



Rapid SaaS Development

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Who is Scio Consulting?

- **SaaS Enablement Specialists**
 - **SaaS Business and Technical Consulting**
 - **SaaS Product Development Services**
 - **SaaS Infrastructure Mgmt and Operations**

What is SaaS?

- SaaS = Software as a Service
- **It is a Deployment/Delivery model**
 - Hosted and Managed by vendor
 - Delivered across the Internet
- **It is a Business Model: usage-based pricing** (vs. perpetual license model of on-premise software).
Examples:
 - Per user per month
 - Per transaction
 - Per GB of storage per month

SaaS Examples

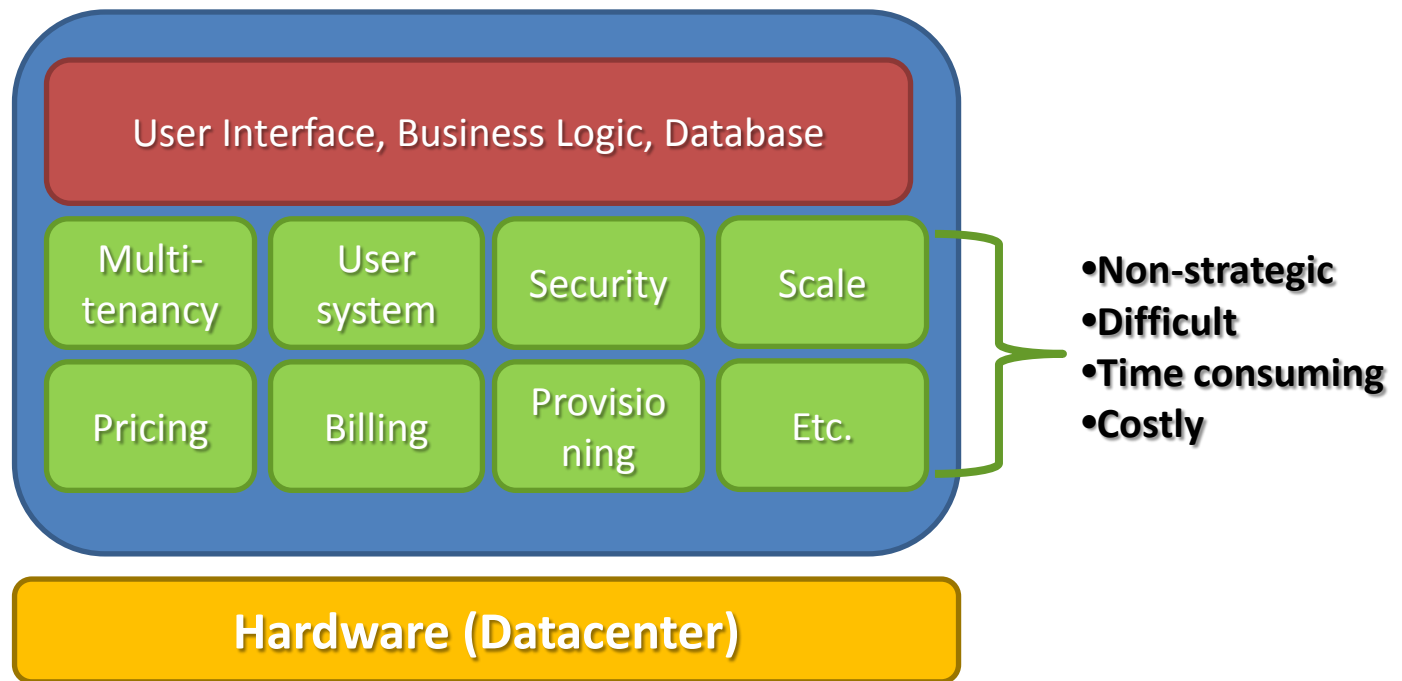


What is different about SaaS?

Architectural <ul style="list-style-type: none">• Multi-tenancy• Scalability• Security• Performance	Functional <ul style="list-style-type: none">• Provisioning• Billing• Metering• Monitoring
Business Context <ul style="list-style-type: none">• Integration Capabilities• Feature Planning• Release Roadmap	Operations <ul style="list-style-type: none">• Hosting/ Infrastructure Selection• Infrastructure Management• Release Management
Sales <ul style="list-style-type: none">• Sales model• Sales compensation• Partner channel• VARs	Marketing <ul style="list-style-type: none">• Strategy & Positioning• Competitive Analysis• Web-centric Marketing

SaaS Architecture

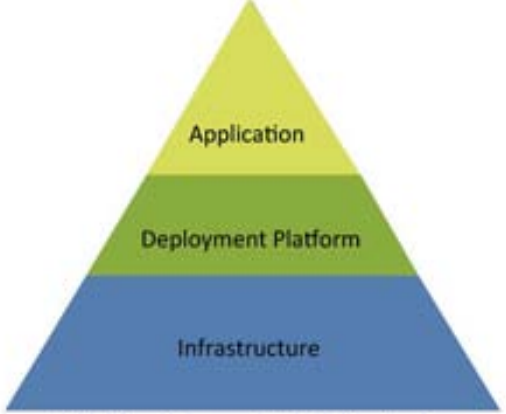
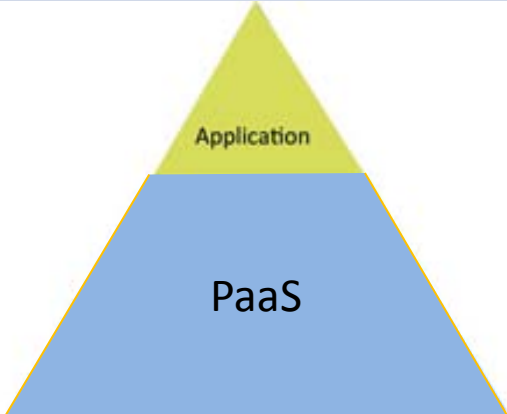
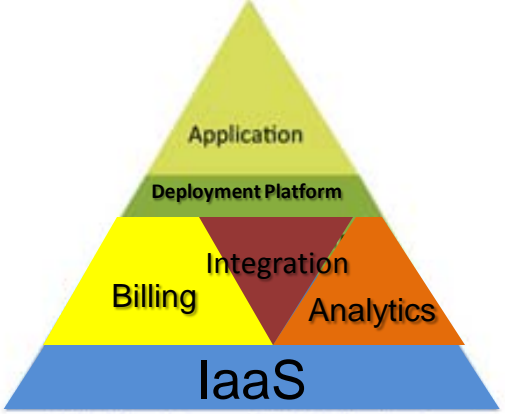
Traditional SaaS Application – built from the ground up



□ Build vs Buy

- ▣ Till recently there was no choice – all this had to be built

Today's Technology Choices

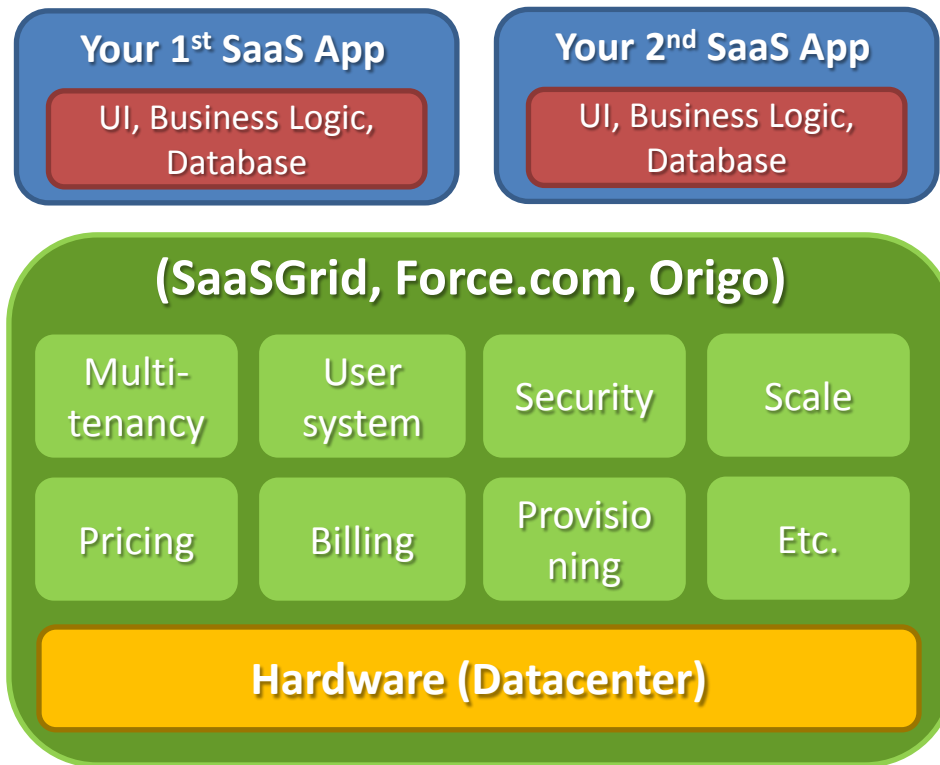
From the Ground Up	Through a PaaS (Platform as a Service)	Combining Cloud Services
 <p>Technical Layers of SaaS Applications</p>	 <p>Technical Layers of SaaS Applications</p>	 <p>Technical Layers of SaaS Applications</p>
<p>Platform Examples:</p> <ul style="list-style-type: none"> • LAMP • Win, IIS, ASP.NET, SQL Server • Ruby on Rails 	<p>PaaS Examples:</p> <ul style="list-style-type: none"> • SaaSGrid • Force.com • Google App Engine 	<p>Cloud Services exist for</p> <ul style="list-style-type: none"> • Infrastructure • Development • Business functions • Monitoring • Interoperability
<p>Hosting Alternatives:</p> <ul style="list-style-type: none"> • In-house • Co-location • Cloud Computing (EC2, GoGrid) 	<p>Hosting:</p> <ul style="list-style-type: none"> • Included in PaaS 	

Cloud Service Types

- **IaaS – Infrastructure as a Service**
 - Utility computing
 - Amazon EC2, GoGrid, Mosso, etc.
- **SaaS – Software as a Service**
 - Specialized components
 - Billing, CLM, Monitoring, Integration, etc.
- **PaaS – Platform as a Service**
 - Infrastructure + Technology Stack + Solution Services
 - SaaSGrid, Force.com, Origo Networks
 - Generic vs. SaaS-specific

PaaS for SaaS

SaaS Applications Using a SaaS-specific PaaS



**A Cloud OS
For SaaS Apps**

Cloud Components for SaaS

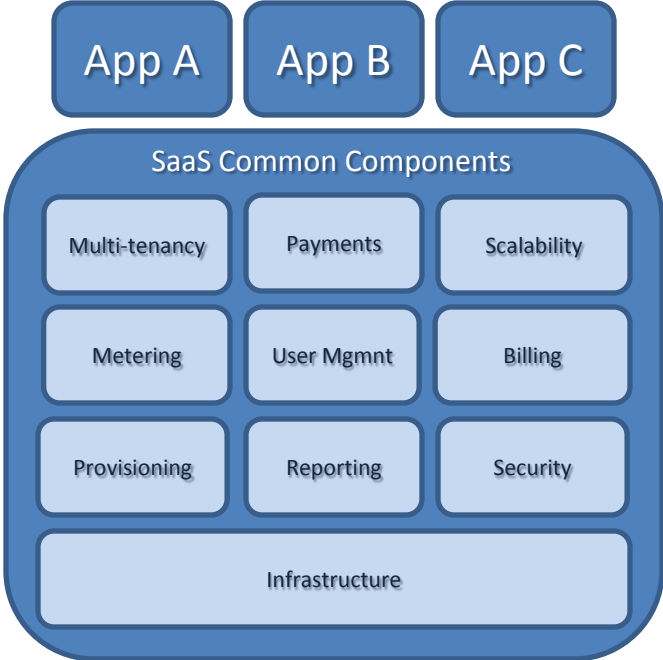
- **Billing**
 - Aria, OpSource Billing CLM, Zuora, Vindicia
- **Customer Management**
 - OpSource Billing CLM (Customer Lifecycle Management), Aria Systems
- **Payment Processing**
 - Paypal, etc.
- **Monitoring**
 - TrustSaaS, Absolute Performance, SaaSMonitor.com
- **Integration**
 - Boomi
- **Analytics**
 - Sonoa

OpSource Billing CLM™

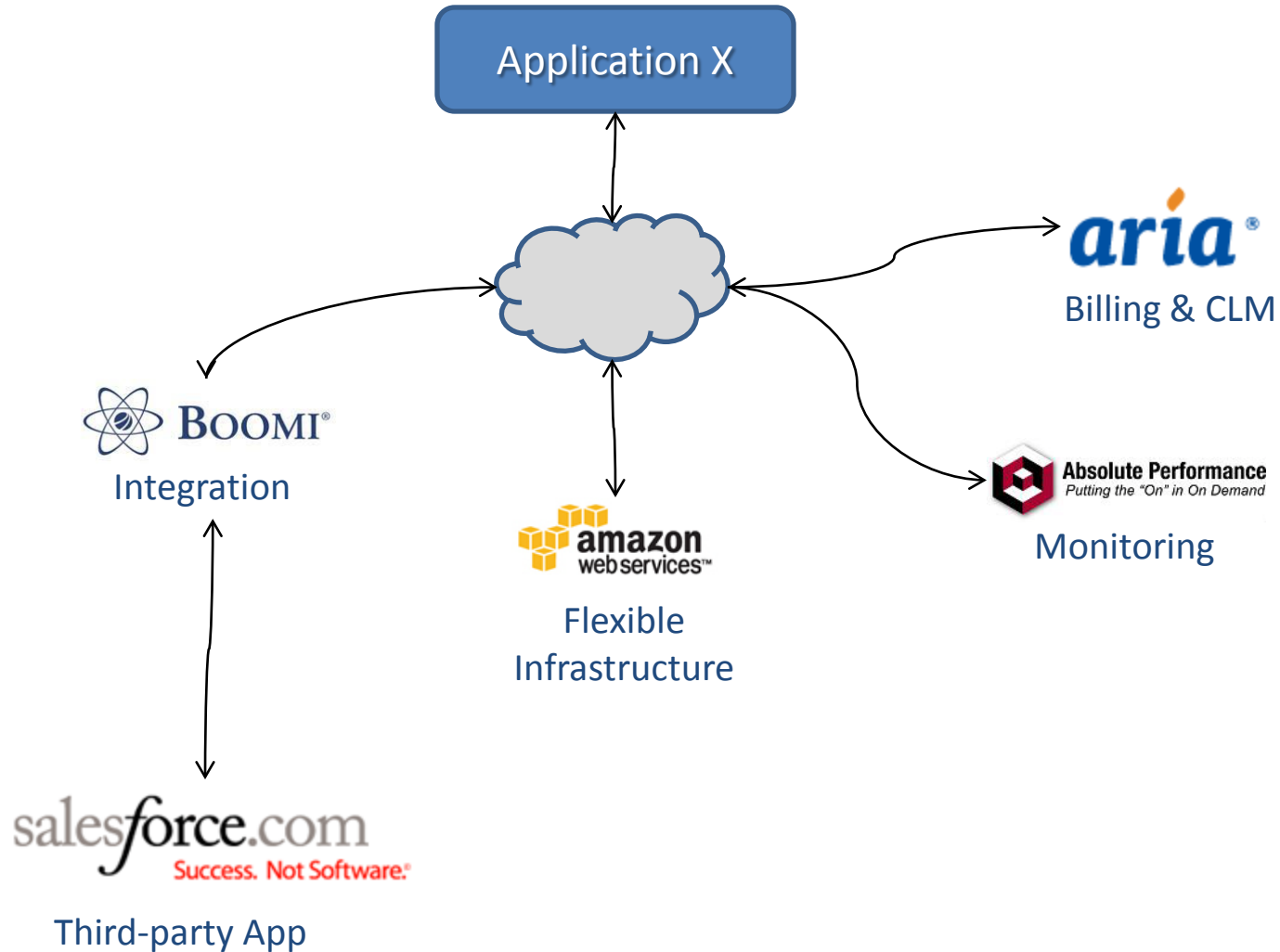


Mix and Match

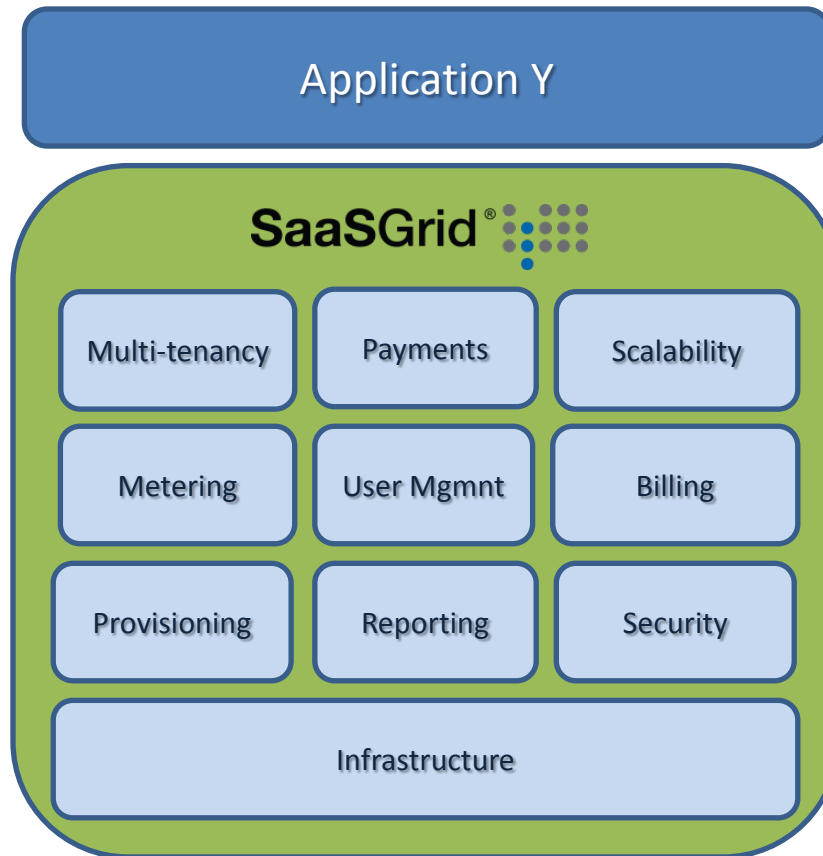
Combinations of Cloud services can be used to deploy SaaS applications faster and cheaper



SaaS App Scenarios



SaaS App Scenarios – cont'd



Case Study: Build vs Buy Analysis

- Client:** B-Soft
- Product:** On-premise ERP/POS for small & medium retail chains
- Objective:** Develop a SaaS version for “long tail”
- Analysis:** Comparing the cost of developing a SaaS application under 2 different scenarios:
1. Building all components from scratch (thus a proprietary SaaS platform)
 2. Leveraging an existing SaaS platform

Application Characteristics

- **Technology Stack:** .NET
- **SaaS Technology:** SaaSGrid
- **Application size:** ~200 user story points (~30 end-user screens)
- **User Interface:** SilverLight
- **Business Logic:** “Standard” level of complexity
- **Integration:** Basic API

Work estimates are based on historical data of previous engagements to design and develop B2B SaaS applications

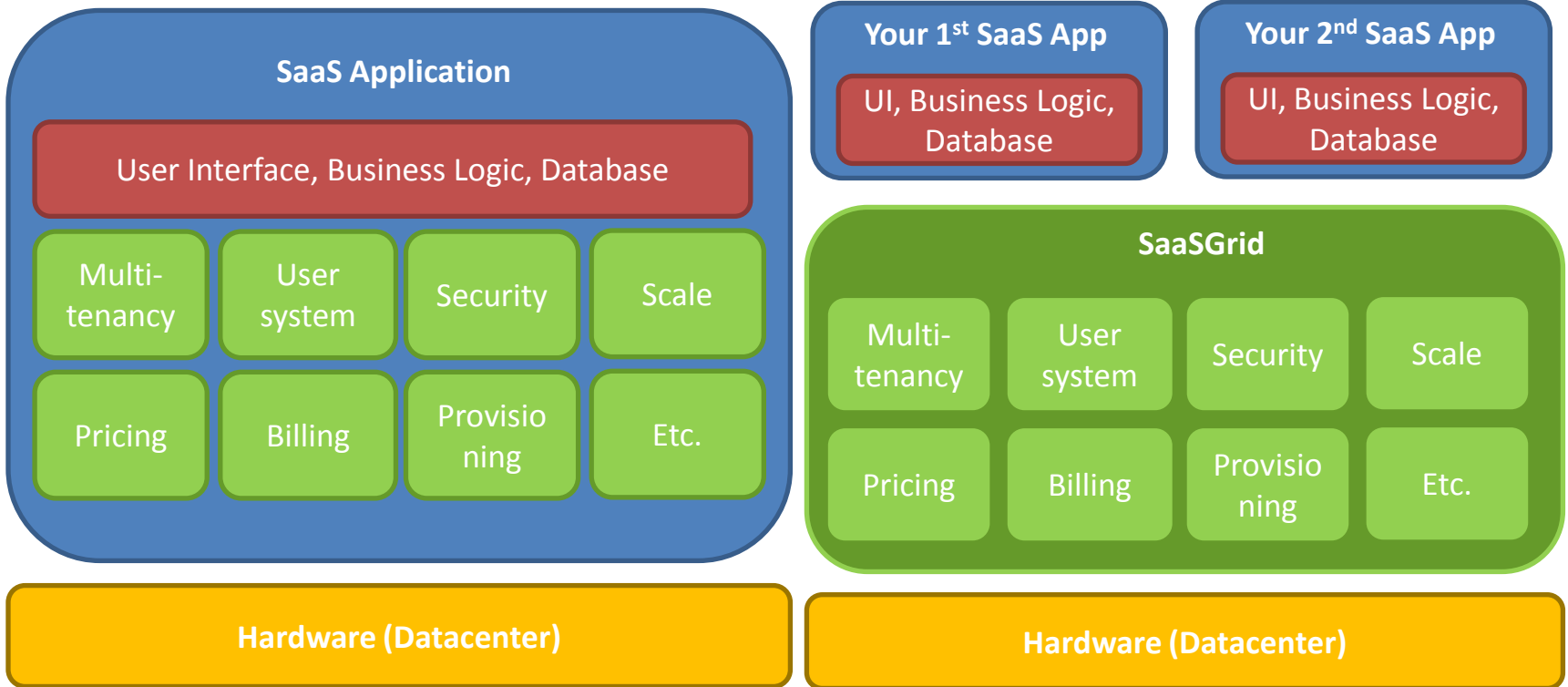
Components Included

- SaaS Characteristics included in comparison:
 - Multi-tenancy
 - Billing and payments
 - Provisioning
 - Scalability
 - Metering
 - Security
 - User management
 - Subscription management
- **License Model:** Cloud Utility model (variable cost – per user/month)
 - Deployed to Origo Networks

Comparison

Only .NET

.NET + SaaSGrid



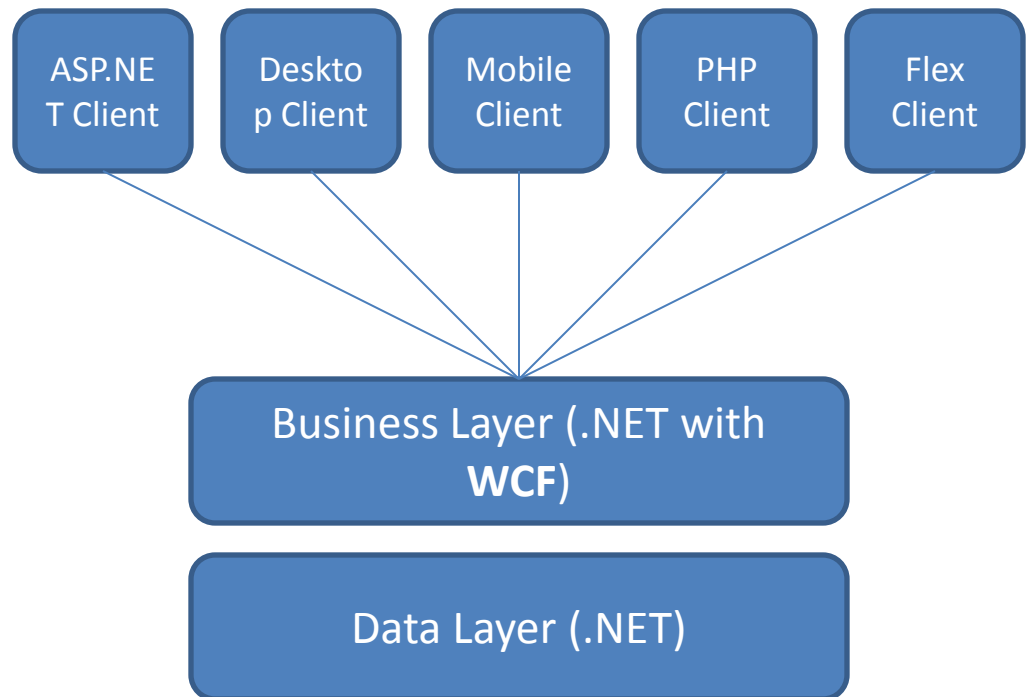
Everything in blue is what needs to be built



- What it provides
 - Out-of-the-box architecture for high scalability
 - Physical separation of data, business and presentation layers
 - Grid Architecture
 - Automatic balancing of load in Server Grid
 - Architectural Foundation & Abstraction
 - Multi-tenancy
 - Scalability
 - Security & User Management
 - App Lifecycle Management

SaaSGrid – cont'd

- Presentation layer can be in any technology
 - ASP.NET
 - PHP
 - Java
 - Flex
 - Silverlight
 - Etc.

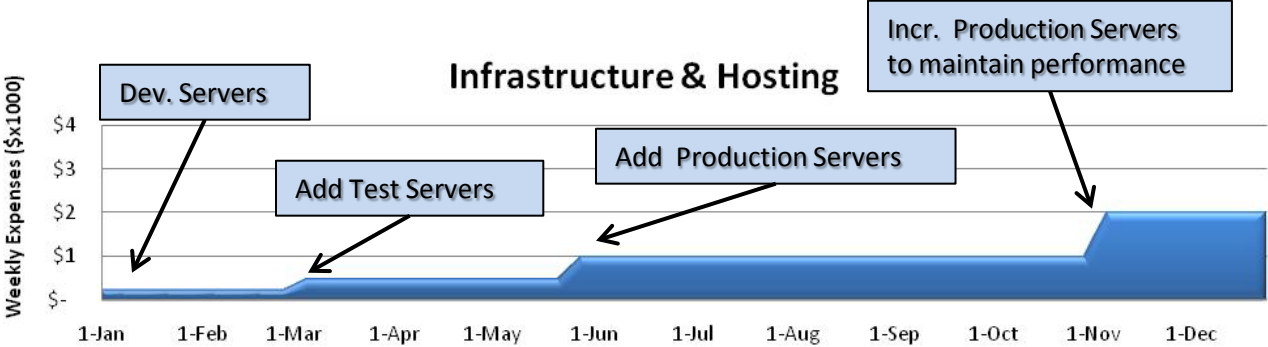
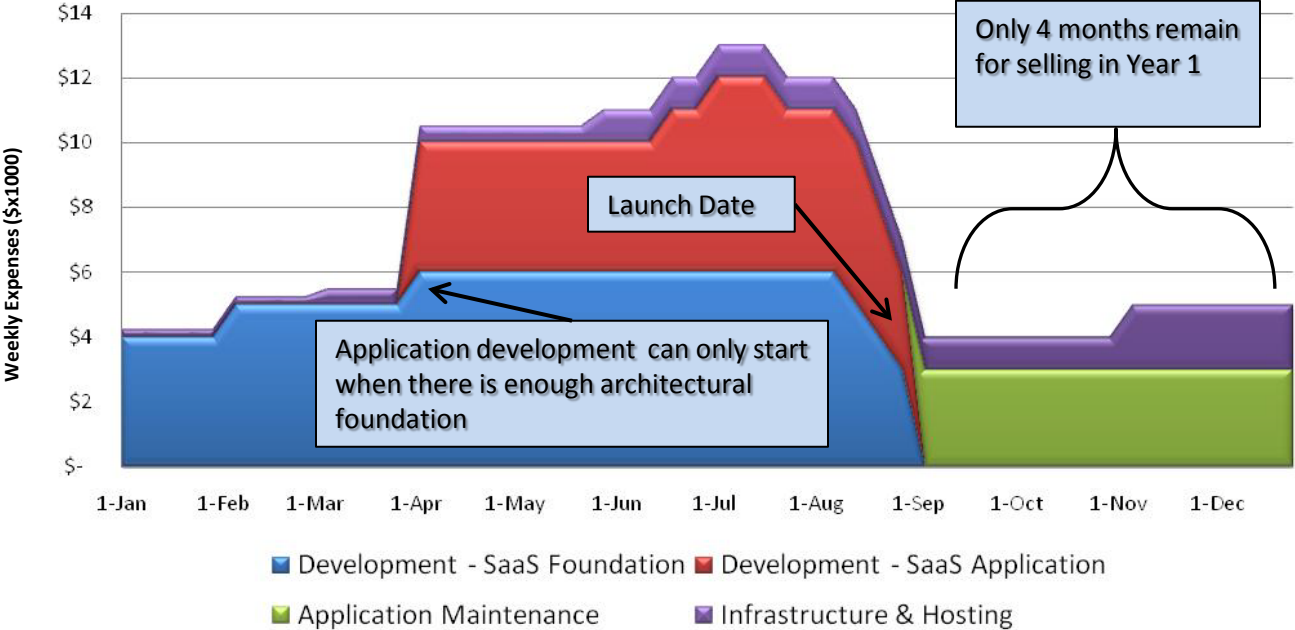


SaaSGrid – cont'd

- Provides significant portion of Business Management Functionality
 - Pricing Engine
 - Billing Engine
 - Provisioning
 - Reporting
 - Vendor & Tenant Management
 - User & Tenant Self Service

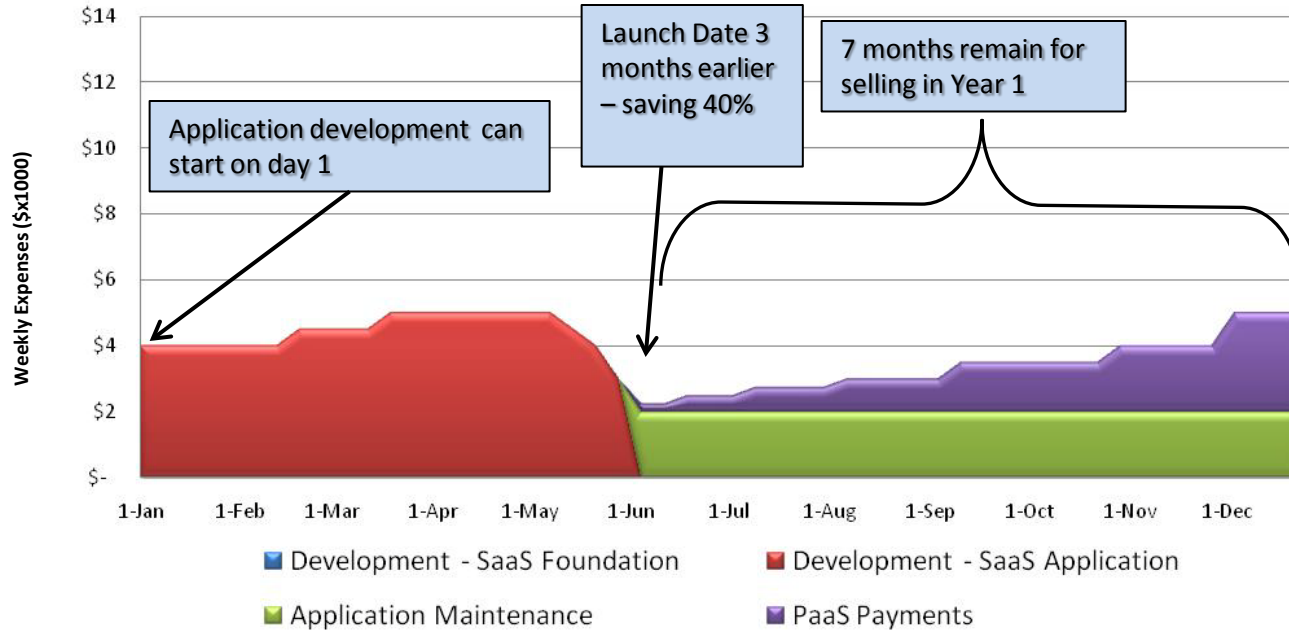
Costs – Custom Development

First Year Costs - Proprietary SaaS Foundation

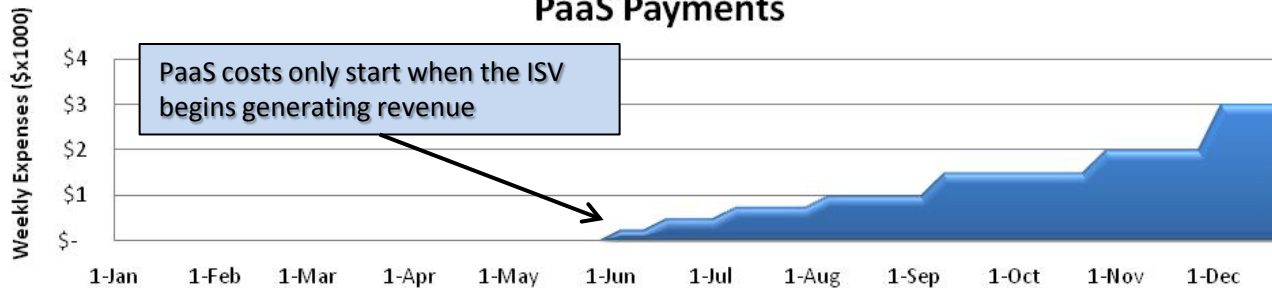


Costs – SaaSGrid Development

First Year Costs - Using a PaaS

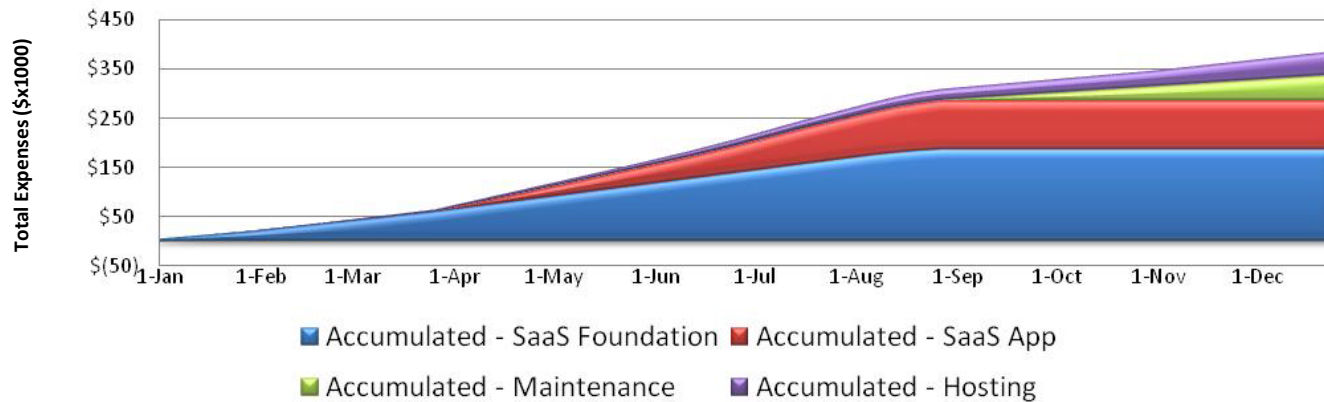


PaaS Payments

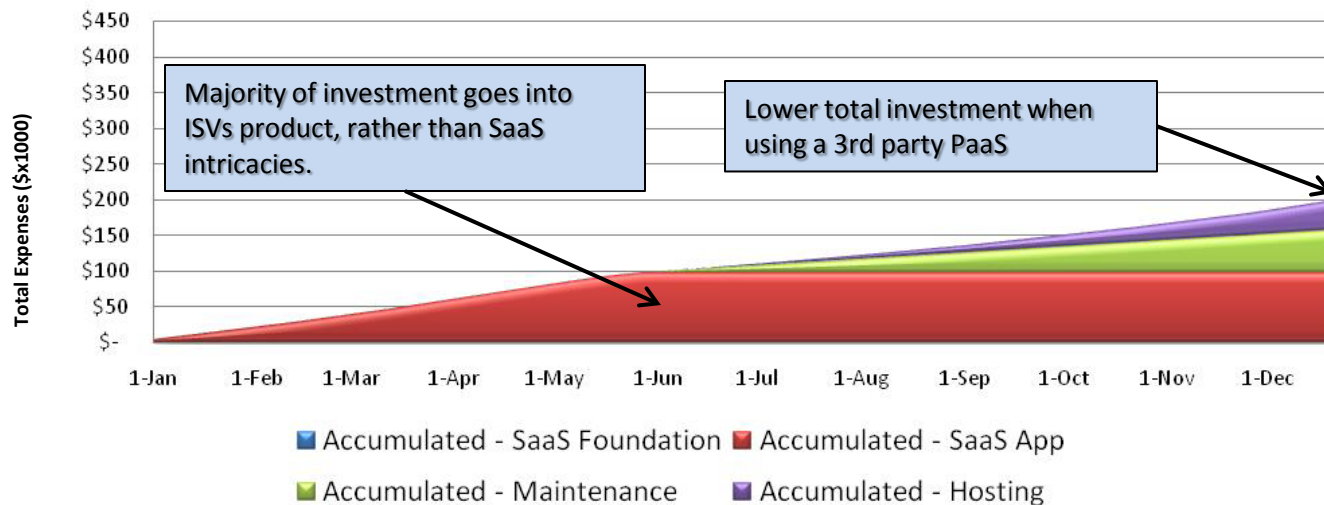


Total Cost Comparison – Year 1

Accumulated Costs w/ Proprietary SaaS Foundation



Accumulated Costs w/ SaaSGrid



Analysis Results

- **Cost Savings**
 - Overall, using SaaSGrid allows for a cost savings of \$200,000, or 50% of the total cost for year 1 when compared to custom development.
- **Time to Market**
 - With SaaSGrid, BSoft is able to launch 3 months earlier, allowing for 3 additional months of selling and revenue generation.
- **Focus on Solving the Customer Need**
 - The majority of R&D spending goes into building and enhancing the customer application, not into SaaS intricacies, allowing the company to focus on their core competency.
- **Flexible Expense**
 - Hosting infrastructure is a variable cost proportional to revenue, not a fixed cost.

Recap

- Building and delivering a Software-as-a-Service (SaaS) offering does not need to be complicated or expensive.
- Leveraging the right technologies, tools and services can help companies to move to SaaS smoothly and efficiently.

Advantages

- Accelerate time to market (40-60%)
- Reduce development costs (20-50%)
- Leverage solutions with greater functionality and based on best practices
- Simplify scalability and application maintenance
- More system components can be a variable cost instead of a capital investment or fixed cost

Disadvantages

- Dependencies on vendors
 - Availability of SaaS solution depends on availability and performance of all pieces
 - Reliability
 - if each component has a 99.99% SLA your app cannot get to 99.99%
 - Lock-in
 - Not strong with SaaSGrid because of .NET
 - Vendors going out of business
- Potentially higher cost if volume of transactions is very high

Final Thoughts

- On balance, more advantages than drawbacks
 - Minimize development costs and duration
 - Minimize fixed operating costs
 - Scale smoothly
 - Simplify building and delivering SaaS applications to focus on gaining market share

FastStart!

- Program to quickly and cost-effectively bring to market your SaaS offering
 - Leverage
 - SaaS platforms & building blocks
 - Cloud infrastructure
 - Specialized team expertise
 - Agile development
 - Nearshore cost advantages



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