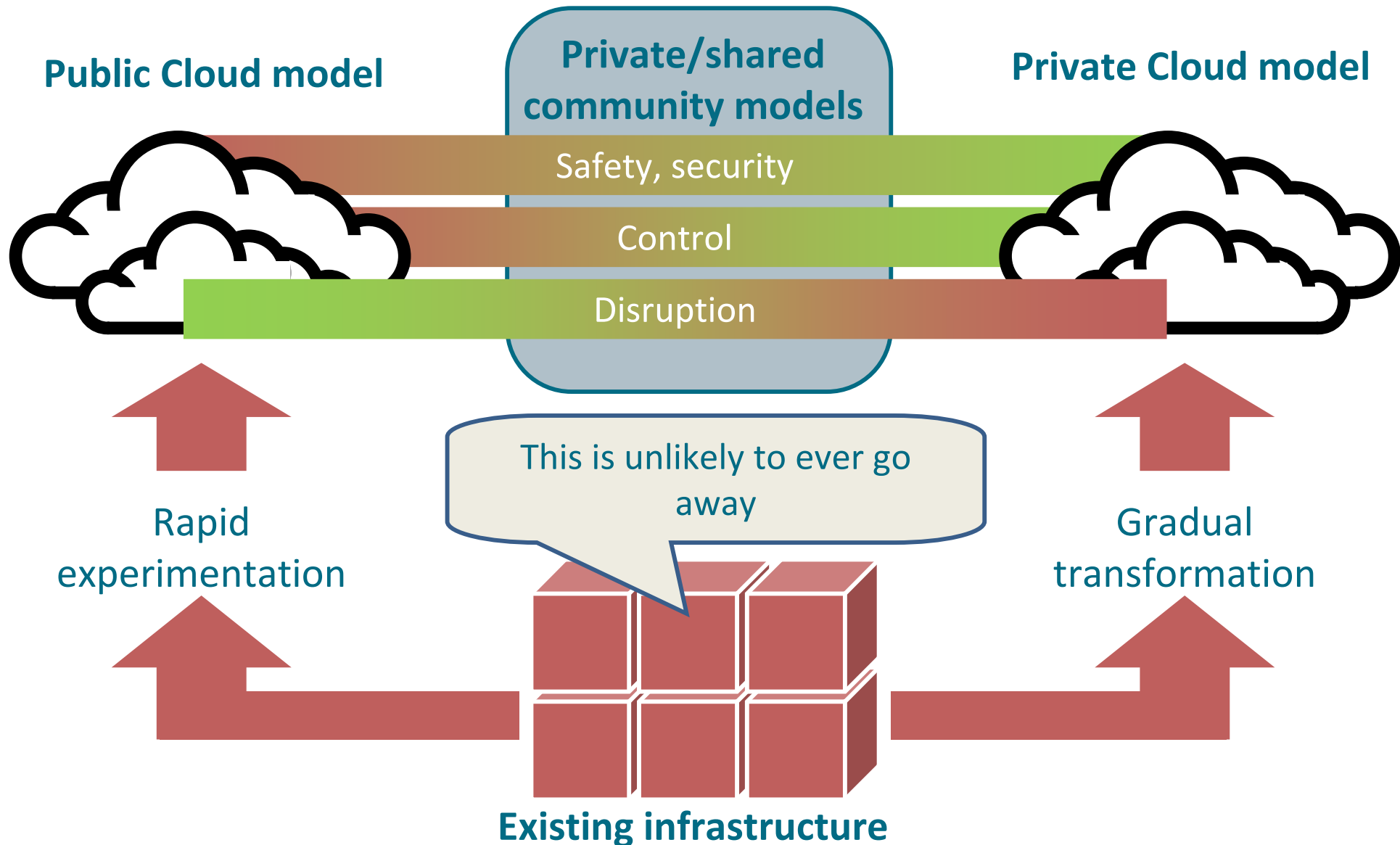
## Private Cloud model



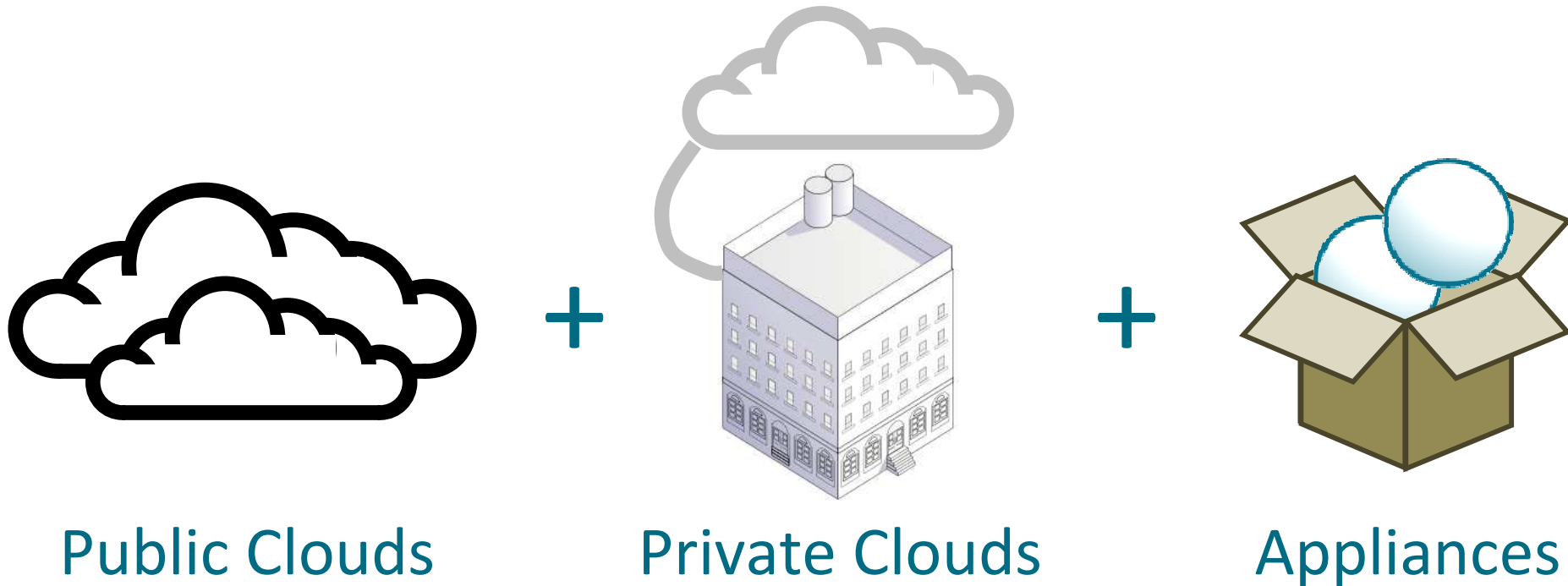
# Both Public Cloud and Private Cloud propositions have a role to play



# Your choice? It has to be about how and where you want to take advantage of the Cloud



# Megatrend: the industrialisation of computing brings business alignment



The true implication of IaaS: the ability to architect and manage infrastructure as a set of technology capabilities that are aligned with business requirements



# Fitting Cloud Computing into your IT strategy

1. Cloud Computing is **not suitable for every workload** or application
2. Cloud Computing platforms are **not all created equal**
3. Different people will try Cloud Computing out for **different reasons** – some because of the financial benefits, some because it helps them do things quickly, and some because it helps them get closer to an outsourced IT capability
4. Cloud Computing, just like virtualisation and SOA, **doesn't eliminate IT complexity** – but it is a tool to help you manage complexity better and reduce it over time
5. Cloud Computing platforms won't replace “traditional” on-premise infrastructure in the short or even medium term; it'll augment it – **nothing ever dies**

Thank you!

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