



Business Model Evolution

Why the journey to SaaS makes sense



Rainer Stropek

software architects gmbh

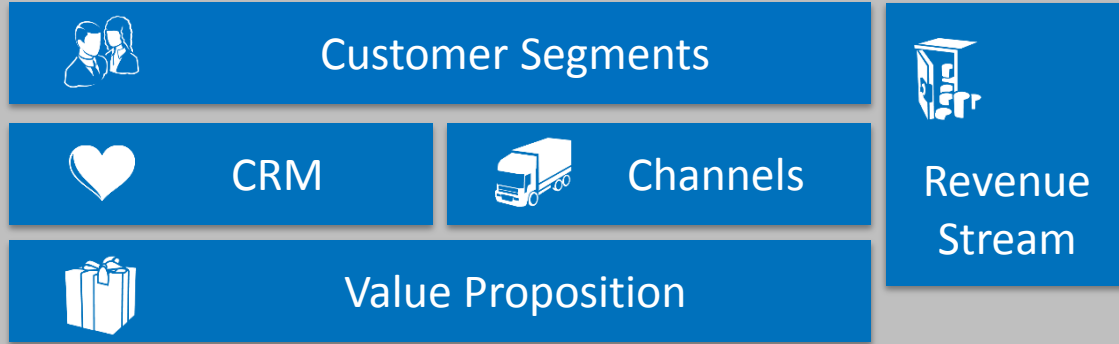
Mail
Web
Twitter

rainer@timecockpit.com
<http://www.timecockpit.com>
@rstropek



time cockpit
Saves the day.

A **business model** describes the rationale of how an organization creates, delivers, and captures value (source: [Wikipedia](#))



Building Blocks of a Business Model

What is a business model?

Business Model

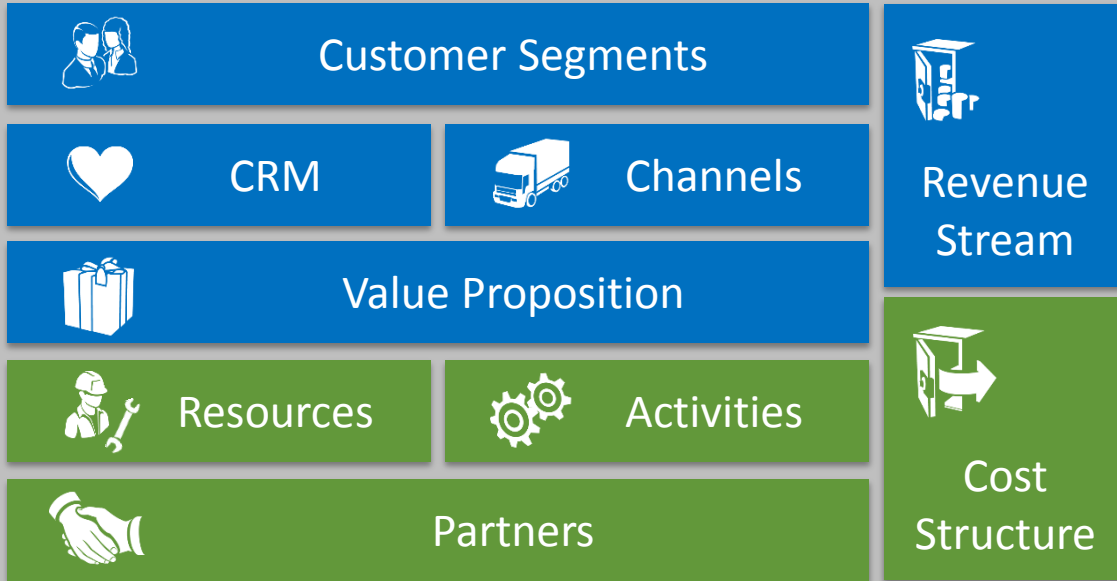
Which **customers** do you serve?

What is the **value** that you deliver to your customers?

Which **communication, distribution, and sales channels** do you use?

How do you establish and maintain the **relationship with your customer**?

How does your value proposition result in **revenue**?



Building Blocks of a Business Model

What is a business model?

Business Model

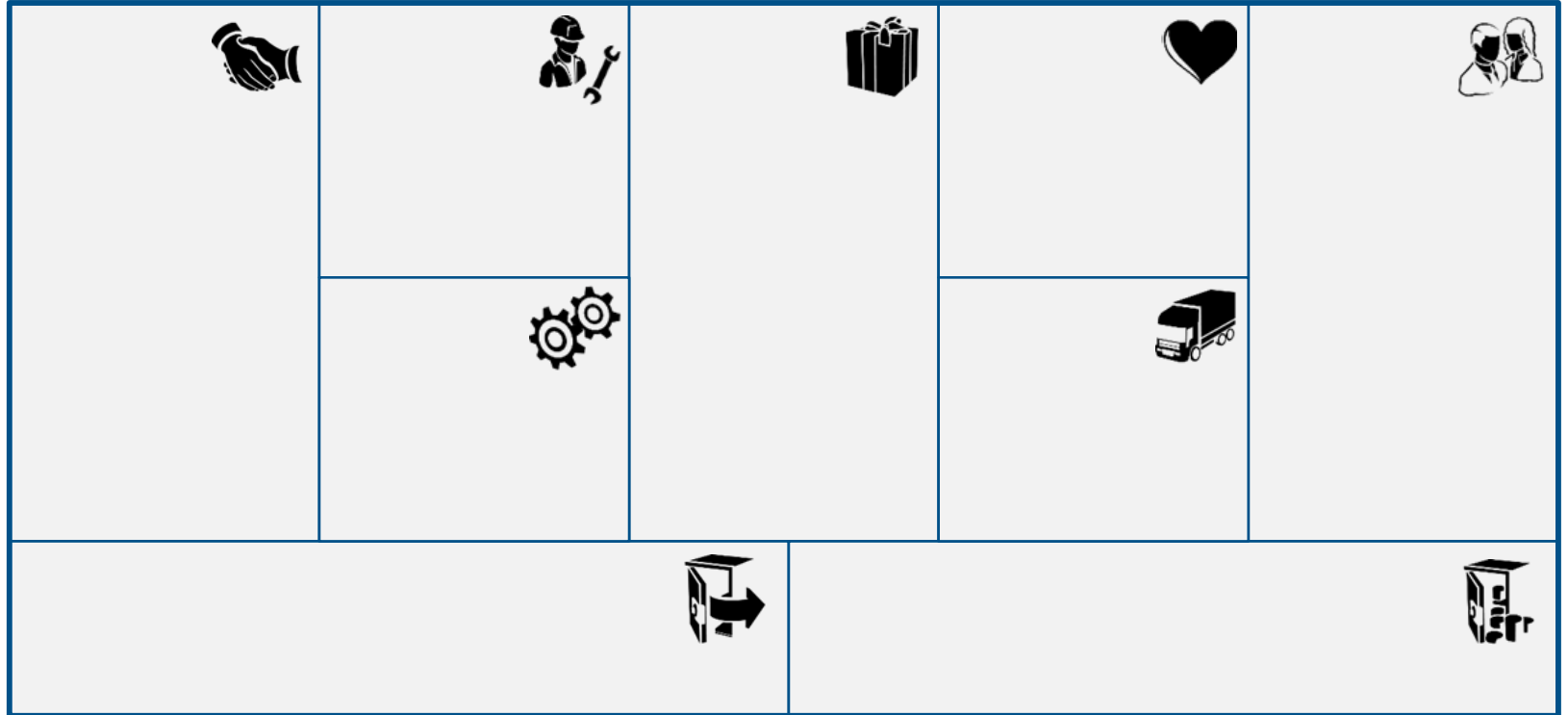
What are the **key resources** that you need?

What are the **key activities** you have to perform?

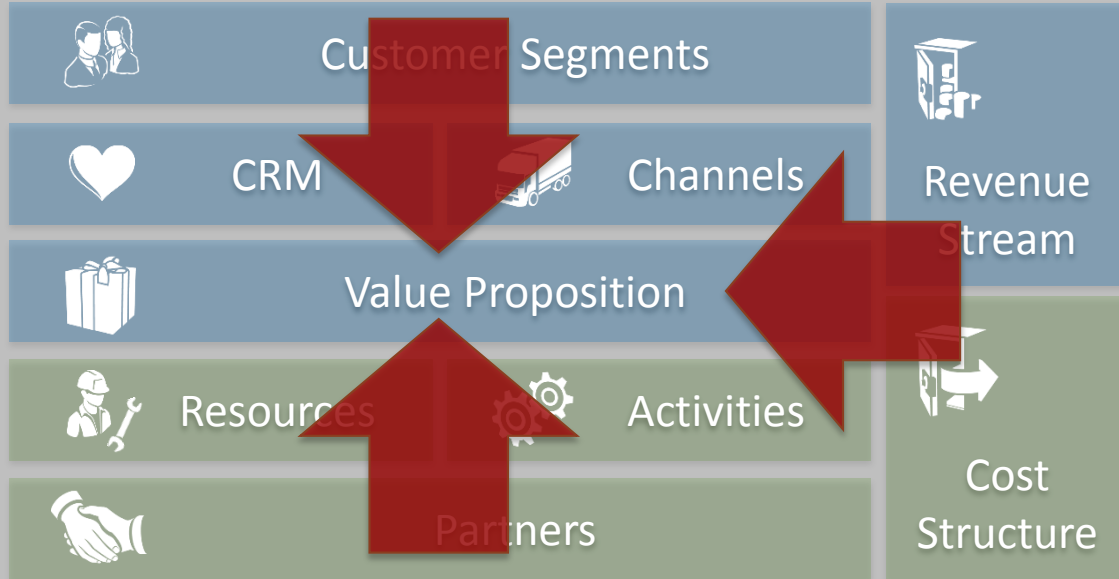
Which activities do you **acquire from outside**?

How does your **cost structure** look like?

Business Model Canvas



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Innovation

Where does innovation come from?

Innovation

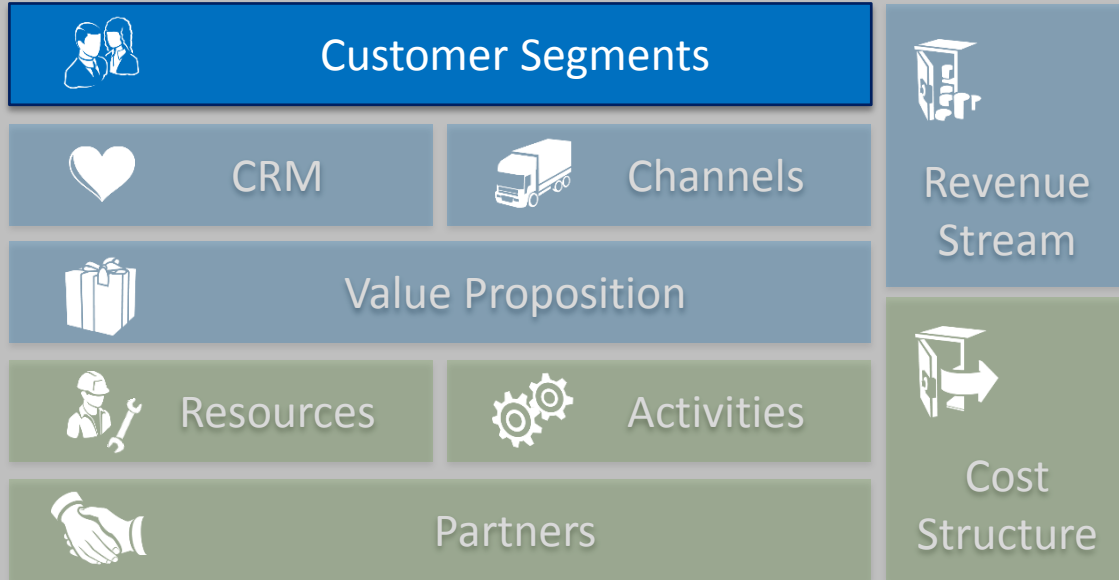
Customers might tell us about areas where they need innovation

New capabilities might enable new value propositions

Different revenue or cost structures might open new markets

How can SaaS and Cloud Computing influence your business model?

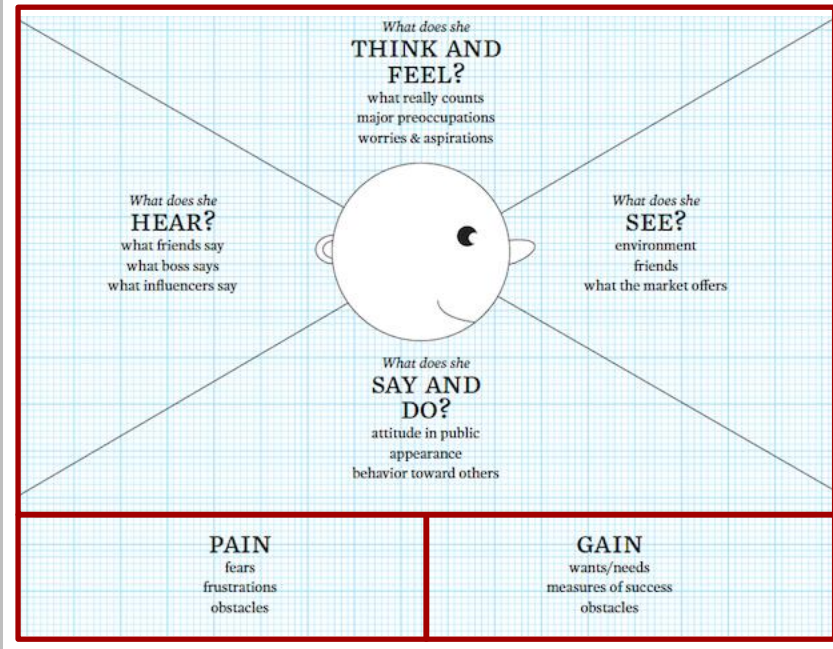
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Customer

Building Blocks of a Business Model

What is a business model?



Customer Empathy Map

Tool developed by the company [XPLANE](#)

Customer-Centric

What job does our customer
needs to get done?

Is it her job to run our
software?

What does our customer **hear,**
feel, and **think** about SaaS
and cloud computing?

Customers

▶ Pain, fears, frustration,...

„I want to concentrate on my core competencies“
„I have to be able to rely on that system“



We will take care
of that for you!

▶ Wants/needs

„Buying this expensive system is too risky for me“
„I don't know our exact needs in the future“



SaaS reduces risk because you
pay for what you really need

▶ Environment

„Cloud is unsecure“
„Our data must be under our control“



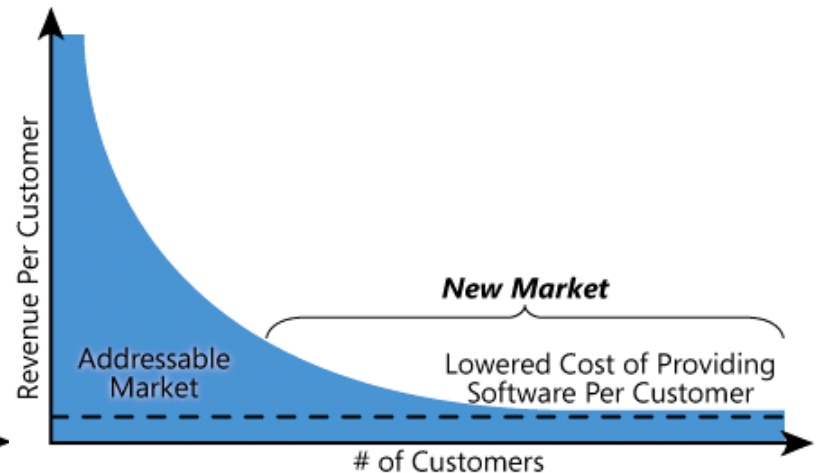
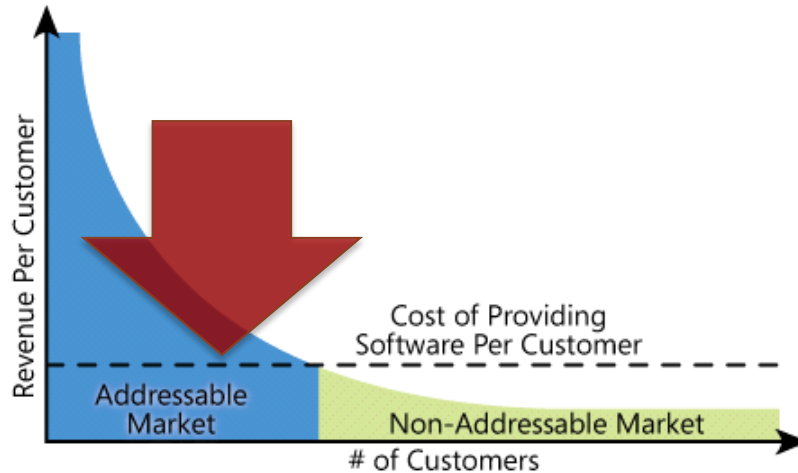
Does your customer trust you
and/or your partners enough?

Customers

- ▶ Address new markets
 - Customer size
 - New customer segments



Make sure your entire organization is ready for that change



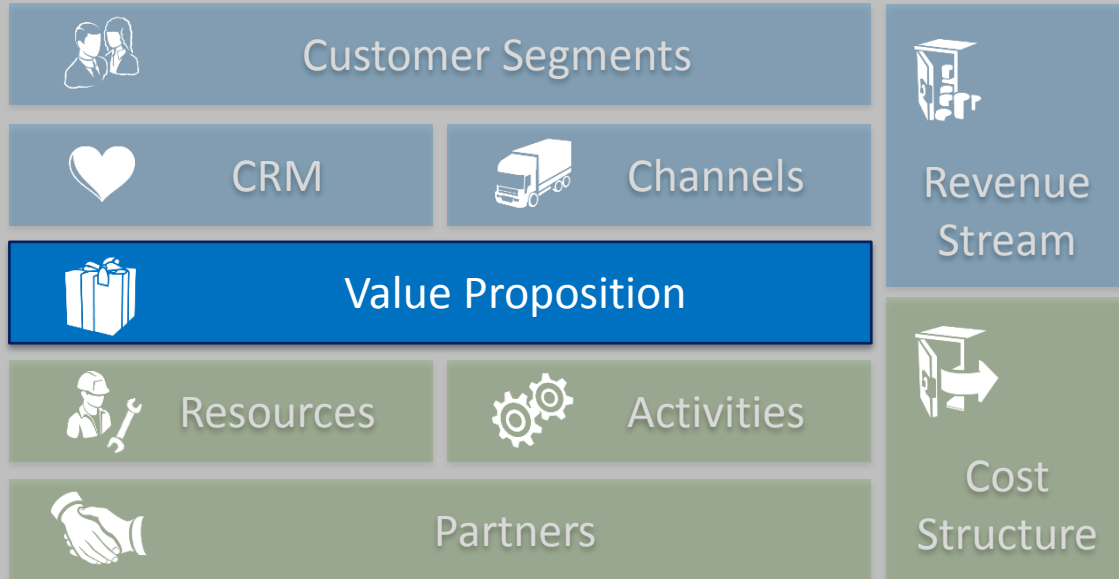
Design to Cost

- ▶ Your product is not ready for the mass market just because you make it cheaper
- ▶ Different customer segments might have different functional needs
Example: SAP Business ByDesign



Source: <http://www.flickr.com/photos/mava/2445734571/>

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Value Proposition

Building Blocks of a Business Model

What is a business model?

Value Proposition

- ▶ Value proposition = Bundle of products and services
- ▶ How can SaaS help to solve customers problems or satisfy customer needs?

Performance – make your solution available faster

Customization – customized product while taking benefit from economy of scale/scope

Price – we will get back to this later

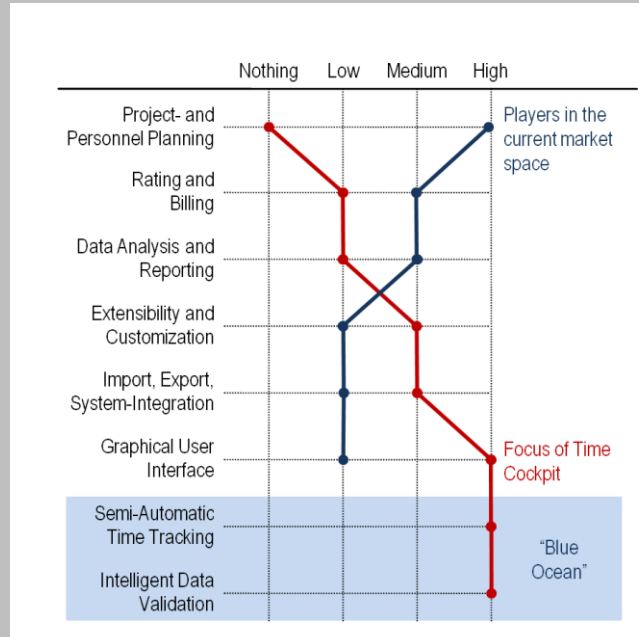
Cost – lower TCO of your solution because of specialization

Risk reduction – trials, availability, security

Accessibility – let more customers benefit from your solution

Convenience – Make your solution easier to use

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Massive consequences on SaaS architecture

Example

SaaS has always been

a „no brainer“

On-premise technically possible but not wanted (strategic decision)

How our „blue ocean“ has

changed/evolved:

Extensibility and customization is in our blue ocean

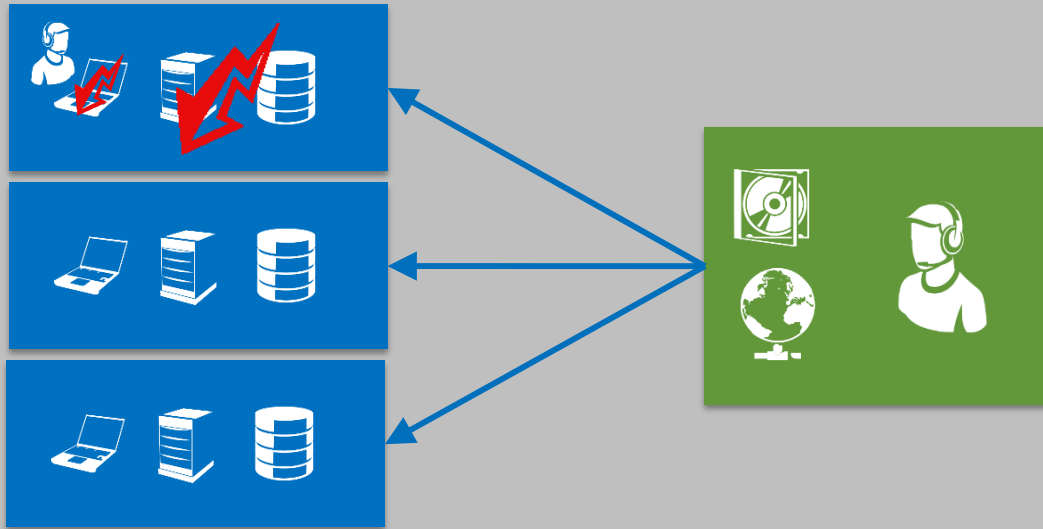
We did not implement the „data validation“ feature yet

Added support for online and offline work

Blue Ocean Strategy

Method for developing the value proposition strategy

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Classical Model

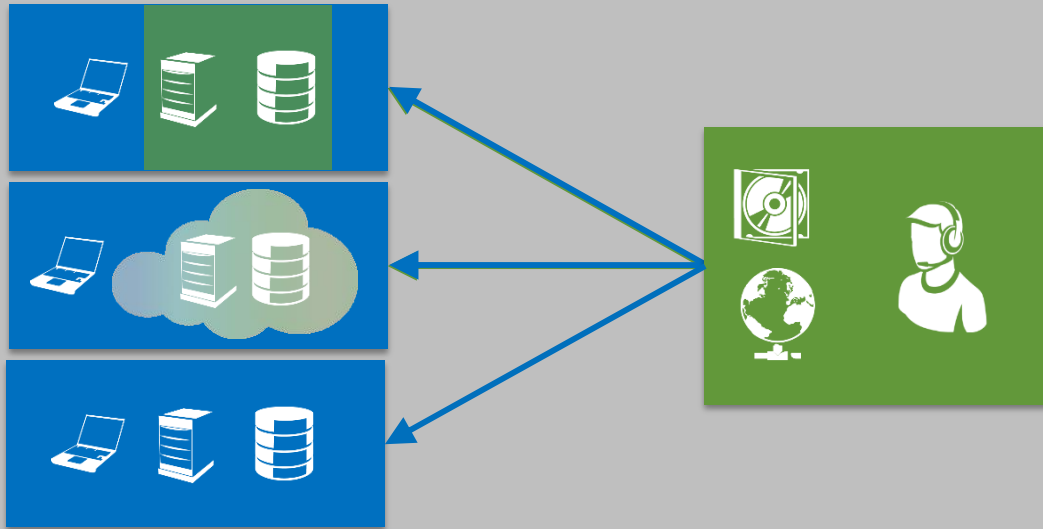
Customer owns infrastructure
Control over code and data

Deployment is hard

Deployment Models

Different options for implementing SaaS

Business Model Evolution



Deployment Models

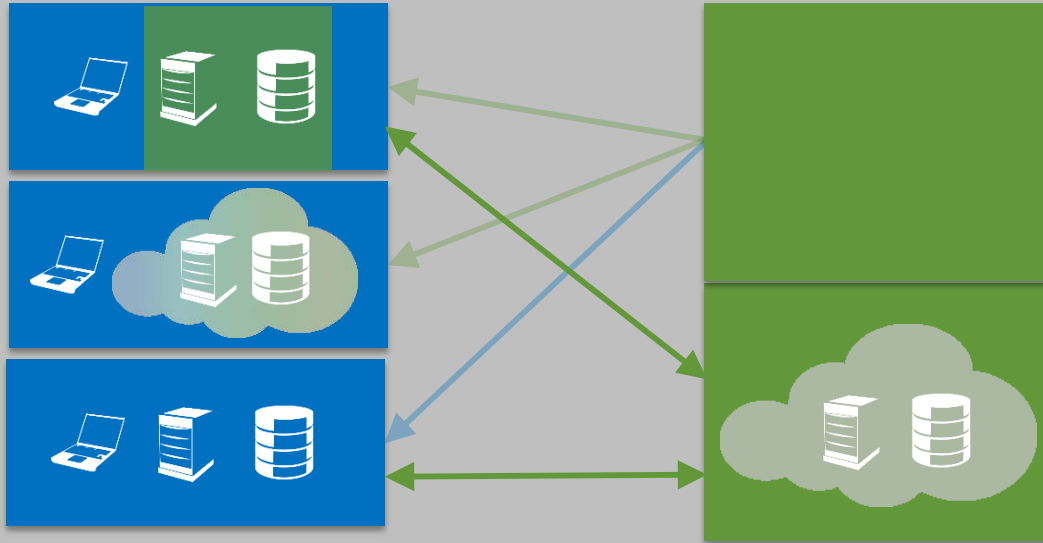
Different options for implementing SaaS

Outsourcing

Software consumed as a service

Customer still owns infrastructure
Private Cloud

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Deployment Models

Different options for implementing SaaS

Enriched Model

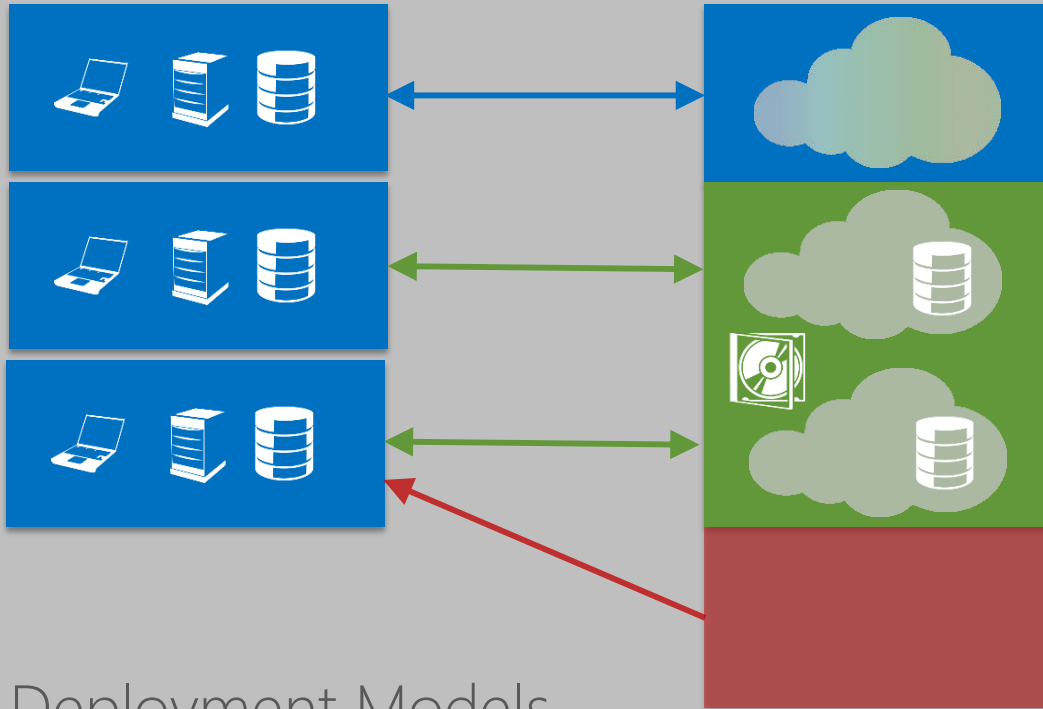
Software is enriched by
(optional) cloud services

Public services

Backup

Message Bus

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Deployment Models

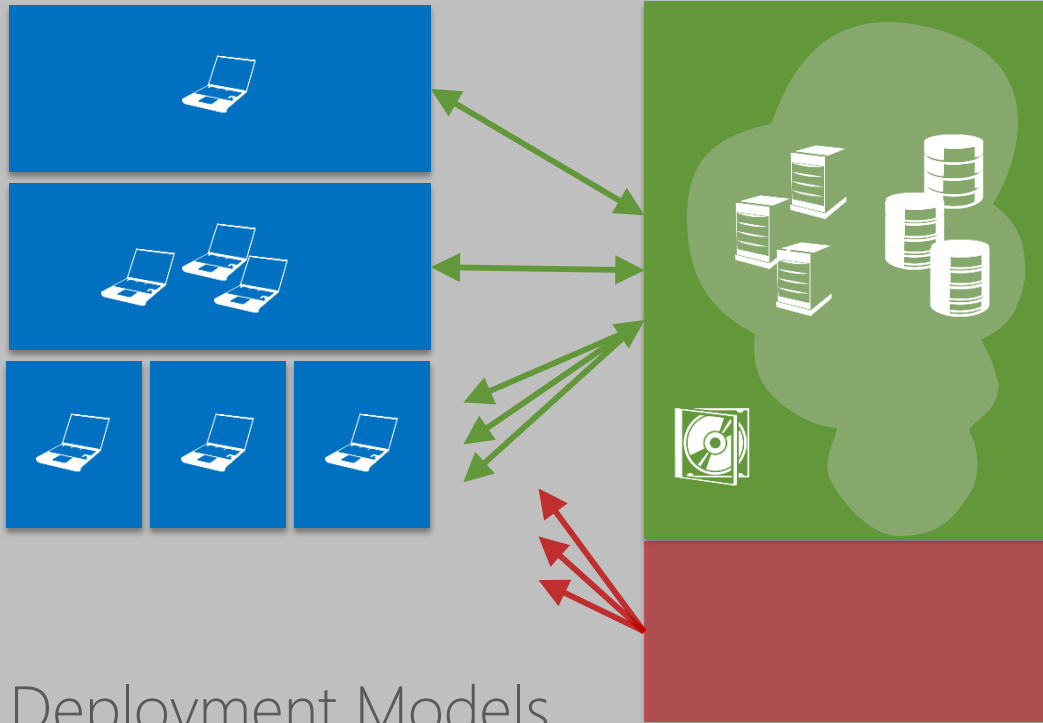
Different options for implementing SaaS

SaaS Single Tenancy

Infrastructure as a Service
Server virtualization

Escrow Service
Code
Data

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Deployment Models

Different options for implementing SaaS

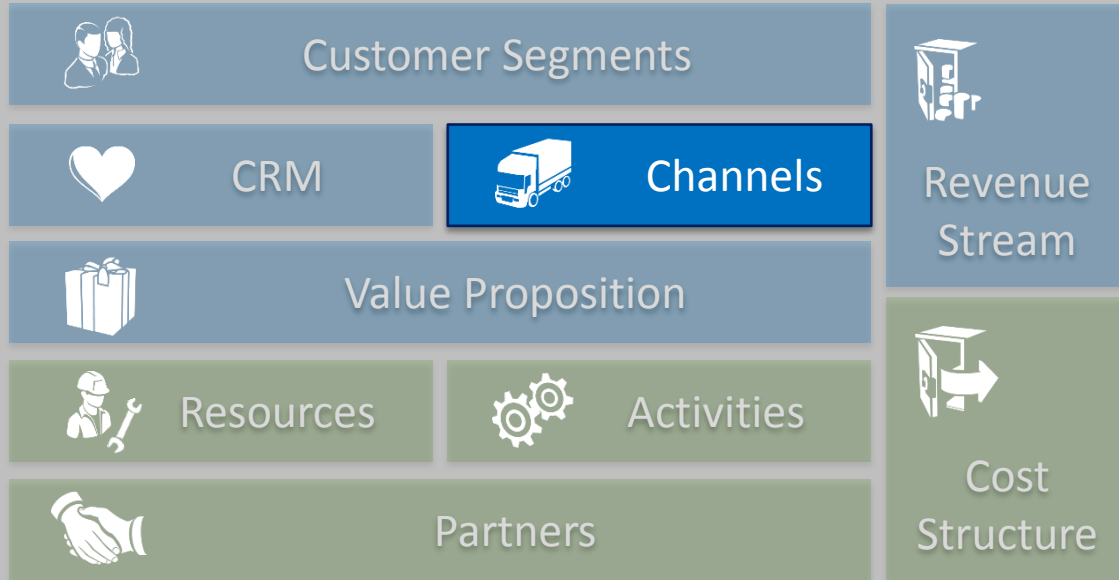
SaaS Multi Tenancy

Dynamically scaling
infrastructure

PaaS

Economy of scale

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Channel

Building Blocks of a Business Model

What is a business model?

SaaS Channel Opportunities

- ▶ **Make it super-simple to evaluate our services**
 - Self-service via web
 - Time-based freemium models
 - Direct communication with operating departments
- ▶ **Web (=self-service) might be an important (new) channel**
 - Make use of existing market places of cloud vendors
- ▶ **The power of trust!**

SaaS Channel Threats

- ▶ **Different pricing model necessary**

 - Fair dual licensing model is hard to find

 - What to do with existing customers („bring your license“ model)?

- ▶ **Don't forget existing channels**

 - Cannibalization effects for existing partner network

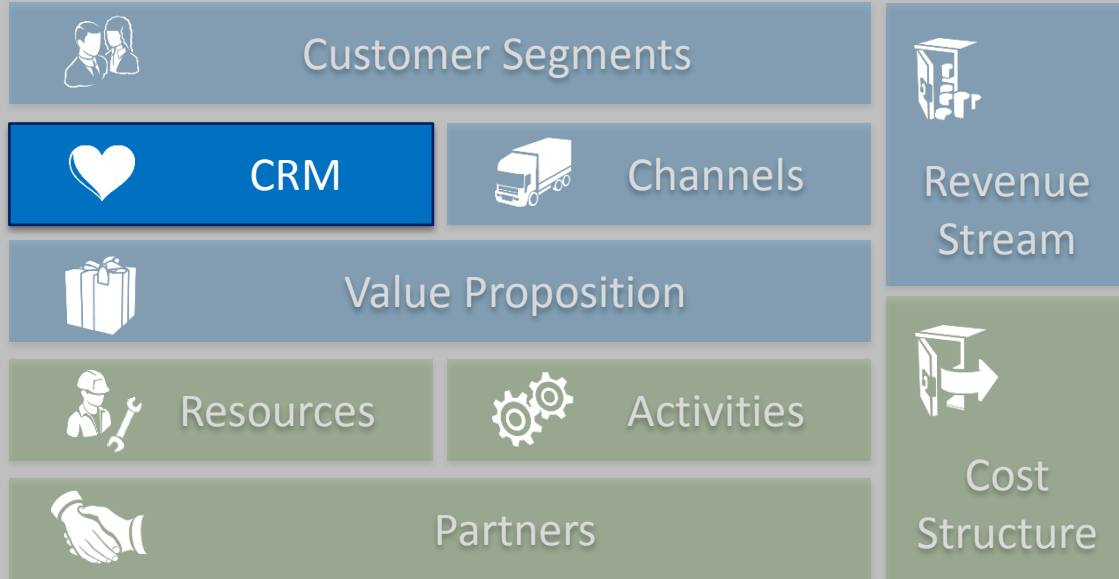
 - New sales compensation rules necessary

- ▶ **Different revenue stream**

 - New revenue sharing model necessary

 - New KPIs (*Customer Lifetime Value* instead of one-time revenue)

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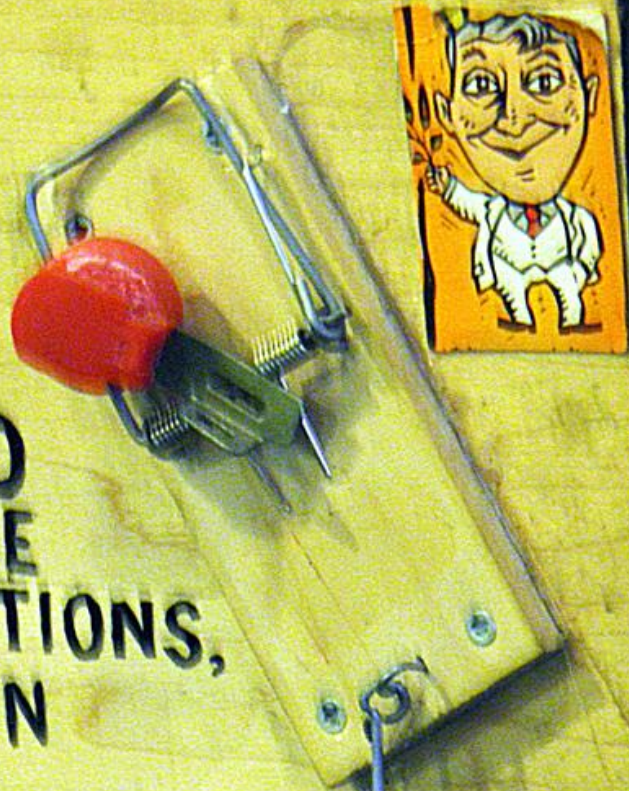


CRM

Building Blocks of a Business Model

What is a business model?

CUSTOMER
COMPLAINTS
DEPARTMENT
PLEASE PRESS RED
BUTTON FOR SERVICE
IF YOU HAVE ANY QUESTIONS,
PLEASE READ AGAIN



CRM

- ▶ **End user support**

You run the solution for the customer

- ▶ **Importance of self-service**

Manual processes will make your operational costs explode

- ▶ **Co-creation and Community**

Customization and extensibility

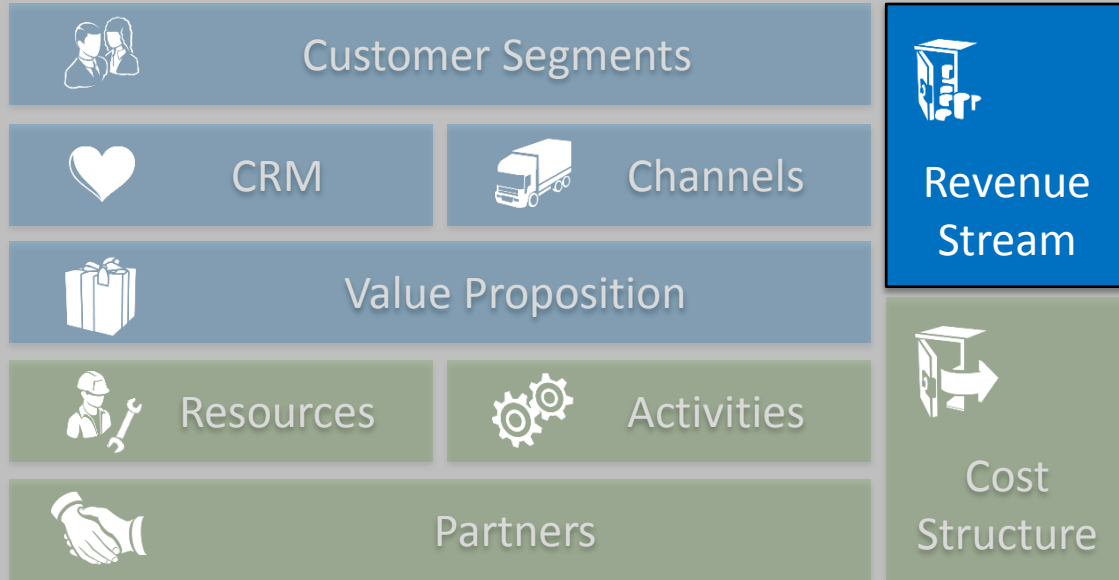
You „know“ the end user

Establish a network of specialists

- ▶ **Remember: Users can use your system less or turn away every single month**

Billing is an important part of your service offering

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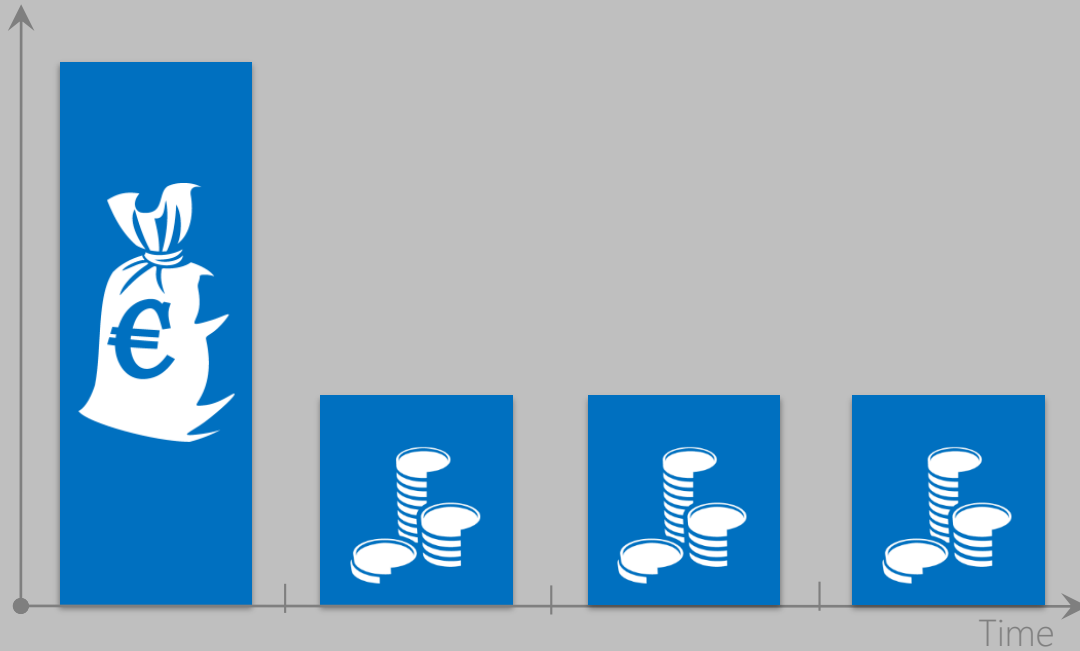


Revenue Stream

Building Blocks of a Business Model

What is a business model?

Business Model Evolution



Revenue Stream

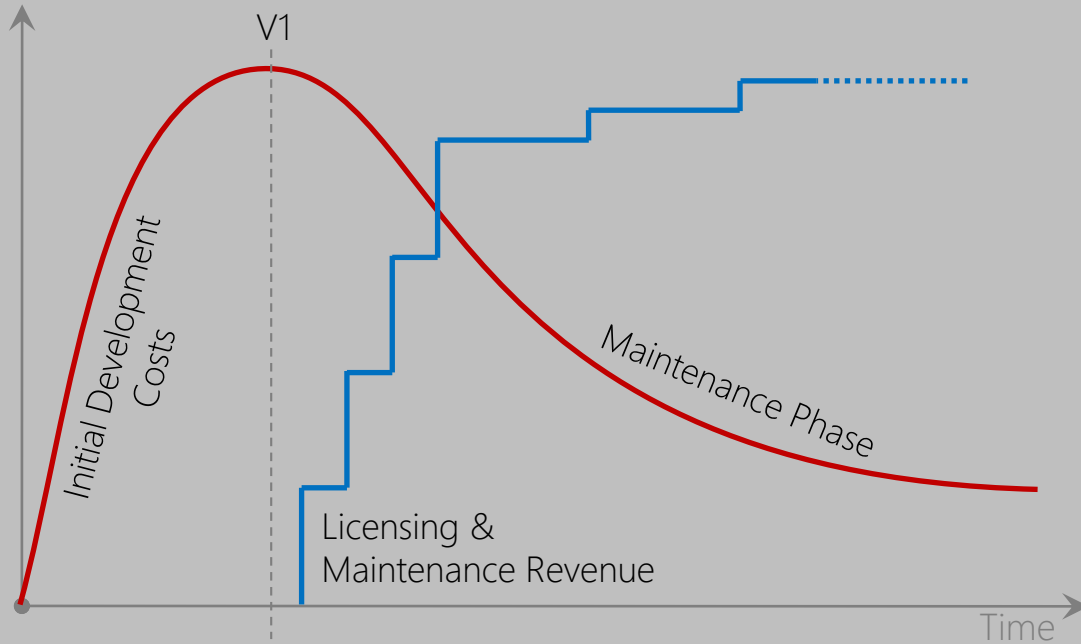
How does SaaS influence the revenue stream?

Classical Model

Licensing-based

Maintenance fee

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Classical Model

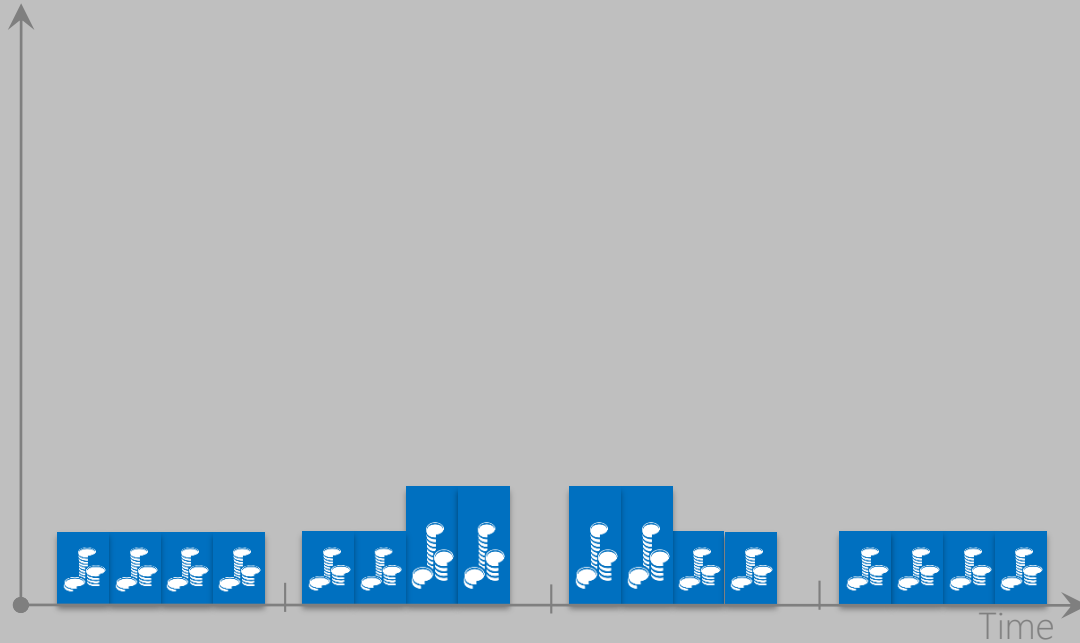
Licensing-based

Maintenance fee

Revenue Stream

How does SaaS influence the revenue stream?

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Revenue Stream

How does SaaS influence the revenue stream?

SaaS Model

Subscription fee or usage fee

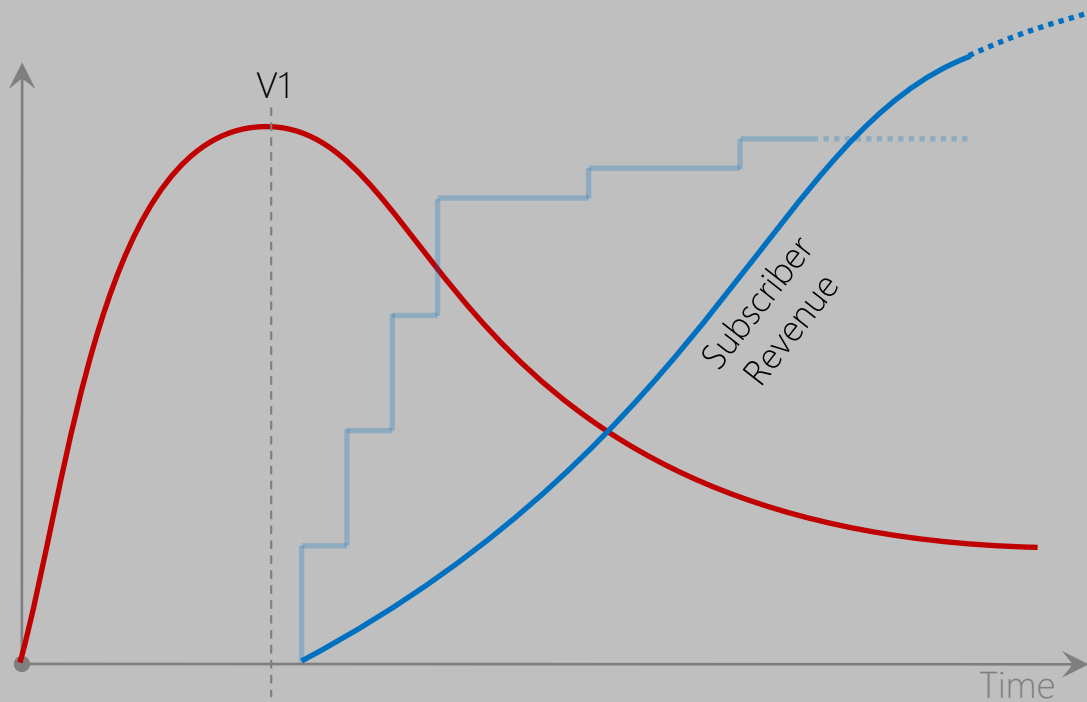
Revenue stream can be
different month by month

Entirely new billing process
is needed

Micro- or mini-payments
Handle defaulting customers

Existing market places and
services might help

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Revenue Stream

How does SaaS influence the revenue stream?

SaaS Model

Subscription fee or usage fee

Revenue Streams

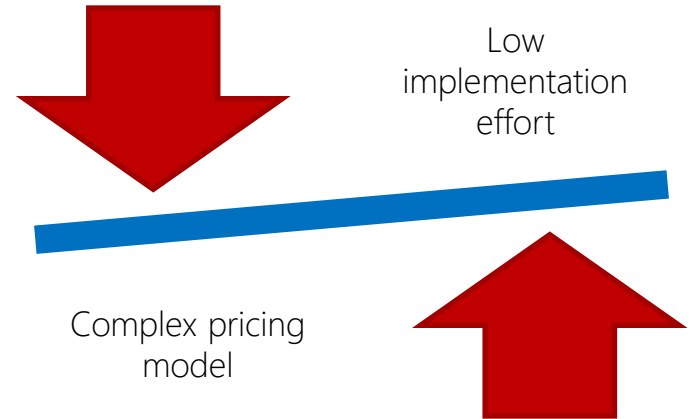
- ▶ Pricing model

- Subscription-based and/or usage-based
 - Minimum fee/usage
 - Rebates, flat fees

- ▶ Fair use policies, limits

- ▶ Rating, billing, payment

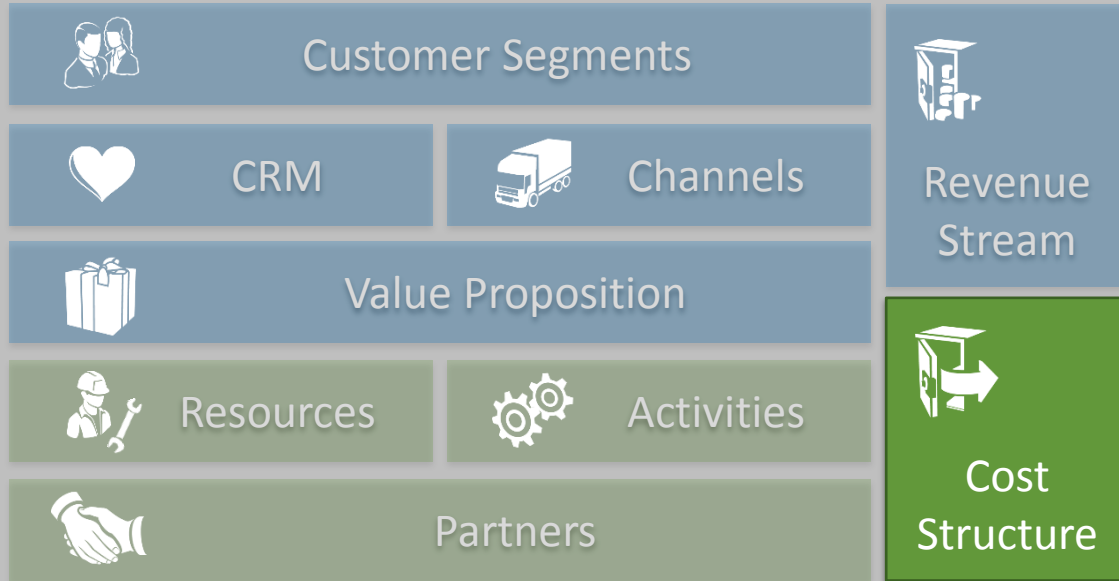
- Organization has to be ready for small invoices/payments



Rating/Billing/Payment

- ▶ **Web portal for...**
 - ...registration of new users (has to handle very sensitive credit card data → has to be stored safely and securely, too!)
 - ...maintaining customer billing data (e.g. customer changes address or credit card provider)
 - ...cancelling accounts or users
- ▶ **Infrastructure for rating**
 - Measure usage
 - Rate usage with rates/unit
 - Additional rating logic will be necessary; examples:
 - Mechanisms for sales discounts (e.g. introductory offer)
- ▶ **Infrastructure for billing**
 - Creation of invoices (in total for accounting and itemized bills for checking the correctness)
 - Sending out invoices (electronically with/without signature, printed)
 - Storing invoices internally.
- ▶ **Infrastructure for payment; options could be:**
 - Credit card payments including mechanisms for handling payment cancellations, invalid credit cards (e.g. expired cards), etc.
 - Payments via online payment solution like PayPal
 - Payment with vouchers (e.g. voucher that an end user received with hardware)
 - Account/balance infrastructure (debit system instead of credit system; example: Skype)
 - E.g. what to do with remaining balance if user cancels his account?
- ▶ **Fraud detection**
 - Infrastructure for credit checking and fraud detection; examples are...
 - ...credit card checking
 - ...check of credit ranking for users
- ▶ **Support infrastructure for rating/billing/payment issues**
- ▶ **Alternatives**
- ▶ **Alternatives for building such a system from scratch could be:**
 - Buying an existing billing system (expensive; does only make sense if customer needs such a system in other areas, too)
 - Handle payments with payment partners (e.g. payment via phone invoice → difficult because such contracts have to be maintained country by country)
 - Use existing SaaS payment solutions (e.g. PayPal; difficult with pay-per-use)

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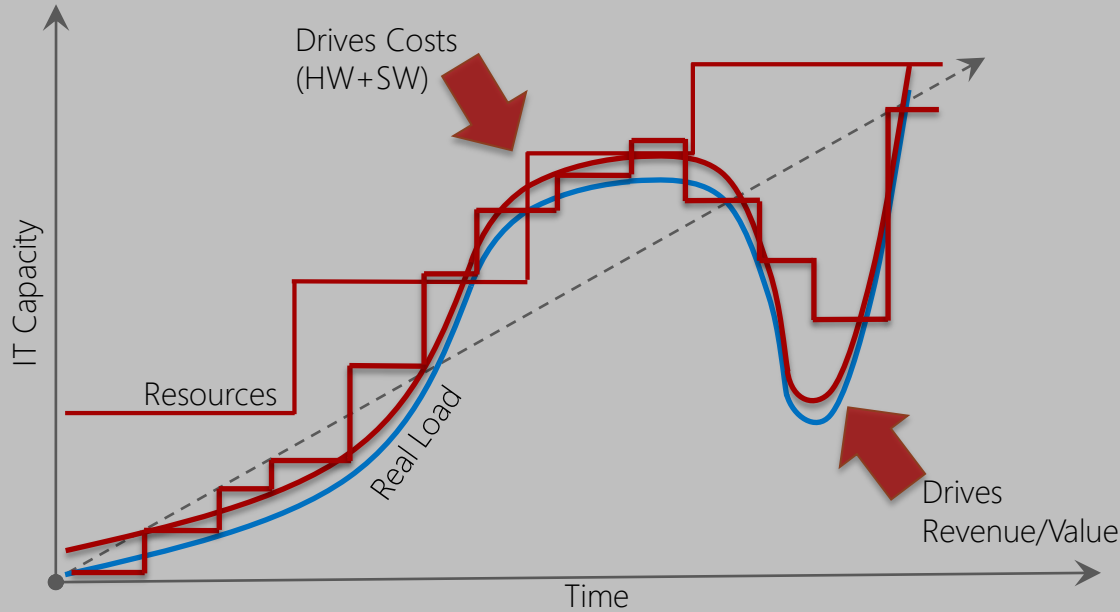


Cost Structure

Building Blocks of a Business Model

What is a business model?

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Cost Structure

How does SaaS influence the cost structure?

Costs

Fluctuating load

Costs of data center resources
TCO for customer

Dynamic resource allocation
Compute
Storage
Bandwidth

...

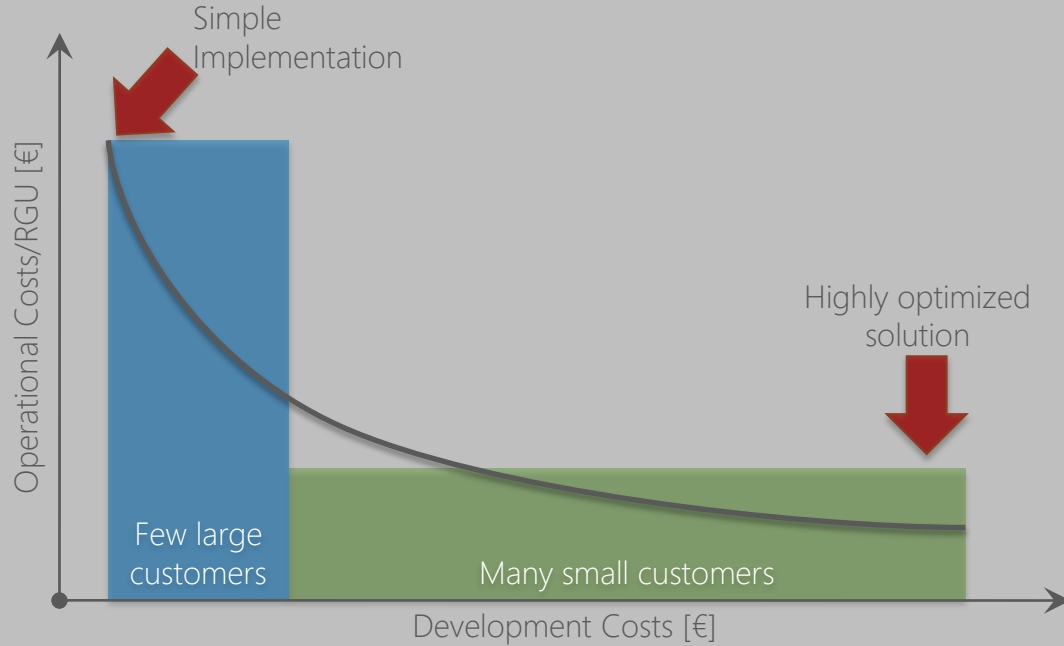
TUNDRA
antique



"We design the price tag first"

\$ 149 / sq. ft.

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Cost Structure

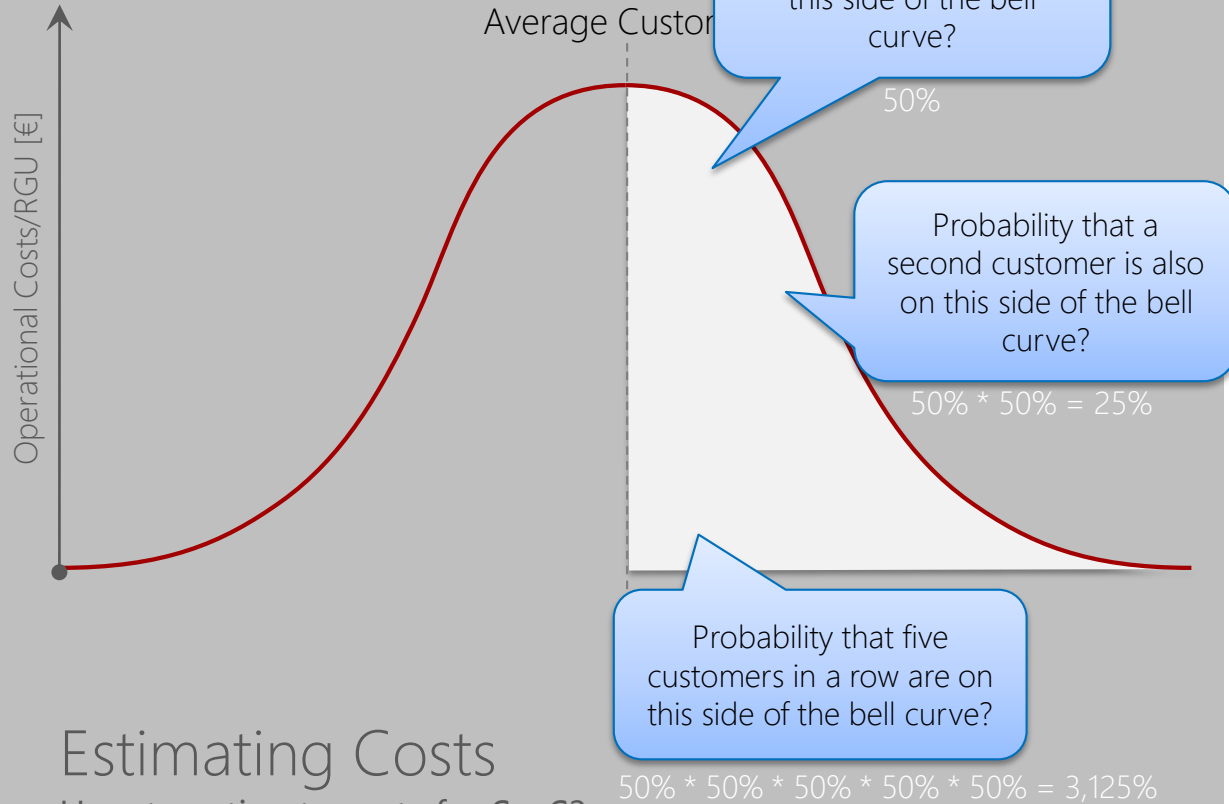
How does SaaS influence the cost structure?

Design to Costs

Strategic decision, not a technical decision

Windows Azure Calculator

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Estimating Costs

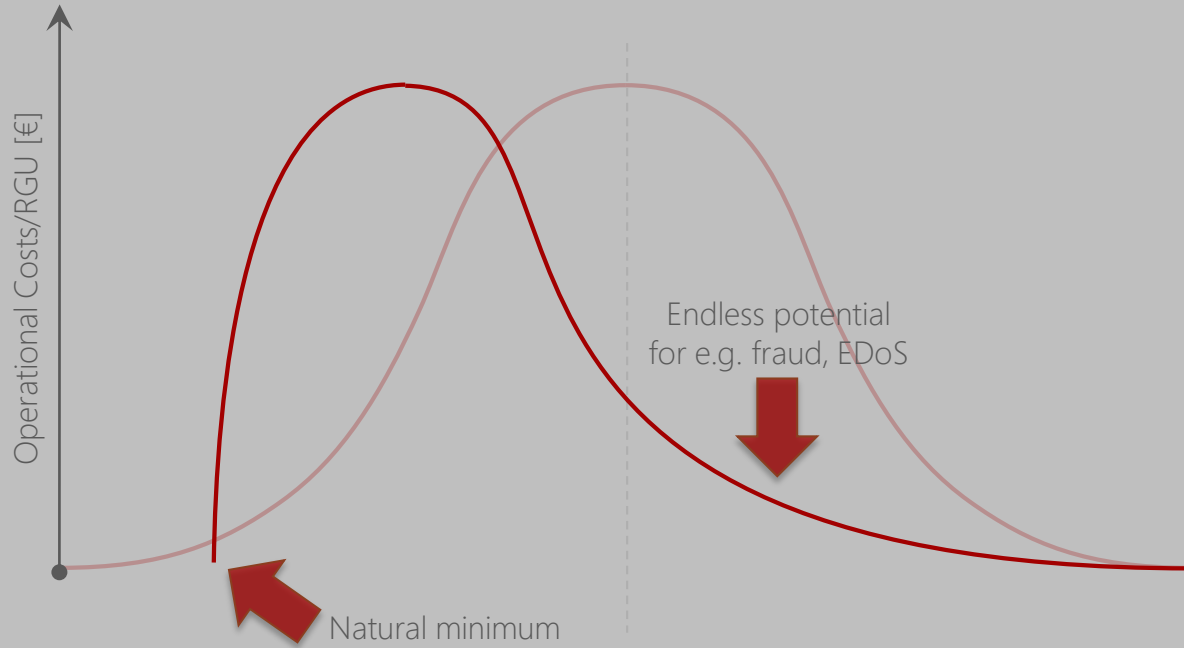
How to estimate costs for SaaS?

Rule of Five

There is about **93% probability** that the median (and mean) of the entire population is between the highest and the lowest values of a sample of five

Prerequisite: Gaussian distribution

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Estimating Costs

How to estimate costs for SaaS?

Statistics

Statistics can be dangerous!



Black Swan

<http://www.flickr.com/photos/essjay/224318029/>

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Black Swan

You cannot predict the future exactly

We do not live in the asymptote, we live in the real life



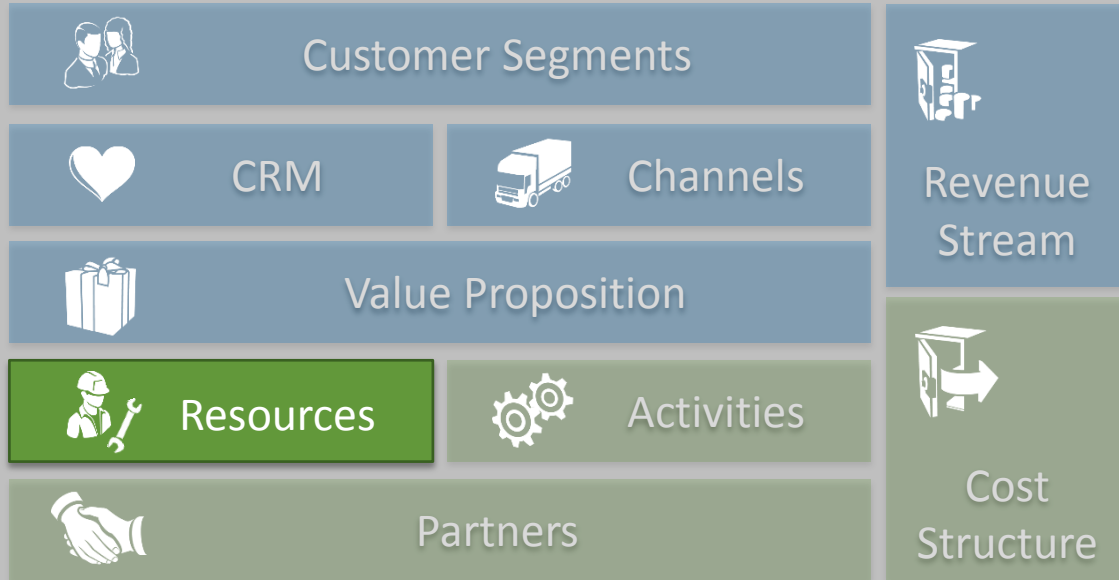
Extremistan



Mediokristan



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Resources

Building Blocks of a Business Model

What is a business model?

Skills

▶ Developers

Software development tools might not change

Knowledge about new patterns and standard necessary

(e.g. federated identity, programming for clusters, dynamic infrastructure, messaging, etc.)

▶ Architects and designers

Understanding of SaaS and especially multi-tenancy

Design to cost

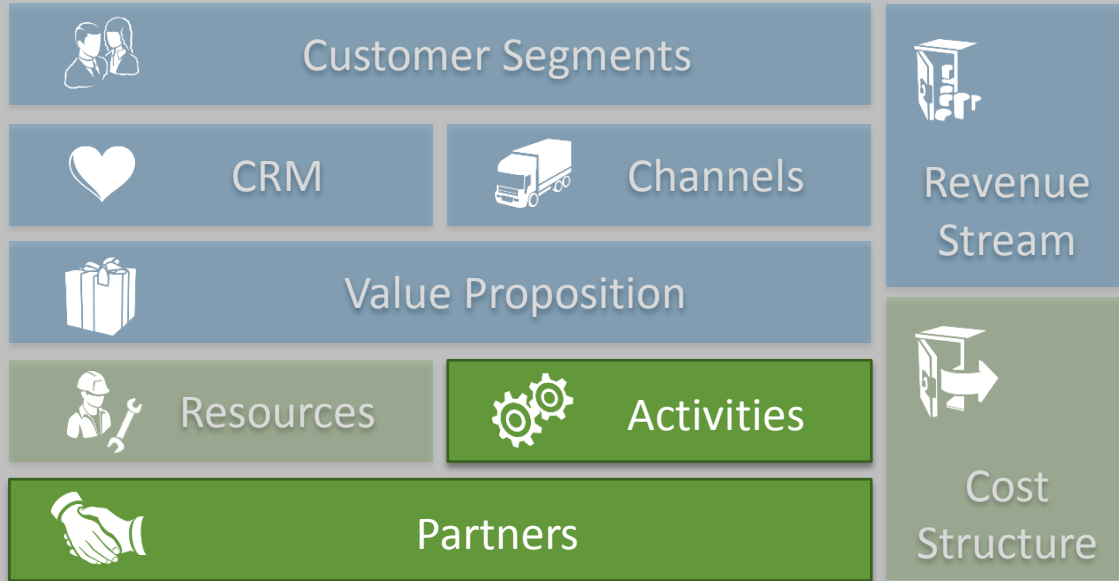
Designs that make use of PaaS offerings

▶ Tools

From software vendor to service operator

(e.g. monitoring, scaling, operations dashboard, etc.)

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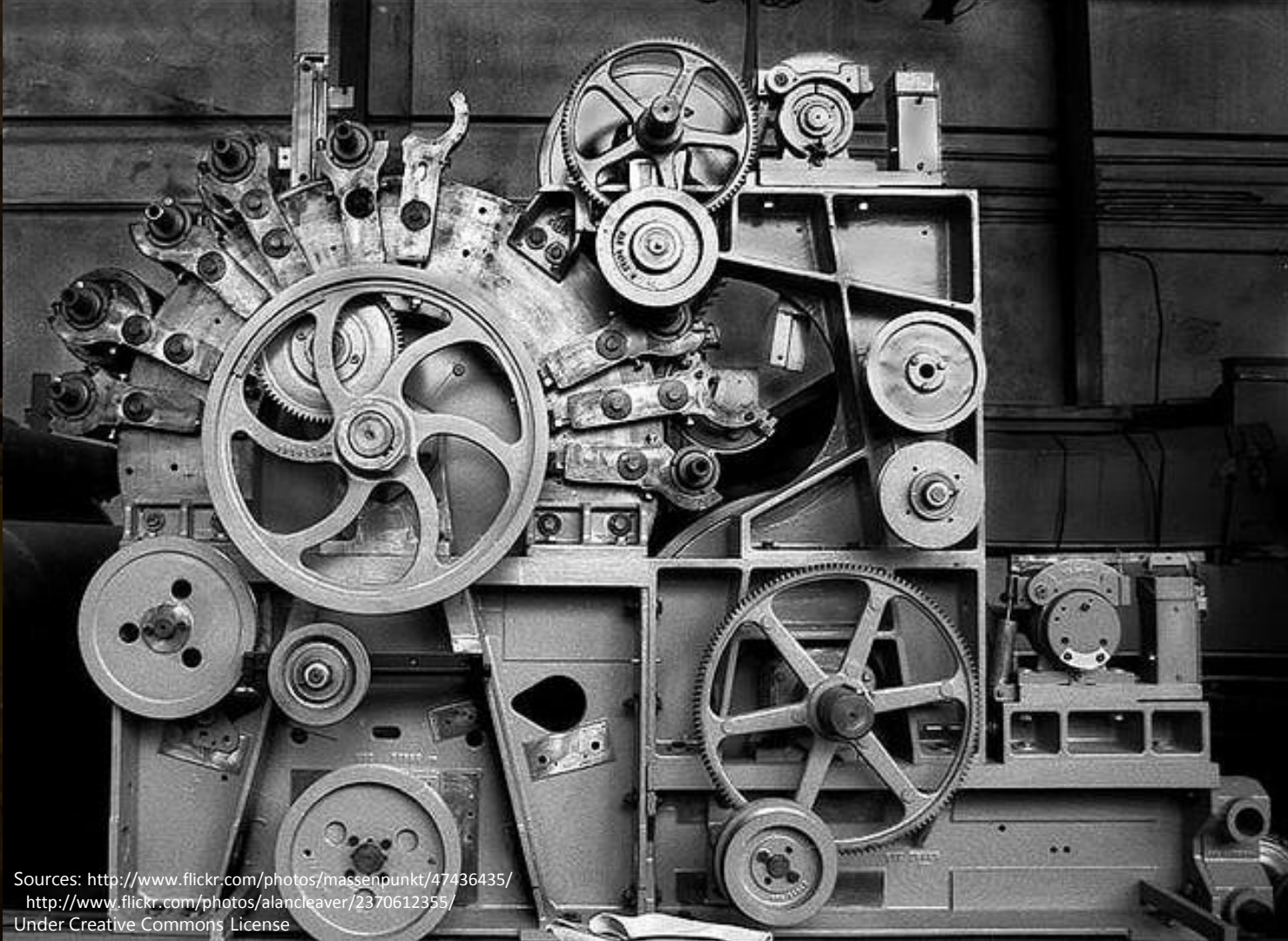
Activities and Partners

Building Blocks of a Business Model

What is a business model?

Activities

- ▶ **Move to Platform as a Service if possible**
Reduces operational costs and enables you to catch the long tail
- ▶ **Standardization and automation rules**
Reduces the effort for upgrades and drives continuous innovation
If something is hard – do it more often!
- ▶ **Develop and IT operations practice**
Operating a multi-tenant SaaS solution needs specific IT operation skills
- ▶ **Offer a level of operational excellence that exceeds your customers' expectations**



Sources: <http://www.flickr.com/photos/massenpunkt/47436435/>
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Monitoring and Scaling

- ▶ Relatively easy to monitor overall load/health of compute servers

Example: Azure Diagnostics gathers data

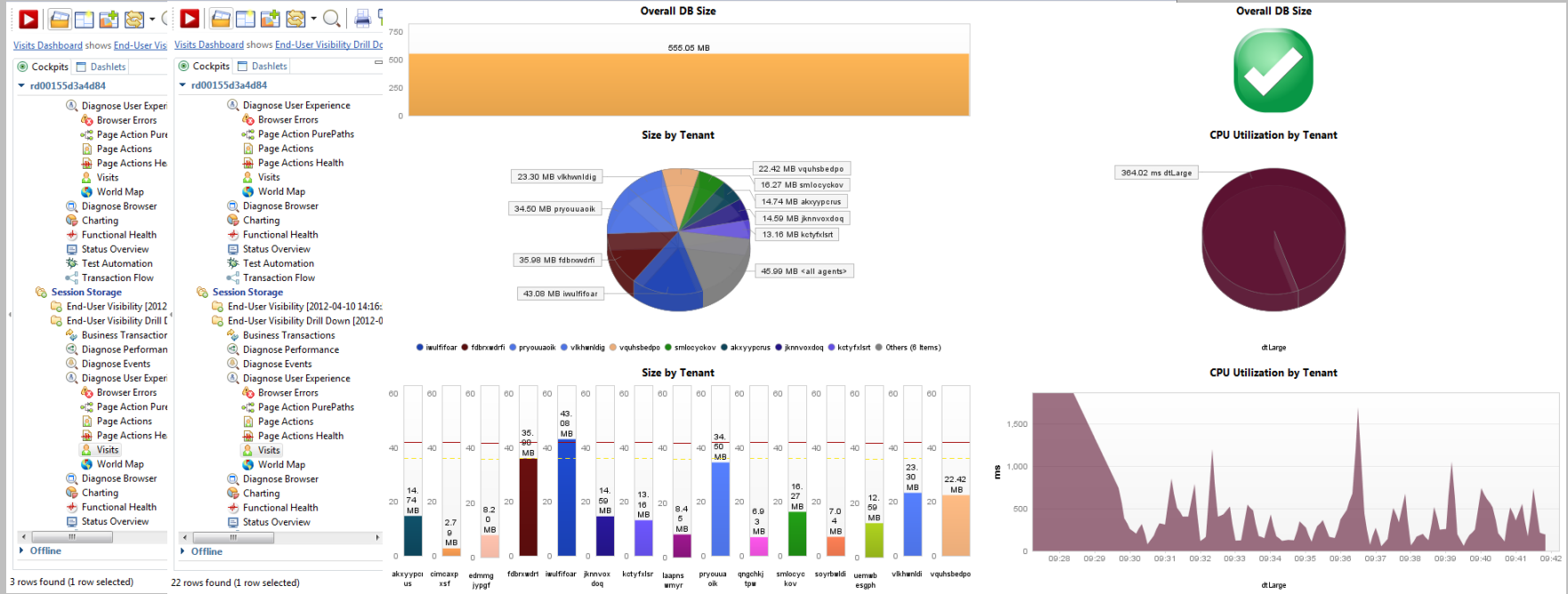
System Center Operation Manager or 3rd party tools for monitoring

- ▶ Harder to monitor end-to-end performance for a certain user/tenant

Application-level logging

3rd party APM tools like DynaTrace

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Application Performance Monitoring (APM)

Example: [Compuware Dynatrace](#)

Monitoring and Scaling...

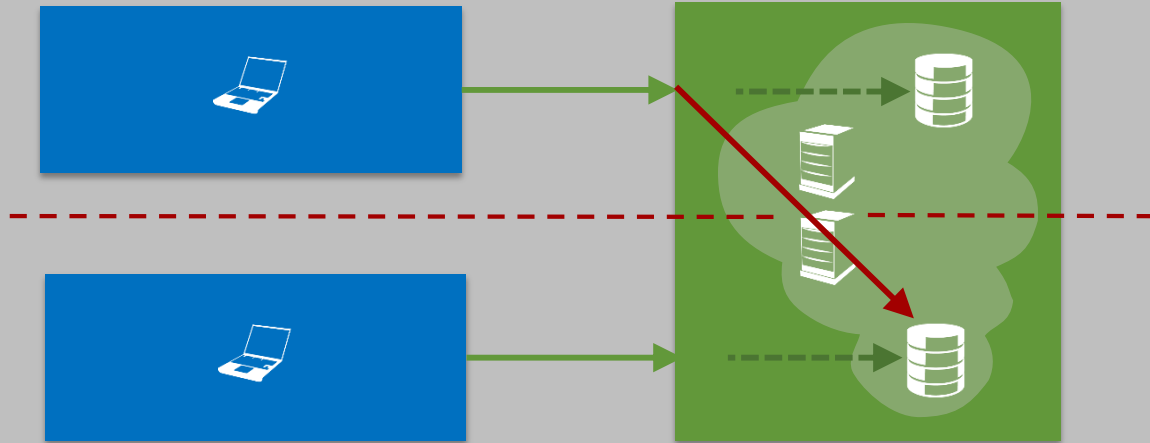
- ▶ ...directly influence your company's margin by dynamically right-sizing the infrastructure
- ▶ ...cares for great user experience by scaling up/out whenever necessary
- ▶ ...gathers the base data to enable usage-based billing
- ▶ ...is used to enforce usage limits
- ▶ ...helps monitoring fair use policies
- ▶ etc.

Resources

- [Microsoft Patterns & Practices](#)
[The Autoscaling Application Block](#)
- [Windows Azure PowerShell Cmdlets \(Version prio June 2012\)](#)
- [Getting Started with Windows Azure PowerShell \(June 2012 Version\)](#)
- [System Center Monitoring Pack for Windows Azure Applications](#)
- [MSDN: Collecting Logging Data by Using Windows Azure Diagnostics](#)
- [MS TechNet: How to Shard with SQL Azure](#)

- 3rd party tools
 - [AzureWatch](#)
 - [opstera](#)
 - [Compuware DynaTrace](#)
 - [redgate Cloud Services](#)
 - [Cerebrata Diagnostics Manager](#)

Business Model Evolution



Tenant Separation

How to secure tenant data

Tenant Separation

decide about the right level of sharing

Influences security

Influences systems

management

Influences operational costs

Example: Windows Azure
Mobile Services

Resources

- [Windows Azure PowerShell Cmdlets \(Version prio June 2012\)](#)
- [Getting Started with Windows Azure PowerShell \(June 2012 Version\)](#)
- [MSDN: How to: Run Partially Trusted Code in a Sandbox](#)
- [MSDN: Managing Application Pools in IIS 7](#)
- [Federations in SQL Azure](#)

- 3rd party tools
 - [Cerebrata Cloud Storage Studio](#)

Disaster Recovery

- ▶ **Backup/Recovery**

 - Done by Microsoft

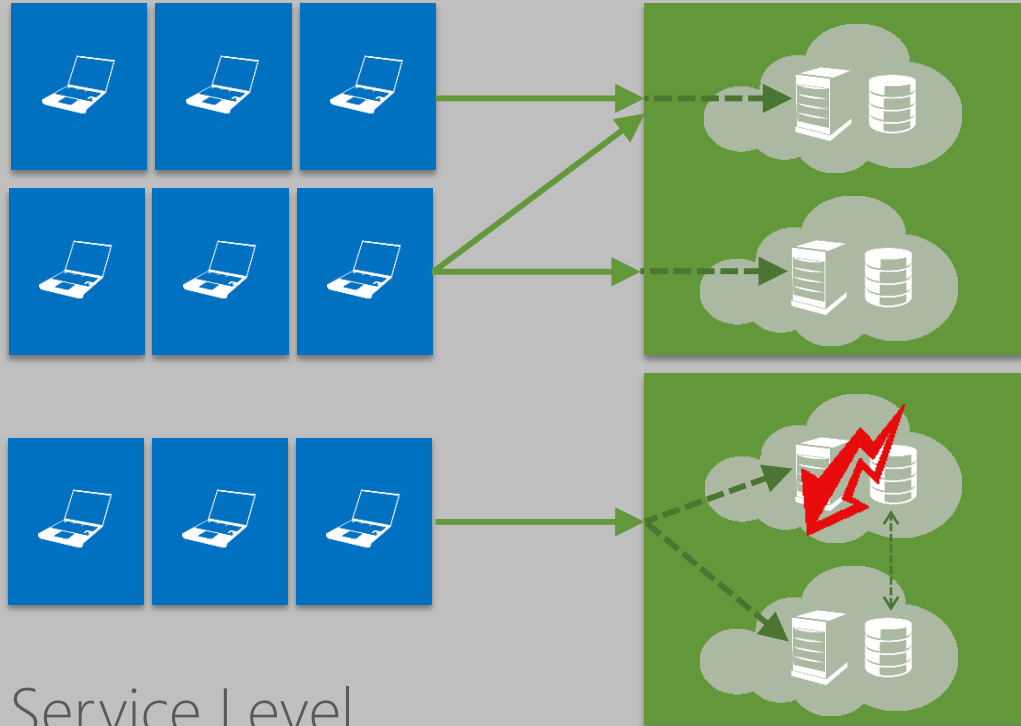
 - Protect your customers from unwanted deletions and modifications

- ▶ **Service Level**

 - Azure's SLA is not silver bullet

 - Take extra precautions if necessary

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Service Level

How to raise the service level of your SaaS application

Service Level

Secure by default

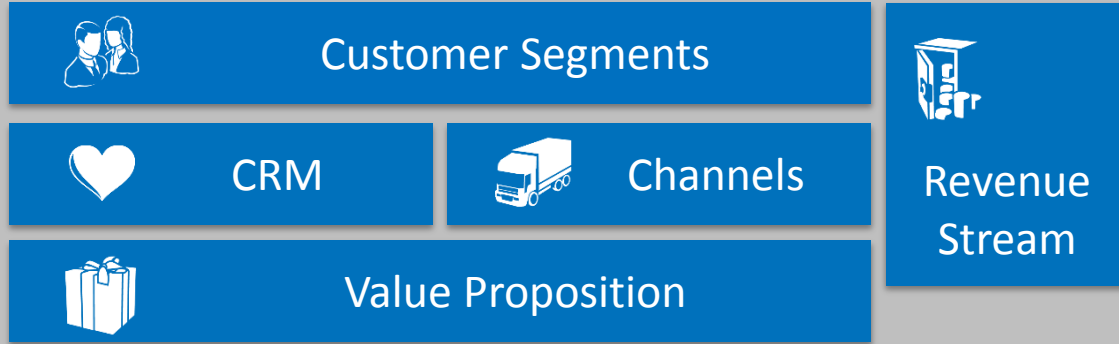
Cluster by default

Bring your application and data to your customers

Load balancing/failover across data centers

Resources

- ▶ **Business Model Canvas**
http://en.wikipedia.org/wiki/Business_Model_Canvas
<http://www.businessmodelgeneration.com/>
[Amazon: A. Osterwalder, Y. Pigneur: Business Model Generation](#)
- ▶ **Customer Empathy Map**
<https://www.google.at/search?q=xplane+customer+empathy+map>
<http://innovatus.org.uk/2012/01/empathy-maps/>
- ▶ **Blue Ocean Strategy**
http://en.wikipedia.org/wiki/Blue_Ocean_Strategy
<http://www.blueoceanstrategy.com/>
- ▶ **Books**
Hubbard: [How To Measure Anything](#)
Taleb: [Der Schwarze Schwan](#)



Summary

What did we cover?

Summary

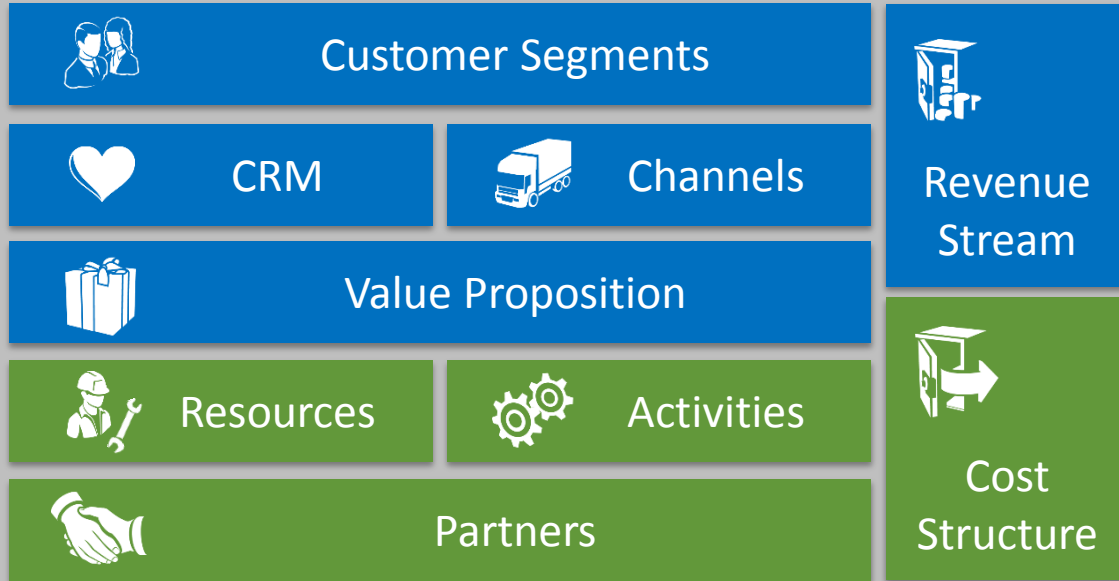
With SaaS you might reach **new customer segments**

Value proposition
= **Products + Service**

SaaS helps you to establish **new sales channels**

Your customers become **subscribers**

Prepare for **changes in your revenue stream**



Summary

What did we cover?

Summary

Development tools stay the same
but your **architecture will be different**

You have to develop **new skills**
regarding **operating** your SaaS
solution

Build on a **PaaS** infrastructure
whenever possible

Optimization is sexy again!



Q&A

Thank you for coming.



Rainer Stropek

software architects gmbh

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rainer@timecockpit.com
<http://www.timecockpit.com>
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time cockpit
Saves the day.