SaaS - An Overview

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Jürgen Pfeifer
Architect, MCA
Microsoft EMEA HQ
http://blogs.msdn.com/juergenp

The 60's: Batch Processing

❖ In the 1960's batch processing arrived

  ◆ You'd submit your work on a deck of cards

  ◆ Come back later & pick up your listing...

  ◆ Lots of concurrent batch jobs

❖ Offline User interaction – still had the white coats

Late 60's, 70's: Accounting as Service

Snail Mail

Snail Mail
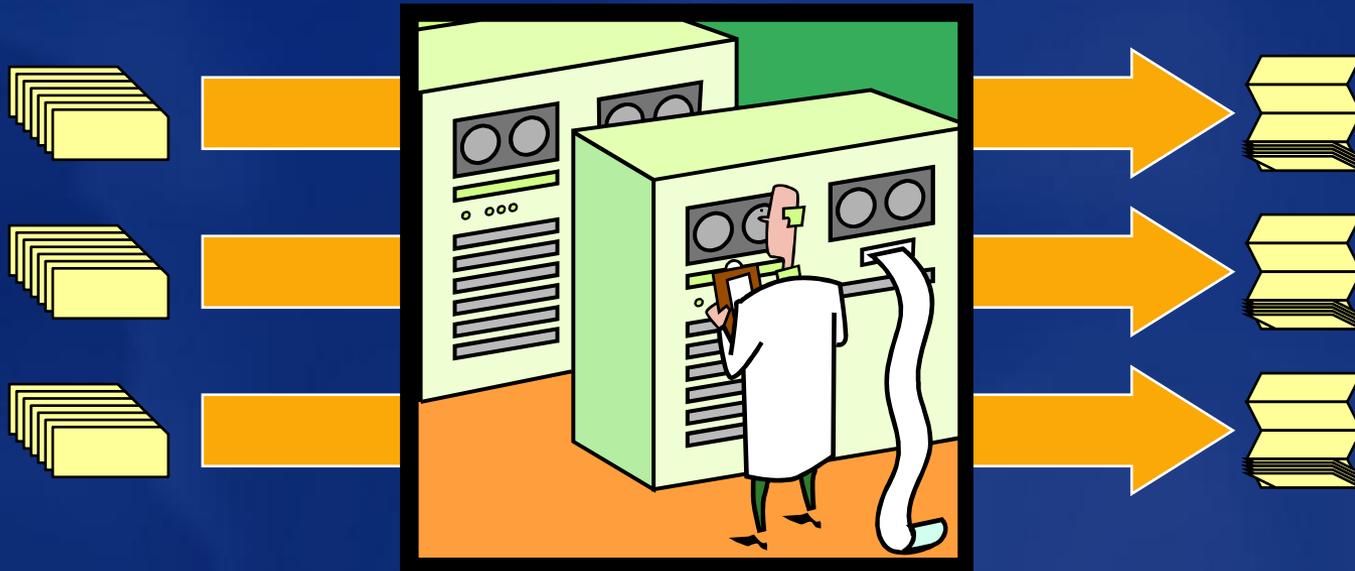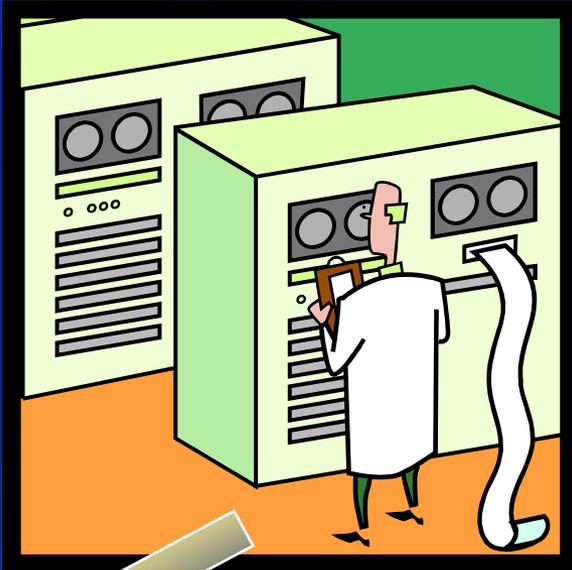
Many Customers

Late 60's, 70's: Accounting as Service

Decoupled Input
From
Process

Transport
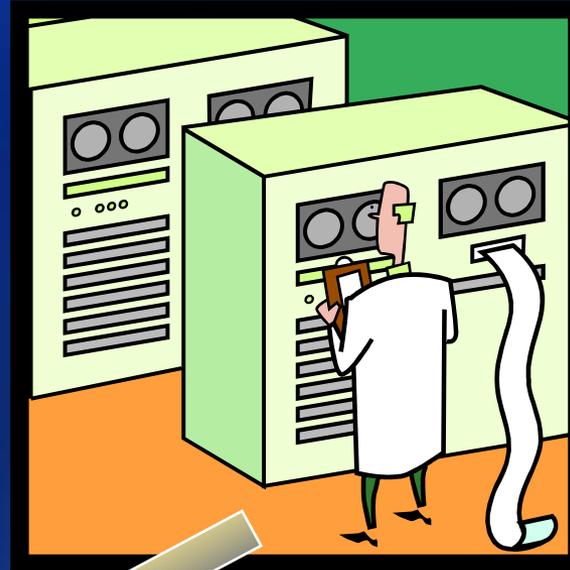
- Multi Tenancy
- Hosted

Decoupled
Output
From
Process

Transport

Many Customers

Some Observations

❖ Decoupled I/O devices and transport were typically process specific.

❖ The exchange of documents and the level of service is essentially a business contract.

❖ Large numbers of SMBs as customers (hundreds of thousands)

- ◆ These customers would have never used IT
  - ◆ Too expensive
  - ◆ No competency
- ◆ But they have a fundamental need for the service

Innovation happens...

❖ In the 80's the dedicated devices were replaced by PCs

◆ Often still dedicated PCs for the purpose of the service provider

◆ Exchange still by snail mail and diskettes

❖ Late 80's, early 90's : Data exchange via dedicated dial-in

◆ Still tied to the service provider

◆ PCs often still dedicated to the service

Innovation never stops...

❖ **Mid 90's : PC is universal business device**

❖ **The Internet get's discovered by the economy**

❖ **Late 90's: The connected device revolution takes the market**

❖ **Situation: We can connect people, devices, systems and processes**

◆ Decoupling of devices from processes and systems becomes „universal"

WHAT IS SOFTWARE AS A SERVICE (SAAS)?

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A working definition of SaaS

❖ **A hosted IT capability**
  ◆ Owned, located, operated and managed externally
  ◆ Not just application software!
    ◆ Also operating environments, integration platforms etc
  ◆ But... only technology, not people
❖ **Optimised for delivery as a service**
  ◆ Not just a hosted instance of an off-the-shelf packaged application
  ◆ Designed to be offered to multiple customers (multi-tenant)
  ◆ Optimised for subscription-based licensing
  ◆ Customer configuration, not customisation
  ◆ Transparent upgrades
  ◆ Service level monitoring/management
❖ **Over the Internet**
  ◆ But... not necessarily to a browser client

Something old…

- ❖ Hosted IT capability delivery is nothing new!
- ❖ In the 1960s the bulk of the software & services industry consisted of "processing bureaux"
- ❖ In the late 1990s the buzz was around Application Service Provision (ASP)
- ❖ Consumer-oriented capabilities
  - ◆ Hotmail, ICQ, AIM etc
- ❖ How is SaaS different?

…something new!

Wave 3: "Web as place"

Wave 2: "Web as sales channel"

Wave 1: "Web as library"

Nature of the Web

Adapting platform

Static publishing medium

Proprietary transactions

Open communities

Applications of the Web
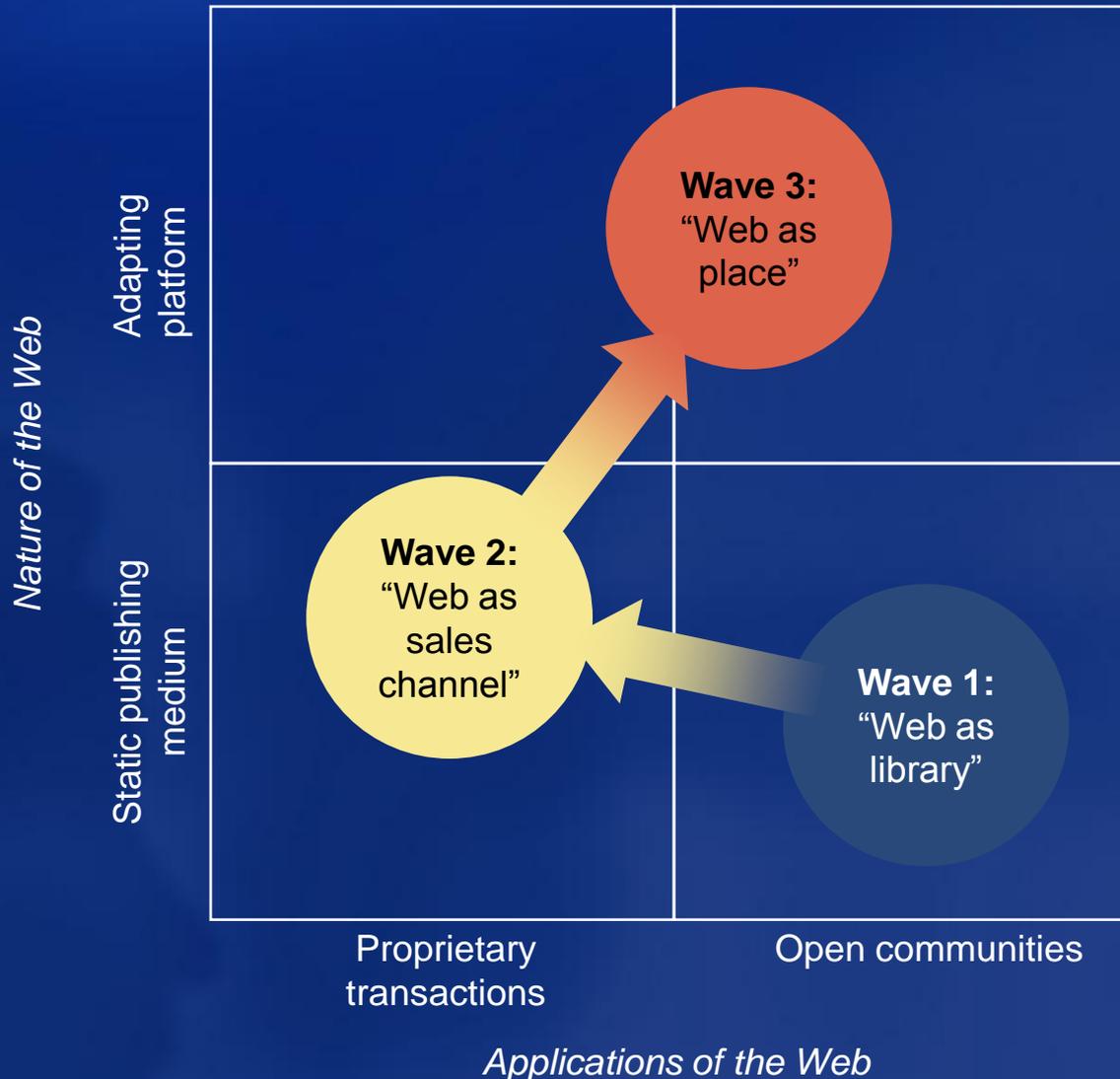
The web is evolving to become a much more natural medium for IT capability delivery

Service providers and their business models are maturing to take advantage of technology possibilities

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…something new!

- ❖ IT capabilities delivered in the "web as place" context aren't applications in the traditional sense
- ❖ "Applications as platforms"
  - ◆ New online application services provide open interfaces that make them easy to integrate, extend and enhance
  - ◆ Offer a multitude of ways to get access to functionality and information – not just pre-canned user interfaces
    - ◆ RSS, web services APIs, etc etc
- ❖ The expectations and appetite of customers has grown
  - ◆ Influenced by their experience as consumers
  - ◆ Sourcing strategies are maturing

SaaS: an optimization

Software

Off-the-shelf functionality

Hosted software

SaaS

Access to best practice
Time-to-market
Lower risk
No capital expenditure
No infrastructure

Simpler customisation
Quicker upgrades
More sophisticated identity management
Service level management

These benefits are all about addressing issues with hosting
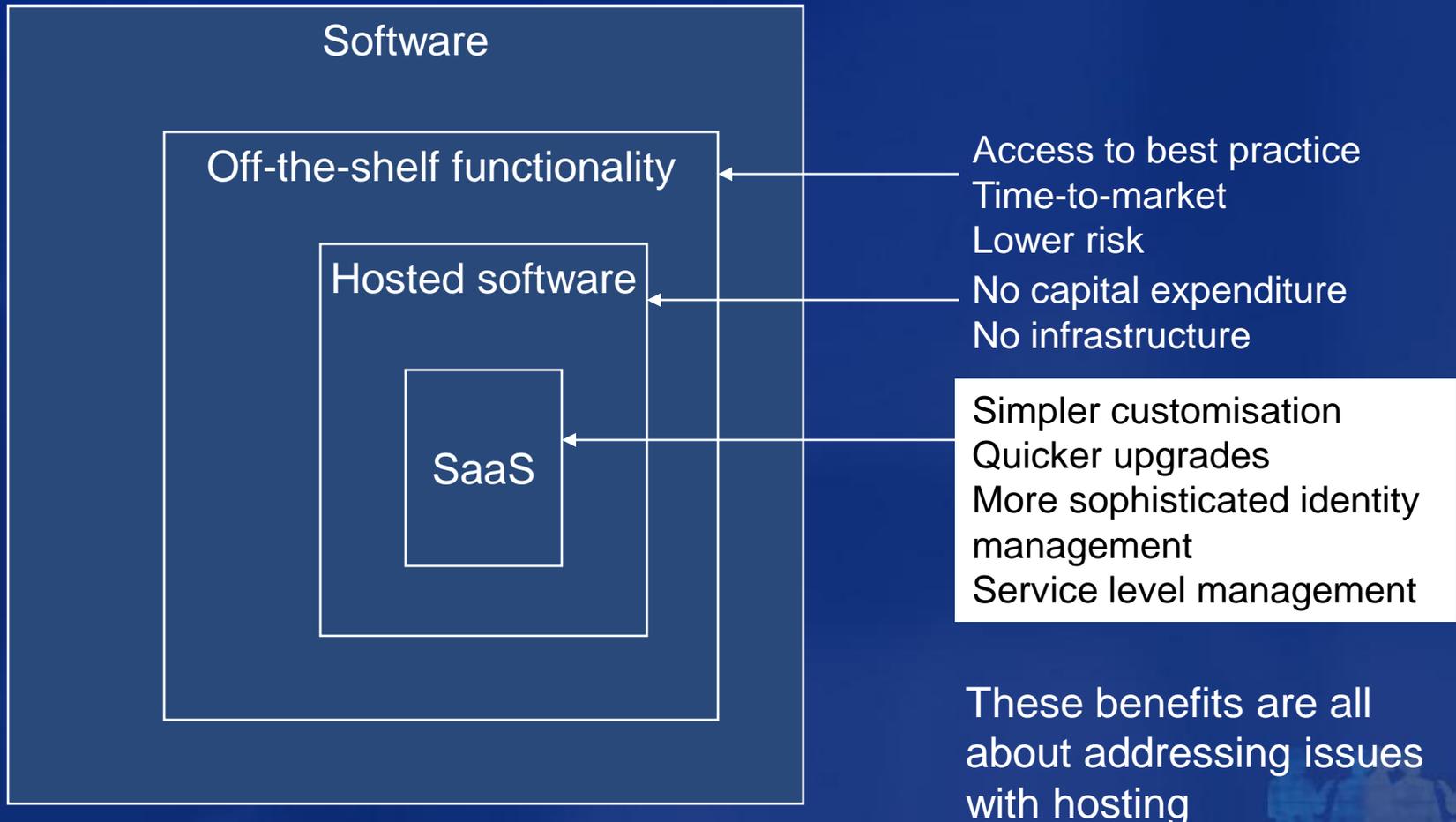
SaaS and SOA: two sides of the same coin

SaaS

ASP
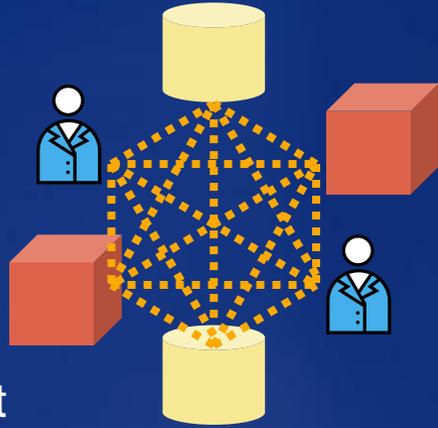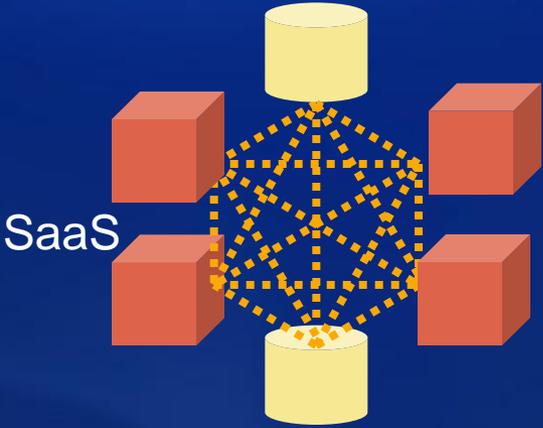
SaaS is to ASP what SOA is to monolithic enterprise applications!

SOA
(Service networks)

Monolithic
on-premise
applications
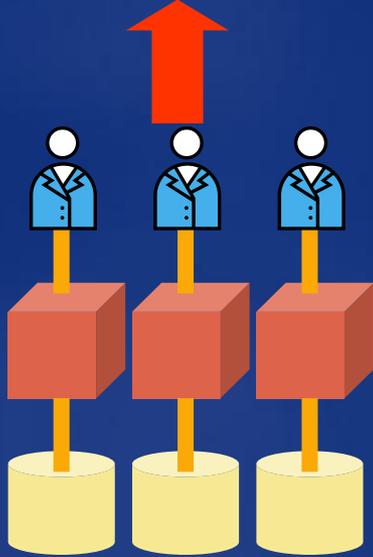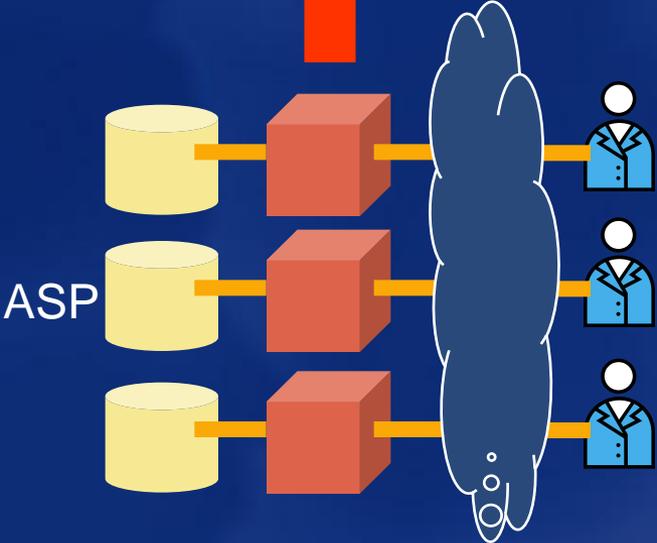
Two sides of the same coin, creating one service network

SaaS

SOA
(Service networks)

ASP

Monolithic
on-premise
applications
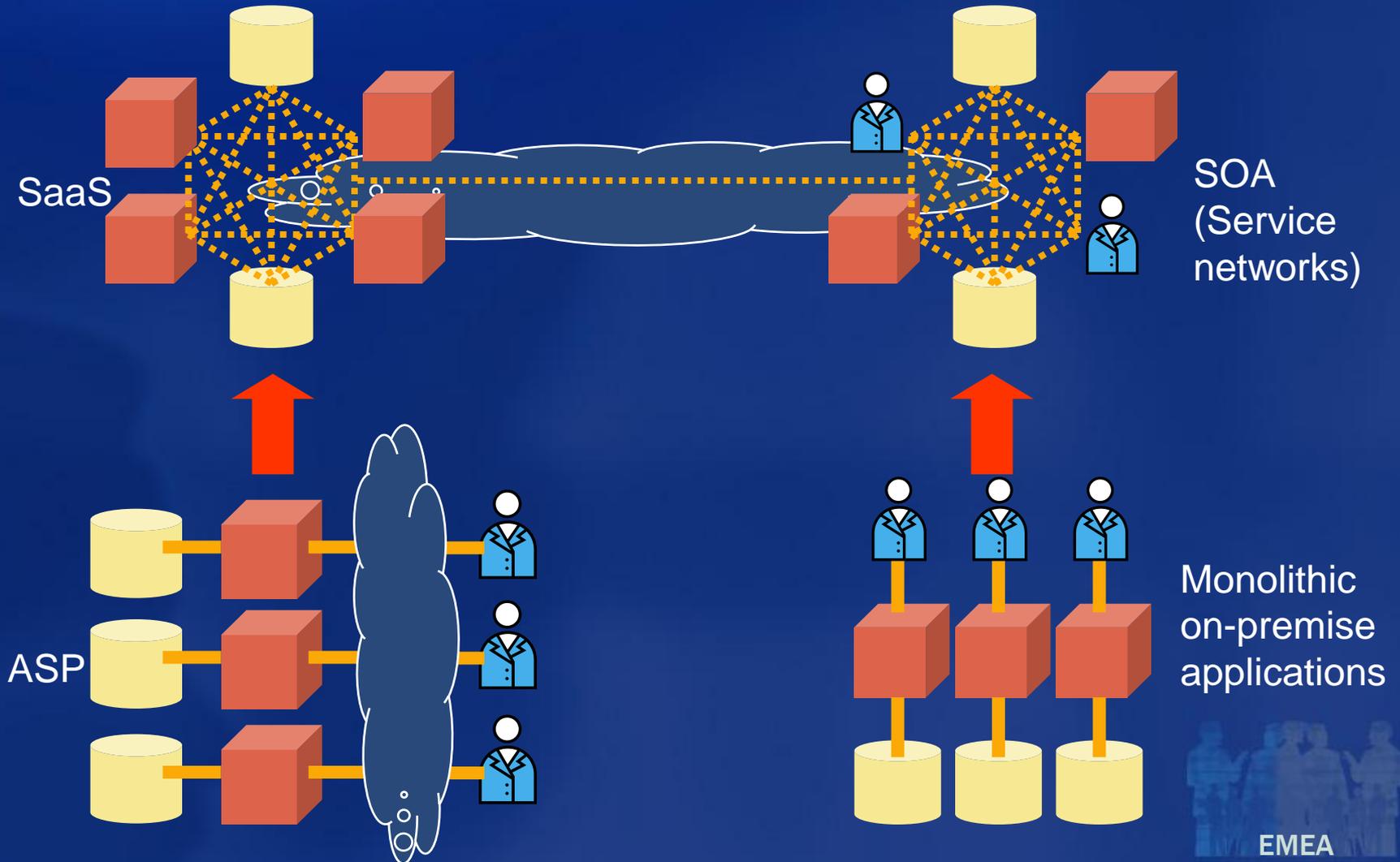
WHY SHOULD YOU CARE?

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Situation

❖ Infrastructure costs

❖ Personnel costs

❖ Rising/uncertain data centre costs

❖ Upgrades, customisations

❖ Legacy platforms

❖ Cost of entry into a solution / upfront cost loading

❖ Pace of change

❖ Access to best practice

SaaS benefits

❖ TCO – predictability of investment

❖ Link of investment to value

◆ You pay as you go and grow

❖ Risk minimization

❖ Upgrade availability

❖ Constraints – limits your options!

◆ This is often a good thing

HOW DOES SAAS FIT IN THE IT LANDSCAPE?

The SaaS value proposition

Capability/maturity of process automation

	Non-differentiating	Differentiating
Strong	SaaS has value here but the benefits aren't unique to SaaS. They also apply to generic hosted remotely managed applications or packaged off-the-shelf applications	No real fit *Emerging possibility but not well-established* *Still constrained by scope and vision of the service provider*
Weak	SaaS provides a low-risk, quick on-ramp to managed automated capabilities in support of processes Limited temptation to customise Access to best practice	

Business process "target"

SaaS value isn't just about "green fields"

Capability can be reduced in the context of requirements by external factors
- Mergers & acquisitions
- Legacy issues and forced upgrades

Capability/maturity of execution

Strong

Weak

The SaaS "sweet spot"

Non-differentiating   Differentiating

Business process "target"
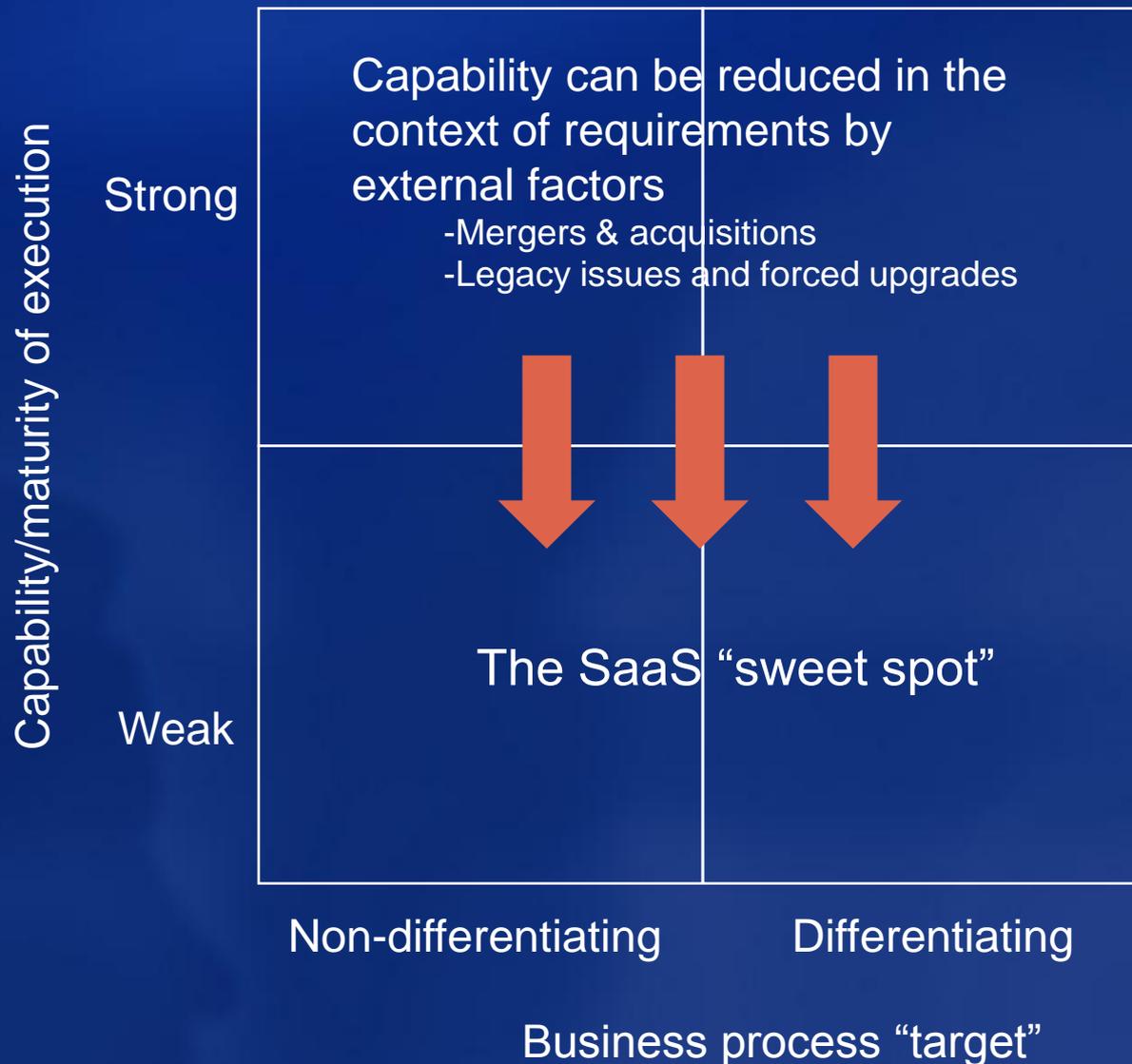
SaaS segments and example providers

	Complete solutions	Component services	Composition platforms
Enterprise	SAP, Oracle on demand	StrikeIron	AboveAll
	SocialText		Microsoft Office System
SME	Salesforce, NetSuite	Amazon S3, EC2	AppExchange/Apex, SuiteFlex
		Microsoft OneCare	
SoHo	Zoho, Zimbra etc		
	Google Apps for Your Domain	Microsoft Office Live	Ning
Consumer		Mac	
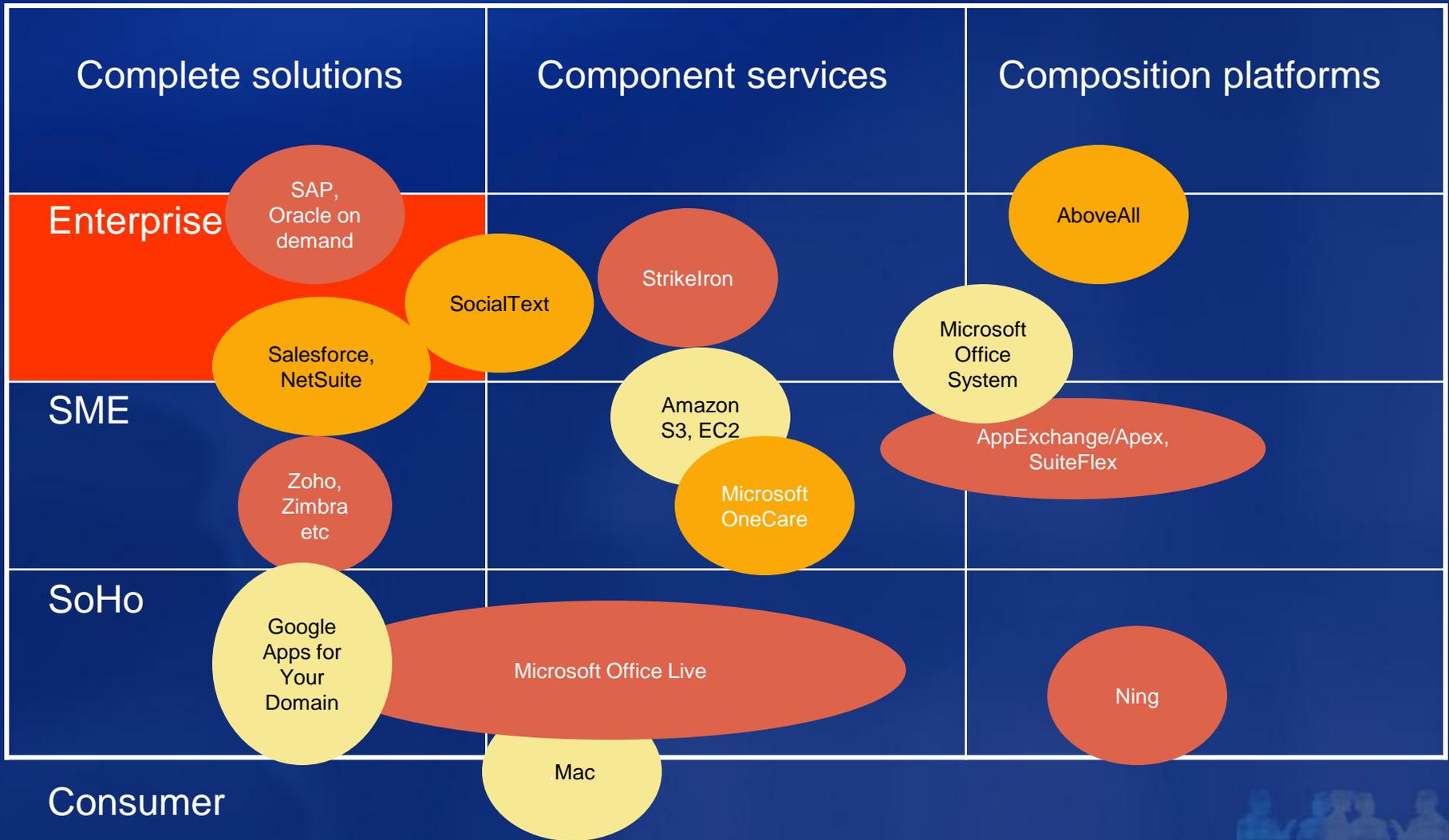
CHALLENGES

Challenges aren't unique to SaaS

❖ But there is a trust/control domain boundary to be navigated that makes challenges clearer

Challenges to discuss

❖ **Identity management / security**

❖ **Functional integration**

❖ **Management integration**

❖ **Quality of service / remediation**
- ◆ Rigorous understanding of SLAs, contracts required

❖ **Skills**
- ◆ Change, customisation

❖ **Cultural resistance**
- ◆ NIH, job protection

❖ **Regulatory, legal issues**
- ◆ Particularly for non-differentiating SaaS sweet spot
- ◆ DPA, SOx, etc – auditing / logging / controls provability

❖ **Managing implications of automated upgrades**
- ◆ Training, integration testing, etc

BUSINESS OPPORTUNITIES

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Looking at some numbers...

- ❖ **500000**
 - ◆ Number of licensed seats of a certain large CRM SaaS ISV as of July/Aug 2006
- ❖ **24800**
  - ◆ Number of unique customer accounts
- ❖ **500000 / 24800 ≈ 20**

Who purchases a traditional CRM package for this many (or better: this few) users?

...products that have a low sales volume can collectively make up a market share that rivals or exceeds the relatively few current bestsellers - if the distribution channel is large enough...
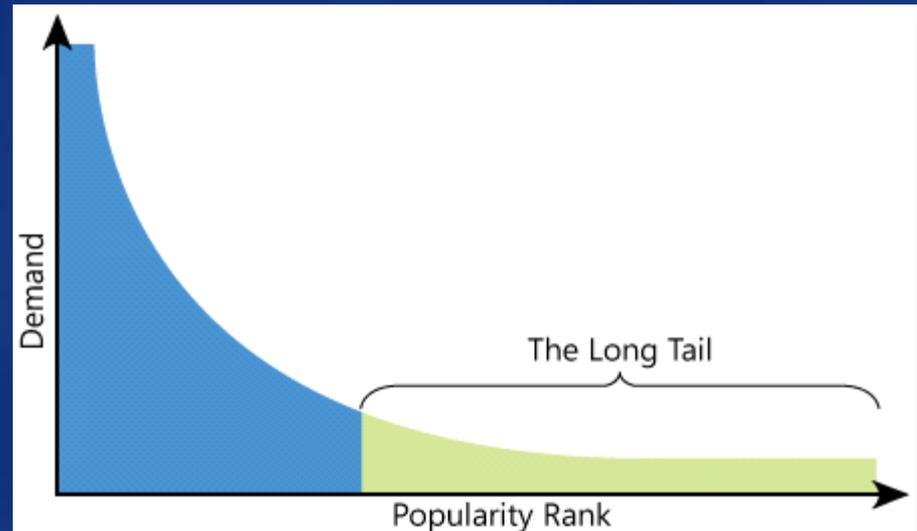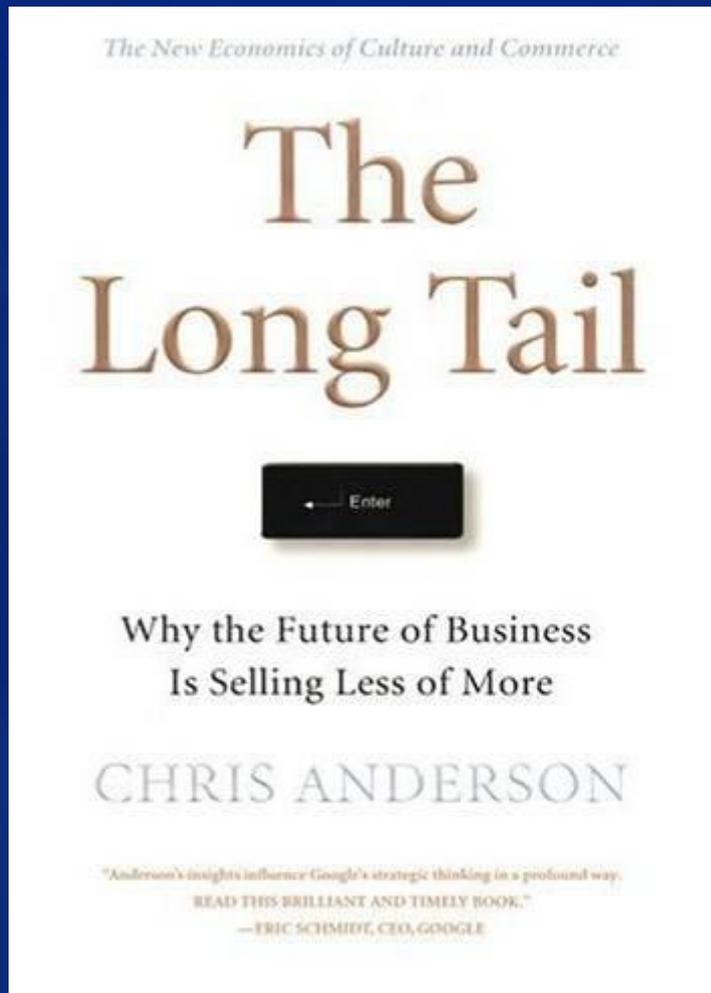
The Long Tail and Software

$ / Customer

Your Large Customers

What if you could lower your costs, and thus lower the sale price of your software?

Your Typical Customers

New addressable market >> current market

(Currently) "non addressable" Customers
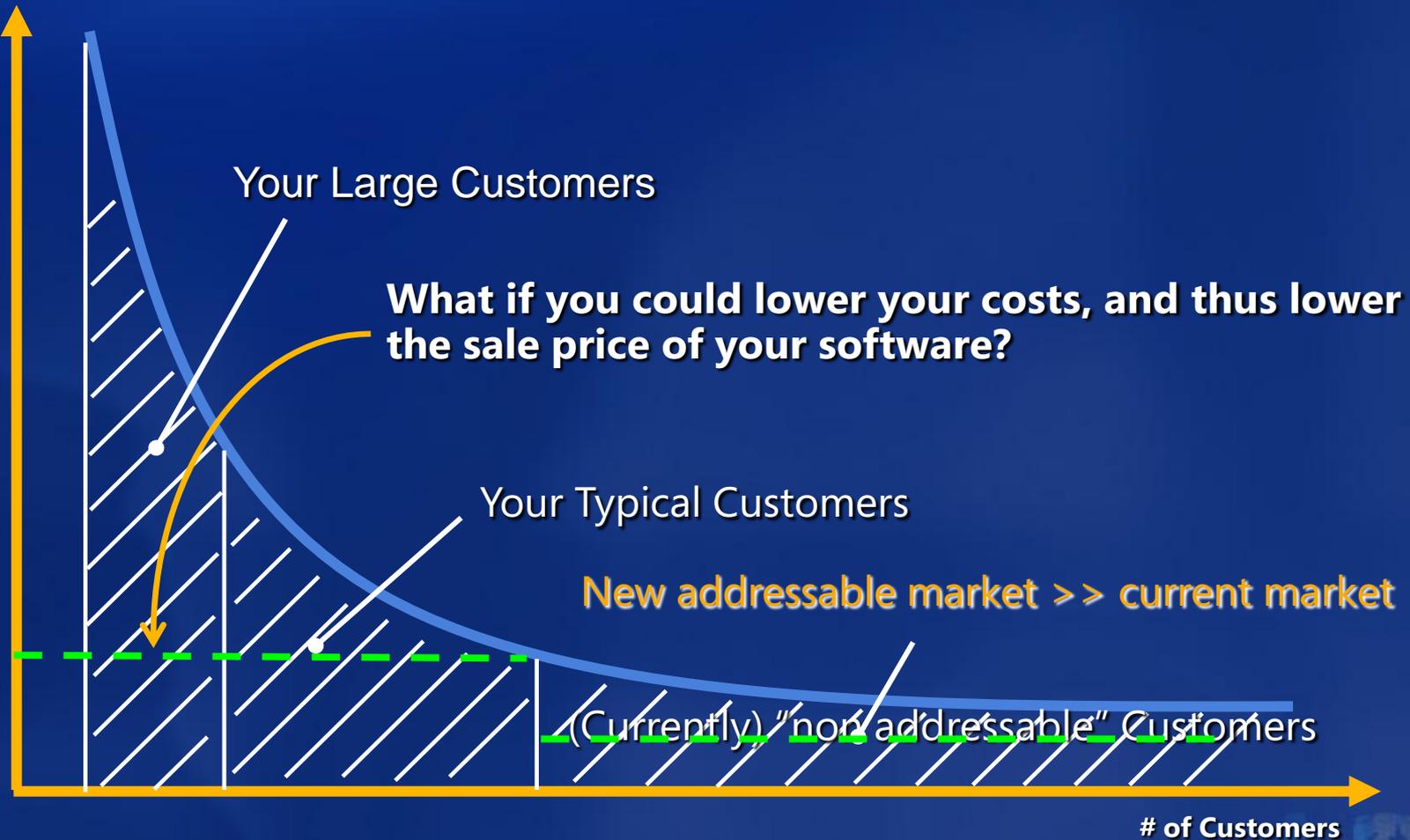
# of Customers

Why the „Long Tail"?

❖ **It addresses mostly SMB and Consumer space**

- ◆ Lesser challenges for adoption

❖ **It reaches out to new customers**

- ◆ and potentially a lot of them

WHO ARE THE PLAYERS?

The components of a SaaS proposition

Service composition/aggregation

Service functions

Commercial enablers (billing, provisioning etc)

Development and integration tools

Hosting infrastructure

Who can play a role in SaaS delivery?

	Hoster	SaaS Hoster	ISV	Aggregator	Systems integrator	Enterprise
Service composition/aggregation				✓	✓	✓
Service functions			✓		✓	
Commercial enablers (billing, provisioning etc)		✓		✓		
Development and integration tools			✓		✓	
Hosting infrastructure	✓	✓				

As the SaaS market plays out, today's incumbents will focus on their specialities

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Three models for SaaS propositions

Service composition/aggregation ○ → Composition platform delivery model
- Natural focus for aggregators

Service functions ○

Commercial enablers ○

Component services delivery model
- Natural focus for ISVs, SIs

Development and integration tools ○

Hosting infrastructure ○

Complete solution delivery model
-Natural focus for largest providers (Google, etc)
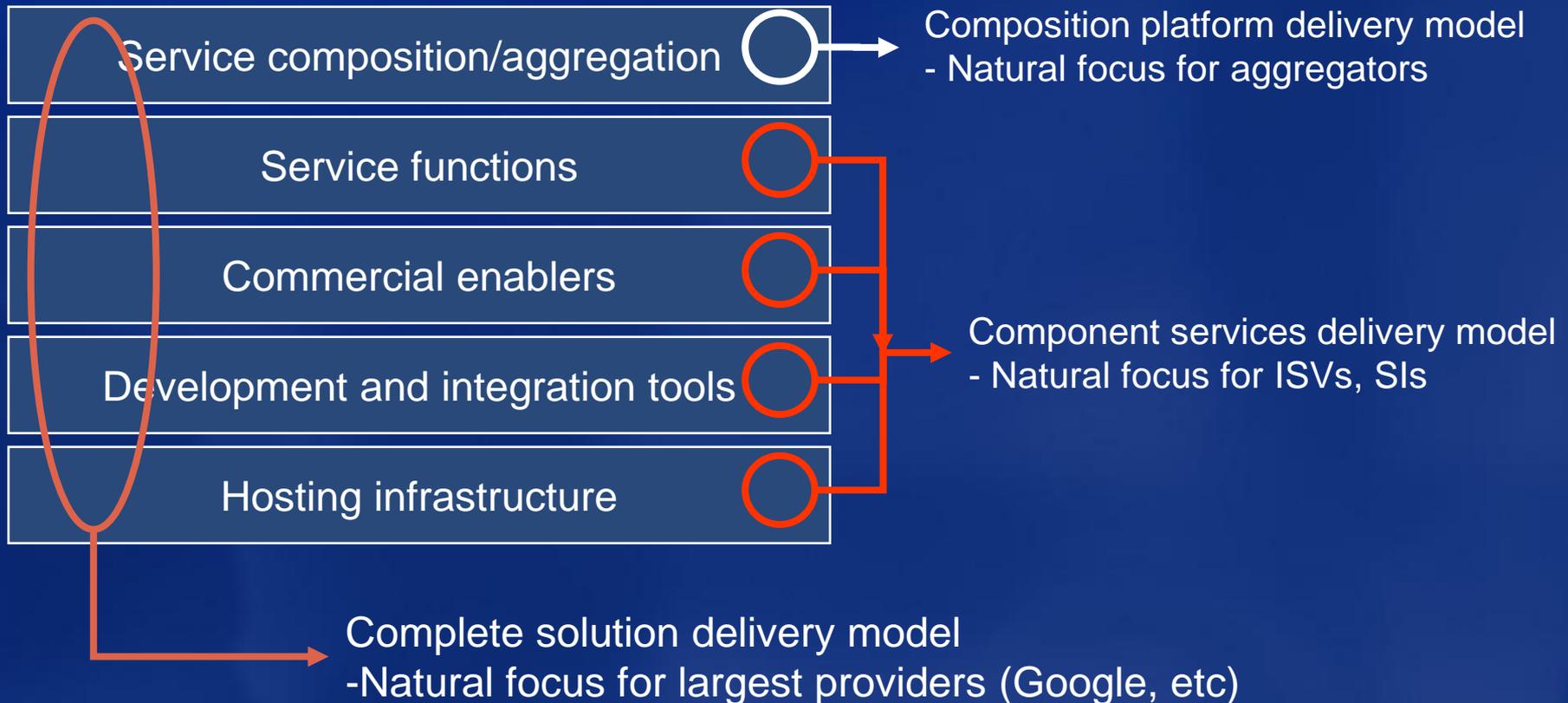
SaaS Ecosystem
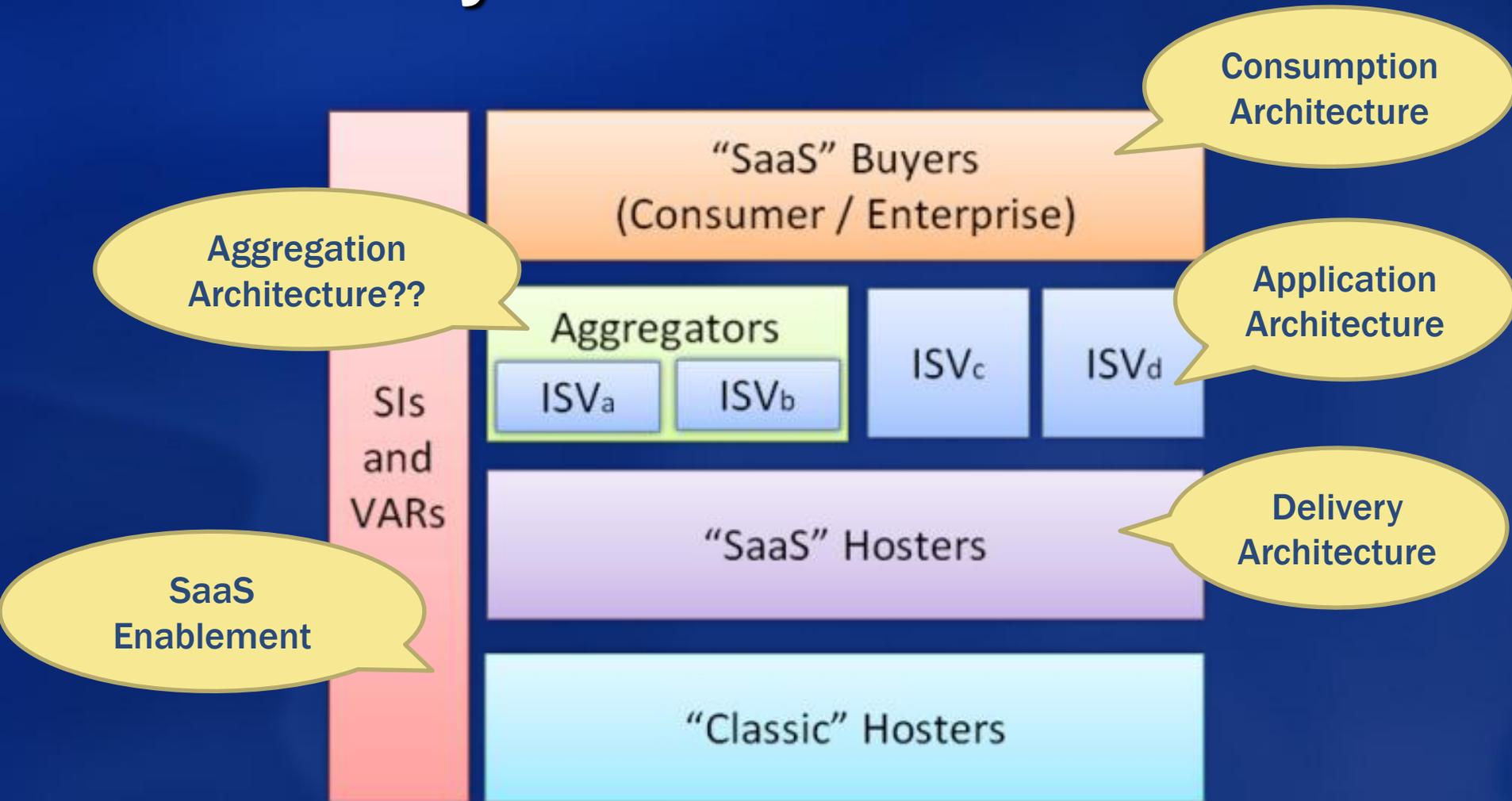
Application Architecture
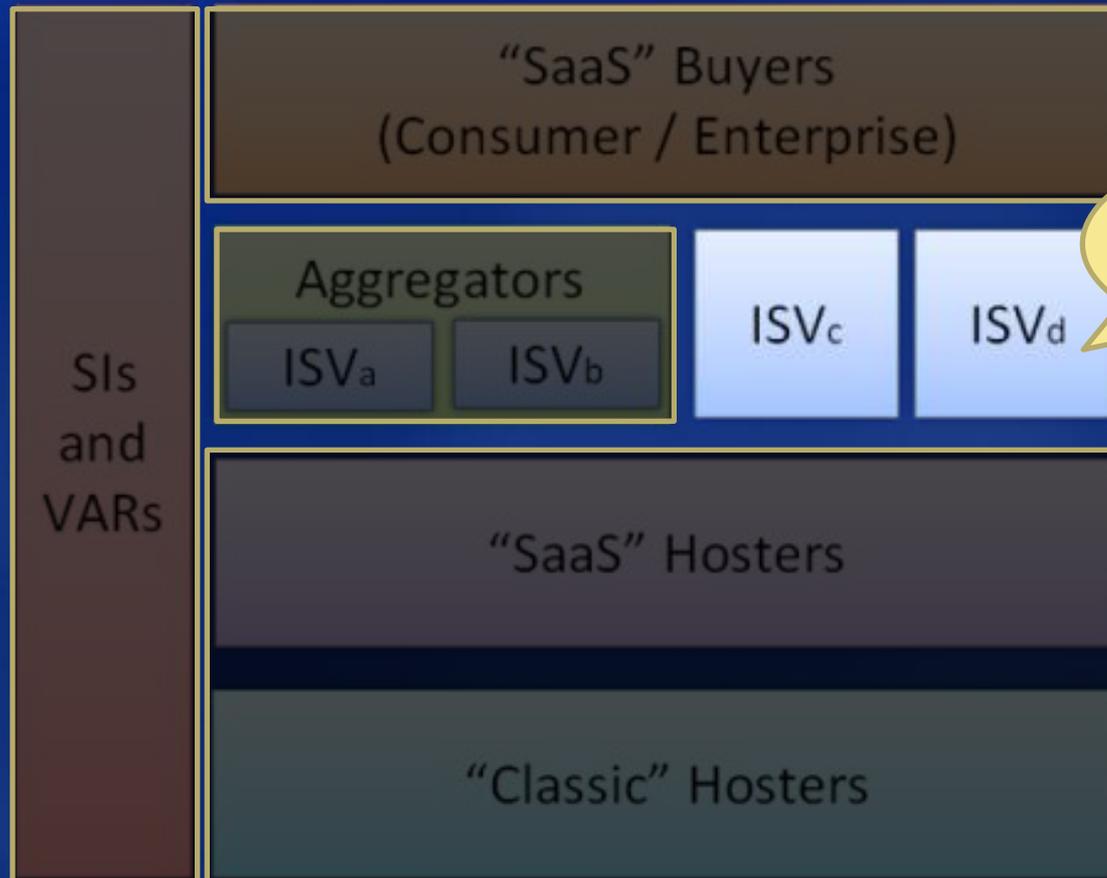
The SaaS Architecture Shift
## Single Instance – Multi-tenant
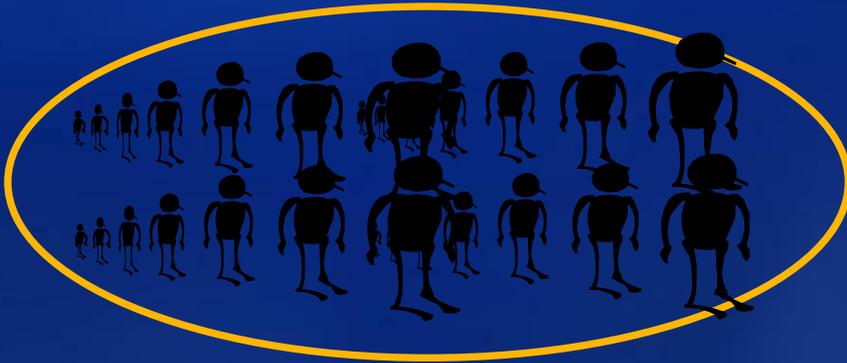
Scaleable
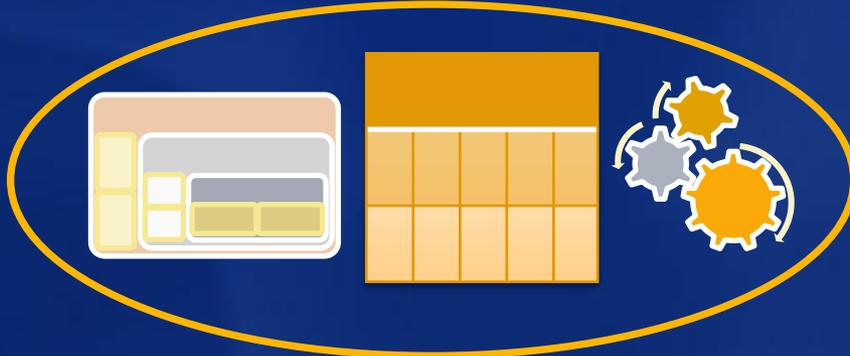
Configurable

Multi-tenant efficient

"Basic" SaaS Maturity Model

1
**Ad-hoc /
Custom**
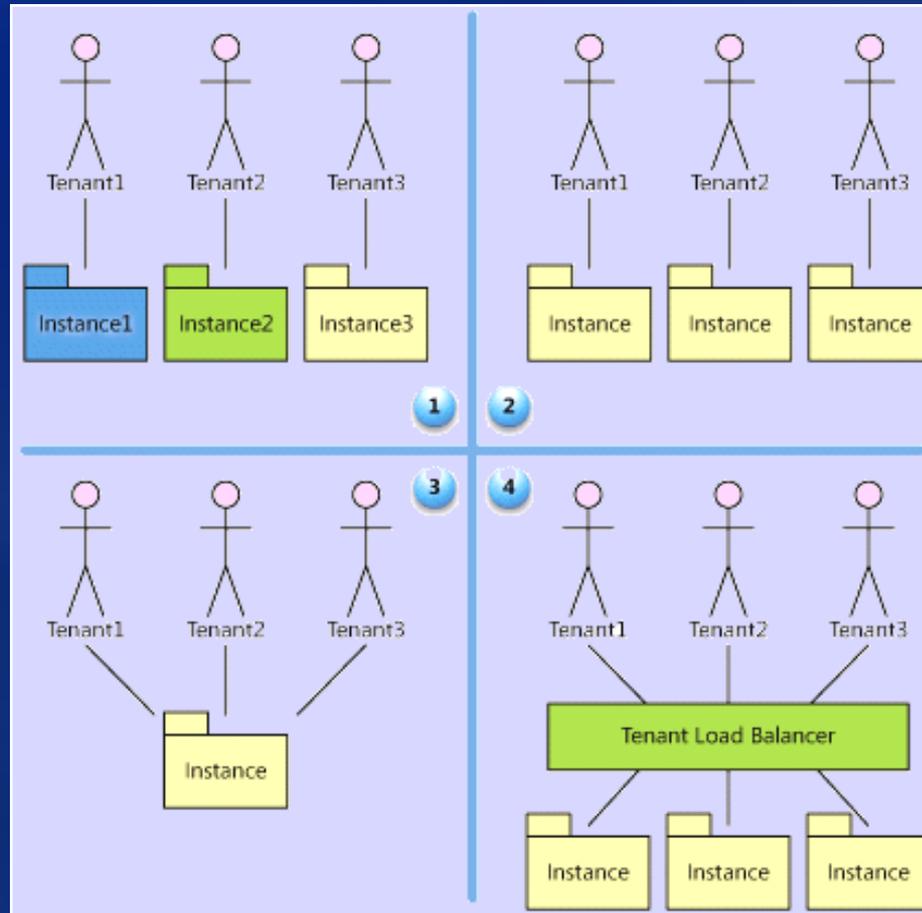
2
**Configurable
(single tenant)**

3
**Configurable
Multi tenant**

4
**Configurable
Multi tenant
Scalable**

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Consumption Architecture

Software + Services

3 key take away:
- "on premise" **+** "in the cloud"
- Integration
- Composition

The Key Shift in the IT of IT Enterprise of IT.
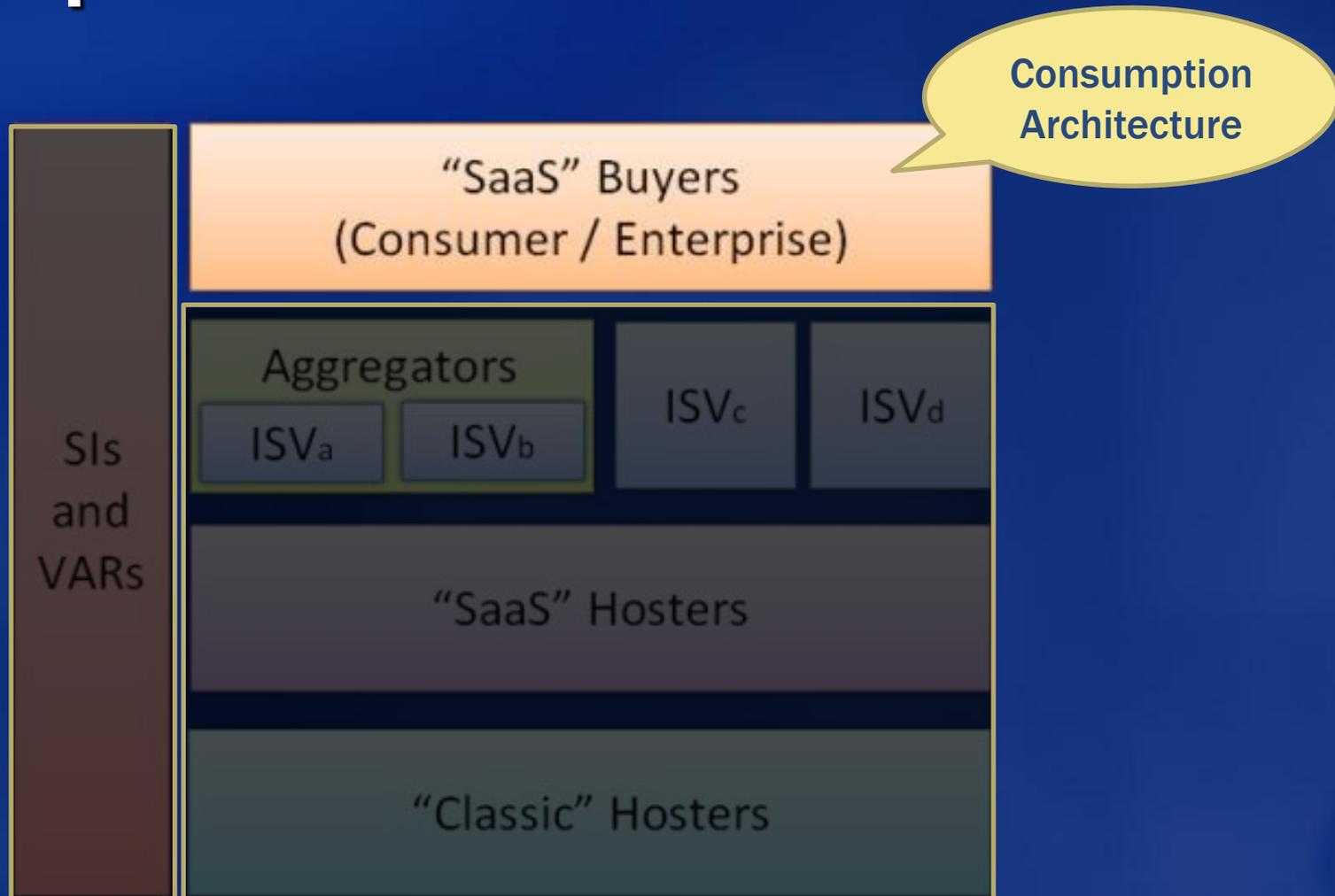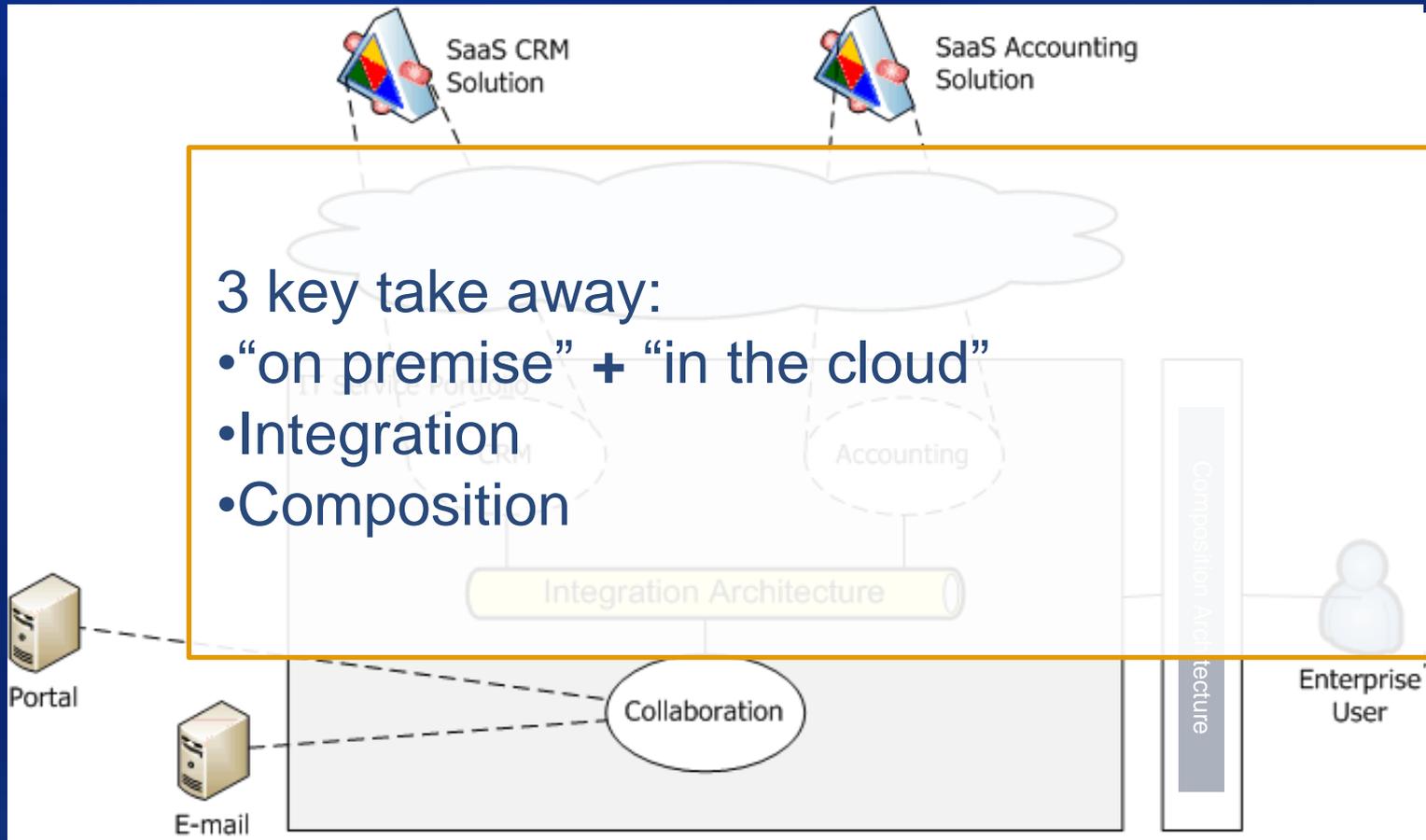
Delivery Architecture

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Service Delivery Platform

SaaS Application

SaaS Application

SaaS Application

SaaS Application

Service Delivery Platform Runtime

Access Control

Order Management

Management Agent

Metering

Security Log

Identity Management

Provisioning

Management Log

Usage Tracking

Billing

CRM

SLA Monitoring
- Availability
- Security
- Performance

Management Alerts

Call Center Support System

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SaaS Enablement

SaaS Enablement

SIs and VARs

"SaaS" Buyers
(Consumer / Enterprise)

Aggregators

ISVₐ   ISVᵦ   ISV_c   ISV_d

"SaaS" Hosters

"Classic" Hosters

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SaaS Enablement

❖ ISV

  ◆ Moving from on-premise model to SaaS

❖ Enterprise

  ◆ Integration with existing systems

❖ Hosting

  ◆ Operation best practices: design for operation

  ◆ SaaS Hosting

Resources

- **Blogs**

  - http://blogs.msdn.com/gianpaolo

  - http://blogs.msdn.com/fred_chong

- **Web Sites**

  - http://msdn.microsoft.com/architecture/saas

  - http://msdn.microsoft.com/isv

  - http://www.microsoft.com/serviceproviders/solutions/applicationhosting.mspx

  - http://microsoftstartupzone.com