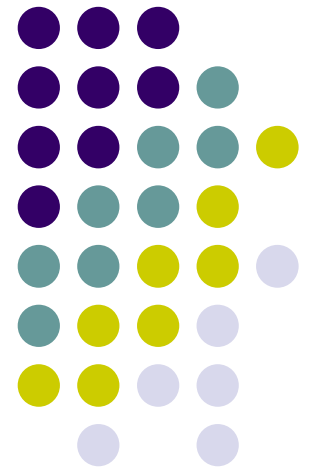


E-commerce & Java

How Java Professionals Can tap
into the largest e-commerce
opportunity



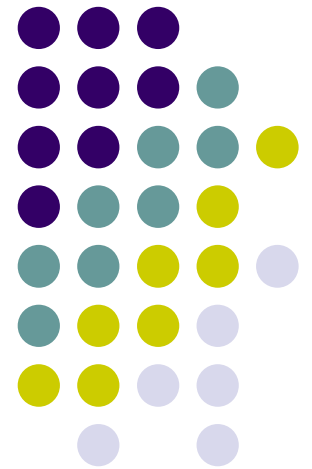


Agenda

- The E-commerce Boom
- Focus Areas for companies
- The E-Commerce platform
- Implementation Options
- The Solution Providers
- The Opportunity
- Emerging trends

The E-Commerce Boom

In the US and in India

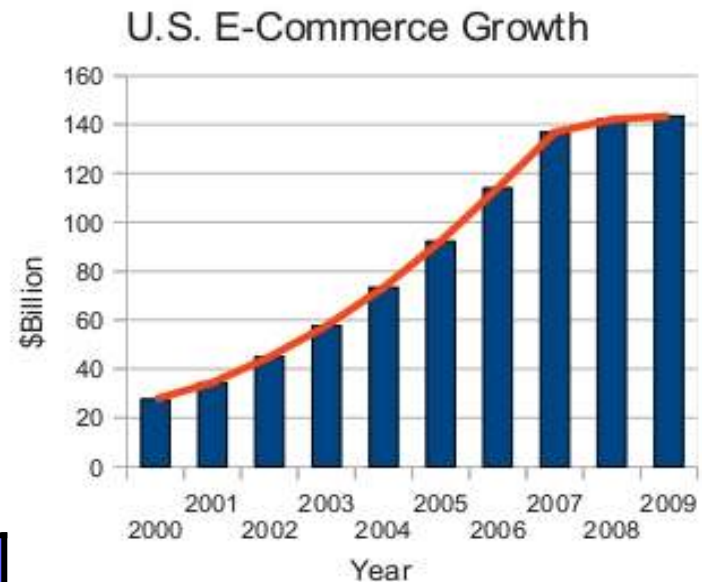




E-commerce Boom – US Census view

- Total sales via e-commerce in the US have grown from \$27.6 billion in 2000 to \$143.4 billion in 2009, a compound annual growth rate (CAGR) of 20.11%
- As of Q2, 2010, according to the US census bureau, about 4.7% of the total sales are attributable to e-commerce related activities.
- From Q4 2009 to Q2 2010, it was seen that growth in e-commerce was 14% - which is double the percentage of growth for total sales during that same period.
- However, the % growth has declined considerably over the years though the overall numbers are high.

Quarter	% change from the same Quarter a year ago	
	Total sales	E-commerce
Q4 2009	2.1	14.6
Q1 2010	6.3	14.3
Q2 2010	7.5	14.0



<http://dstevenwhite.com>

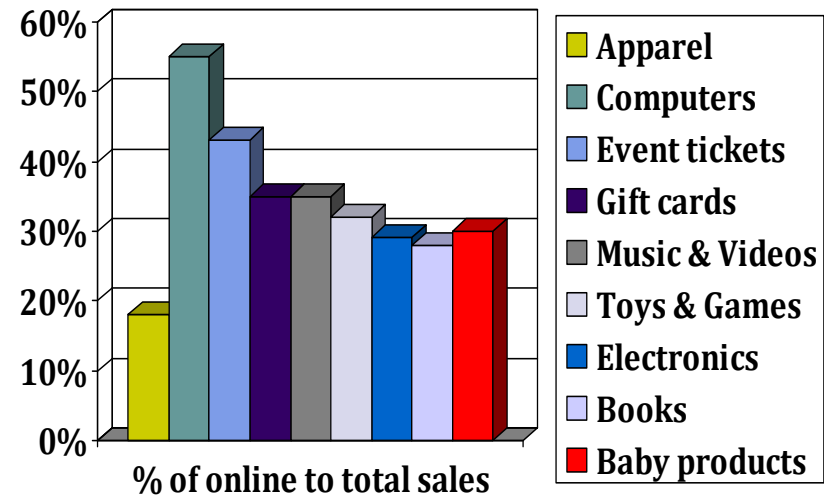
Source: <http://dstevenwhite.com>

E-commerce Boom – Forrester view



- Forrester estimates the 2007 e-commerce revenue at \$175 billion and projects that it would grow to \$335 billion by 2012.
- This is in part due to the fact that sales are shifting away from stores.
- It is also partly due to the fact that online shoppers are less influenced by adverse economic conditions – in a survey of online shoppers, only 20% stated that they would cut back on online spending while a survey in 2008 on the entire population indicated that more than 2/3rds would cut down their spending due to the economic crisis.
- According to Forrester, the E-commerce contribution to sales became 6% in 2007. The projection for 2012 is that 10.7% of the entire shopping would be online.
- If we exclude autos and food that account for 50% of all sales, the penetration is more than 13% i.e. 1 out of \$7 that is spent, is spent online in the US.
- Around 88% of people in the US state that they have purchased online in the past.

2012 Projections



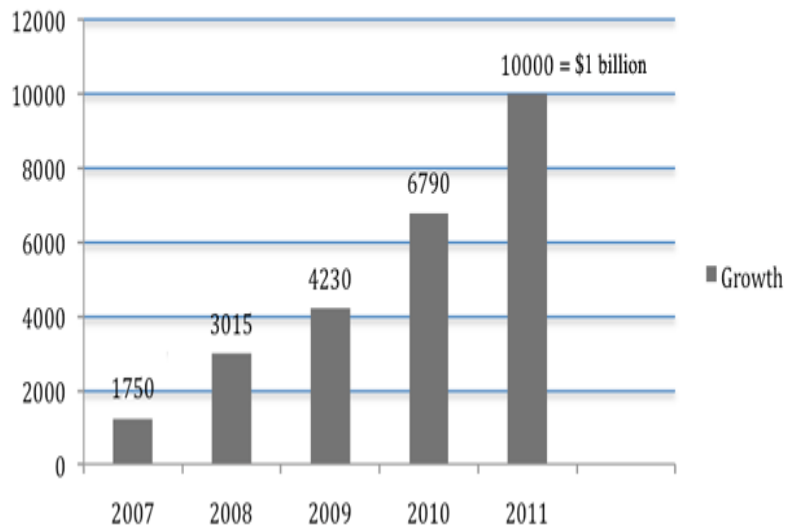
Source Forrester



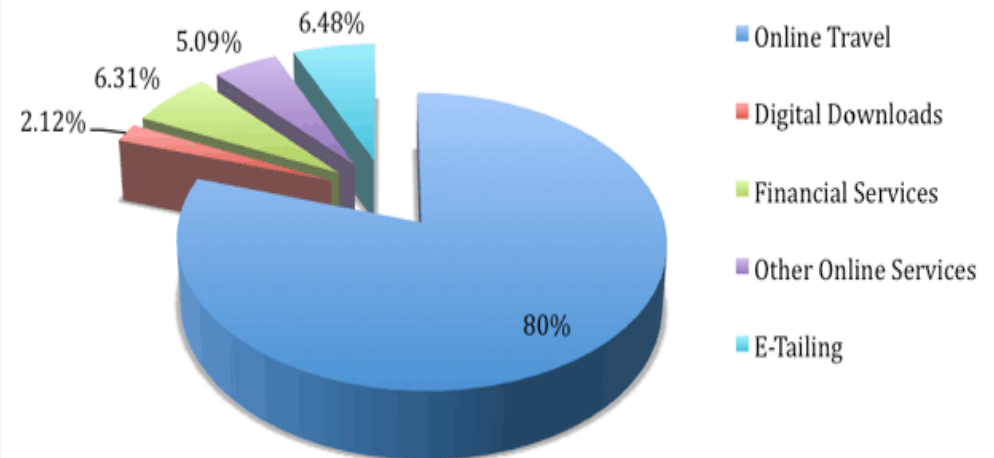
E-commerce Boom in India

- Internet and mobile association of India states that e-commerce in India is growing at the rate of 70% annually and has grown 500% since 2007!
- Estimate for 2010 was \$6.79 Billion up from \$1.75 Billion in 2007.
- Online travel dominates market share at 80%
- Increased 3G coverage is expected to boost the digital downloads share from mobile phones.

**Growth of E-commerce over the years
(Figures in USD millions)**

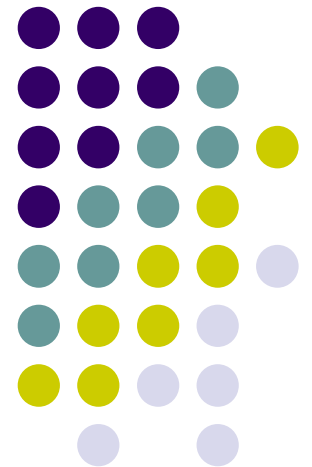


E-commerce Market Share, 2010



Focus Areas

For E-commerce sites





Develop Online Brand Equity

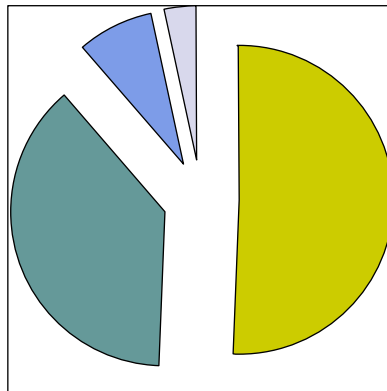
According to Forrester, majority of online customers:

- Had a product and website in mind
- Shopped only with one retailer before buying the product

Hence it is important to:

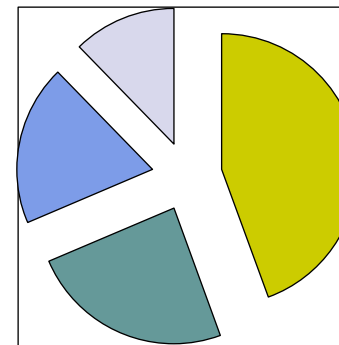
- Attract customers to your site – i.e. develop an online brand
- Drive existing customers to quickly close on the sale.

What did you shop for?



- I had a product and web site in mind
- I had a product in mind but not a website
- I had a website in mind but not a product
- Neither a website nor a product

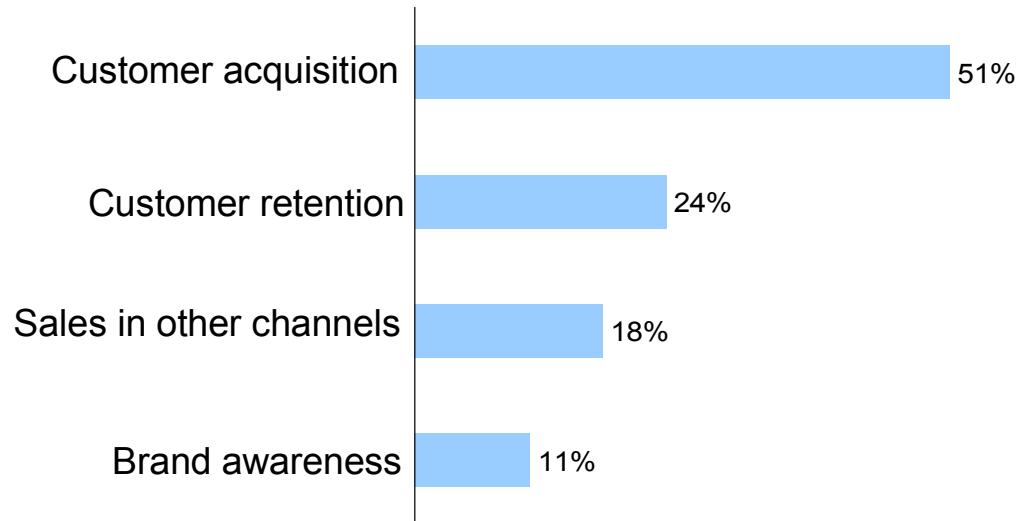
How many online retailers did you shop for before buying the product?



- 1 retailer
- 2 retailers
- 3 retailers
- 4 or more



E-commerce Focus areas



The Universe of new buyers is huge – hence many e-commerce sites focus on customer acquisition.

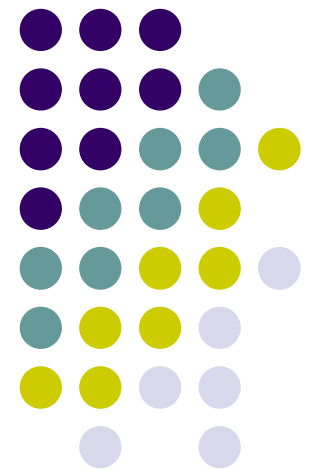
Retention of existing customers is next since customers don't typically shop at too many retailers before buying.

Mobile, especially, opens up new frontiers to e-commerce.

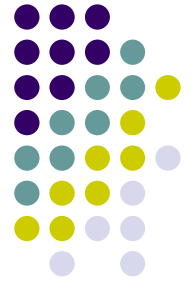
Brand awareness brings in a customer to a website.

E-Commerce Platform

Functional & Technical vision



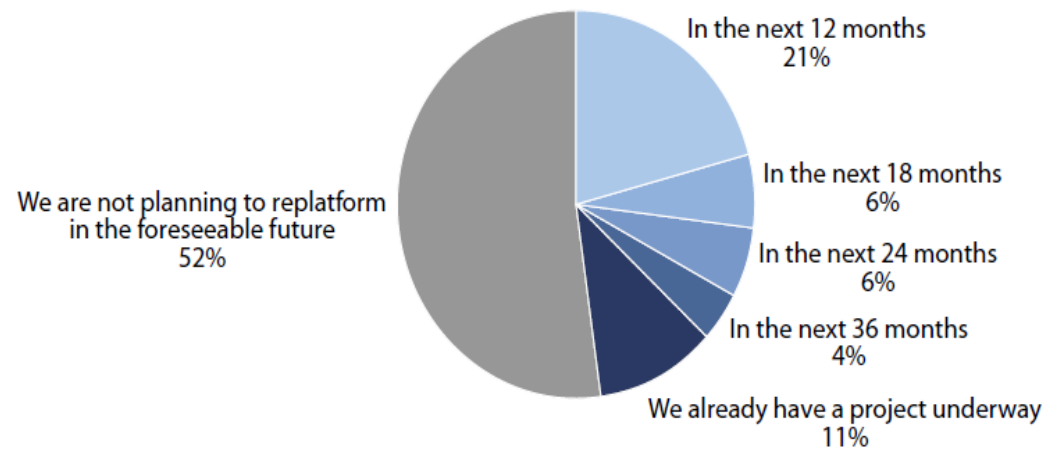
Re-platforming trends



Why re-platform?

- **Better User Experience**
- **Better business management with tools such as CMS, Analytics etc.**
- **Better monitoring of platforms.**
- **Better backend integration**
- **Drive increased multi channel support.**

“When, if at all, are you planning to change your eCommerce platform technology solution?”



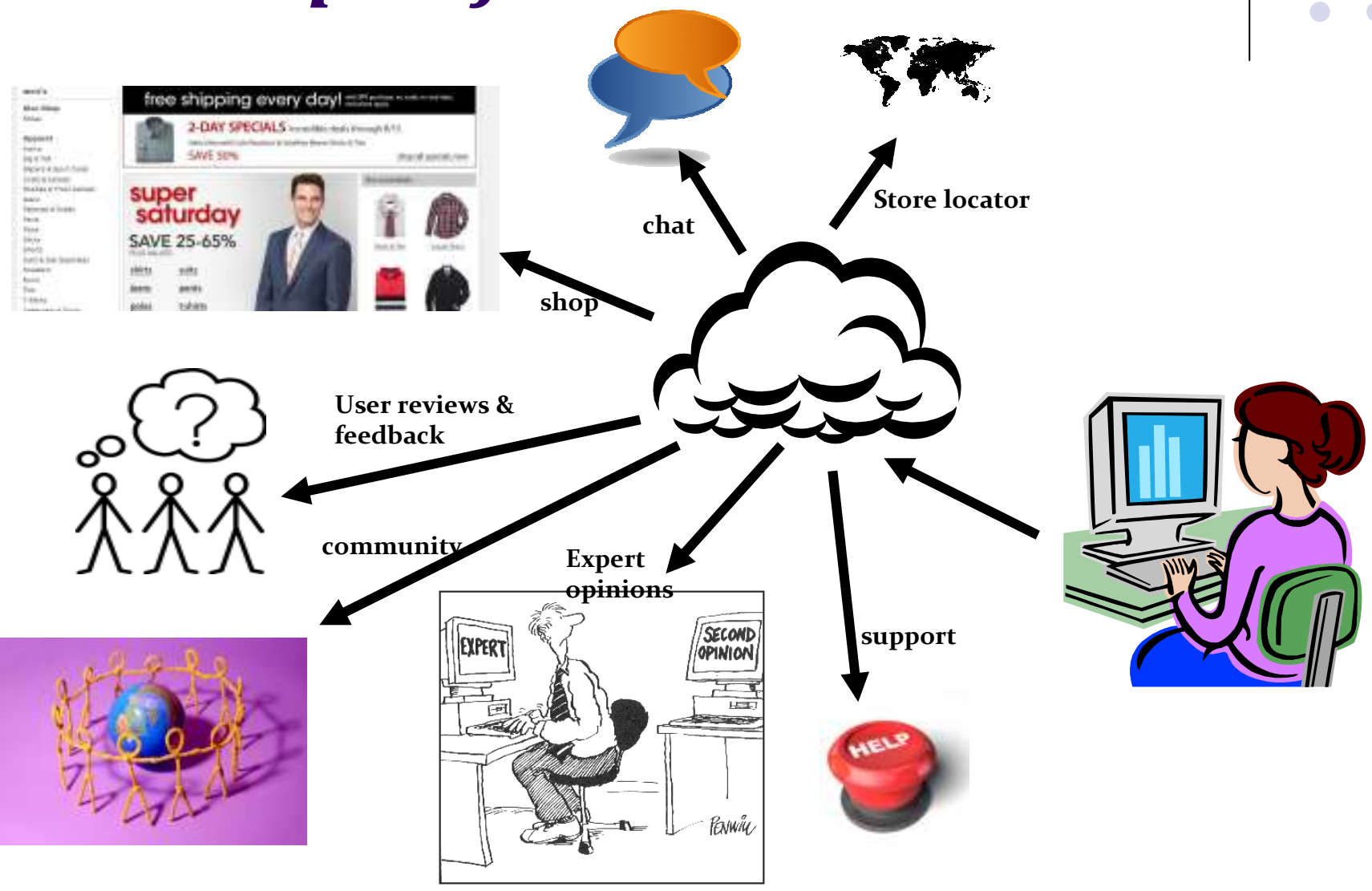
Base: 291 US online retail professionals

Source: Q4 2009 US Retail Executive Online Survey

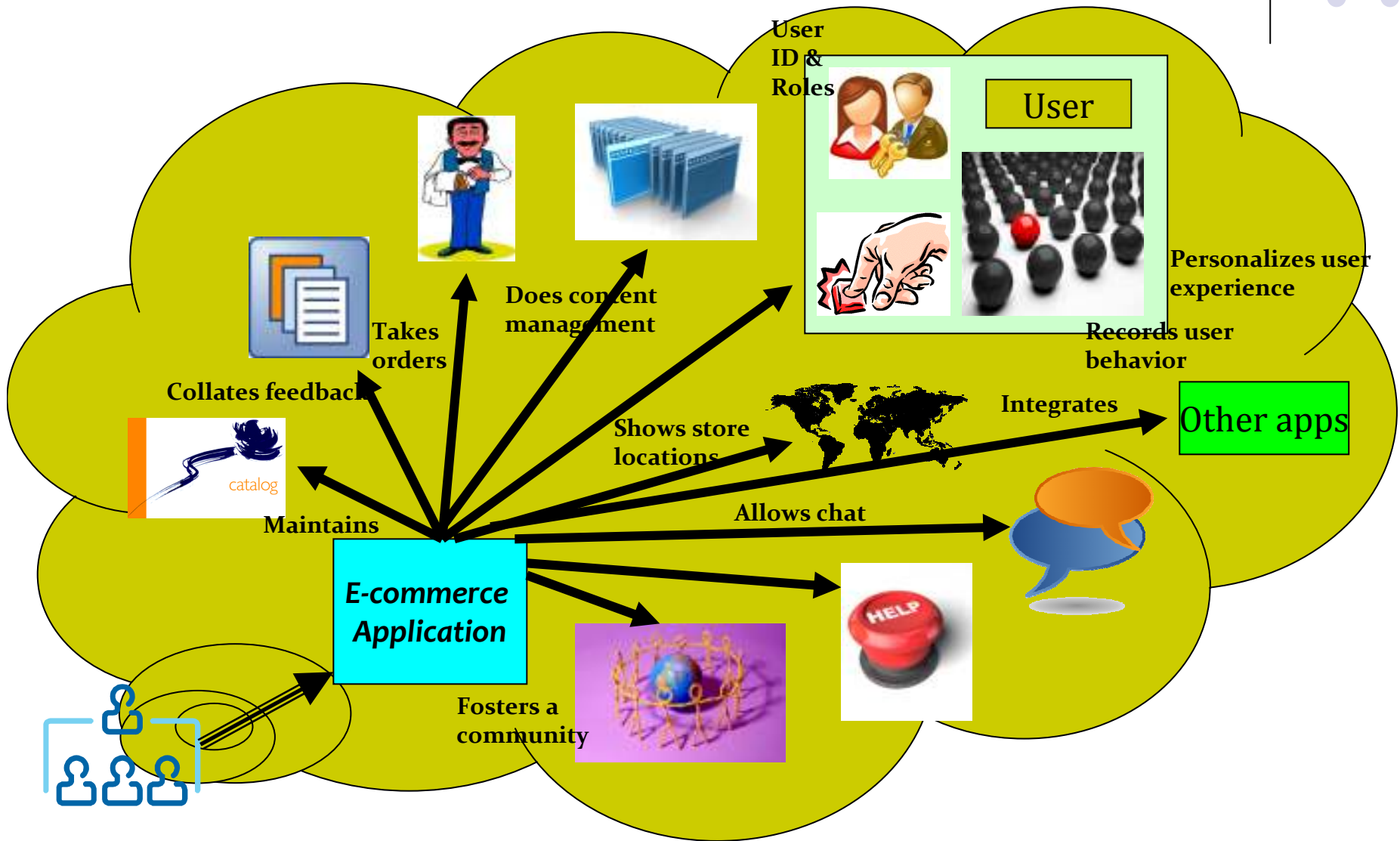
Source: Forrester Research, Inc.



Landscape - for customer

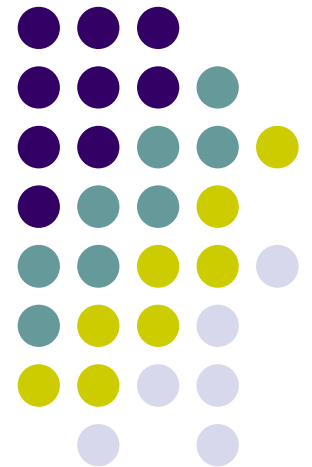


Landscape - for Management

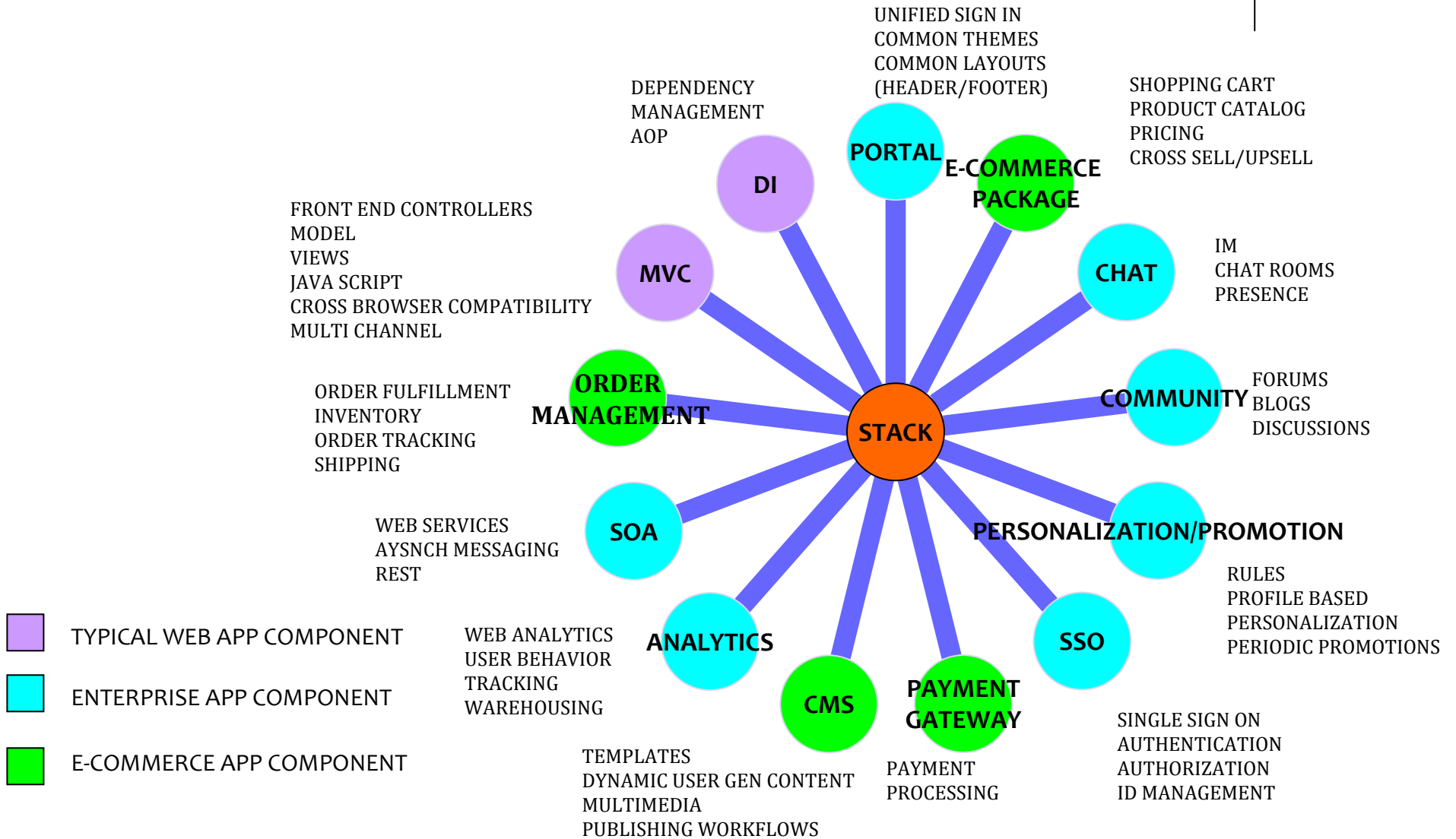


The Options

For E-commerce implementations



Products/Frameworks in use



E-commerce Options for organizations



Fully hosted store and fulfillment providers

- Provide end to end from e-commerce store front to order management to fulfillment.
- Easy set up with minimal customization
- Expensive with the cost being a percentage of the sales. (can be as high as 10%)
- Examples include Amazon, Frys, Digital River and GSI

SaaS – Software as a service

- Vendor provides a store that can be customized along with hosting.
- Faster time to market with lesser upfront cost
- Business logic customization is limited
- Few vendors have demonstrated the ability to scale in this space
- Examples of vendors include Digital River, MarketLive and Demandware.

Hybrid Solutions

- Fully functional package offerings from the likes of ATG and IBM who mix their powerful solutions with hosted solutions.
- Shortens implementation times.
- Ability to leverage a powerful product.
- The model has not been proven yet.

Fully customized solution

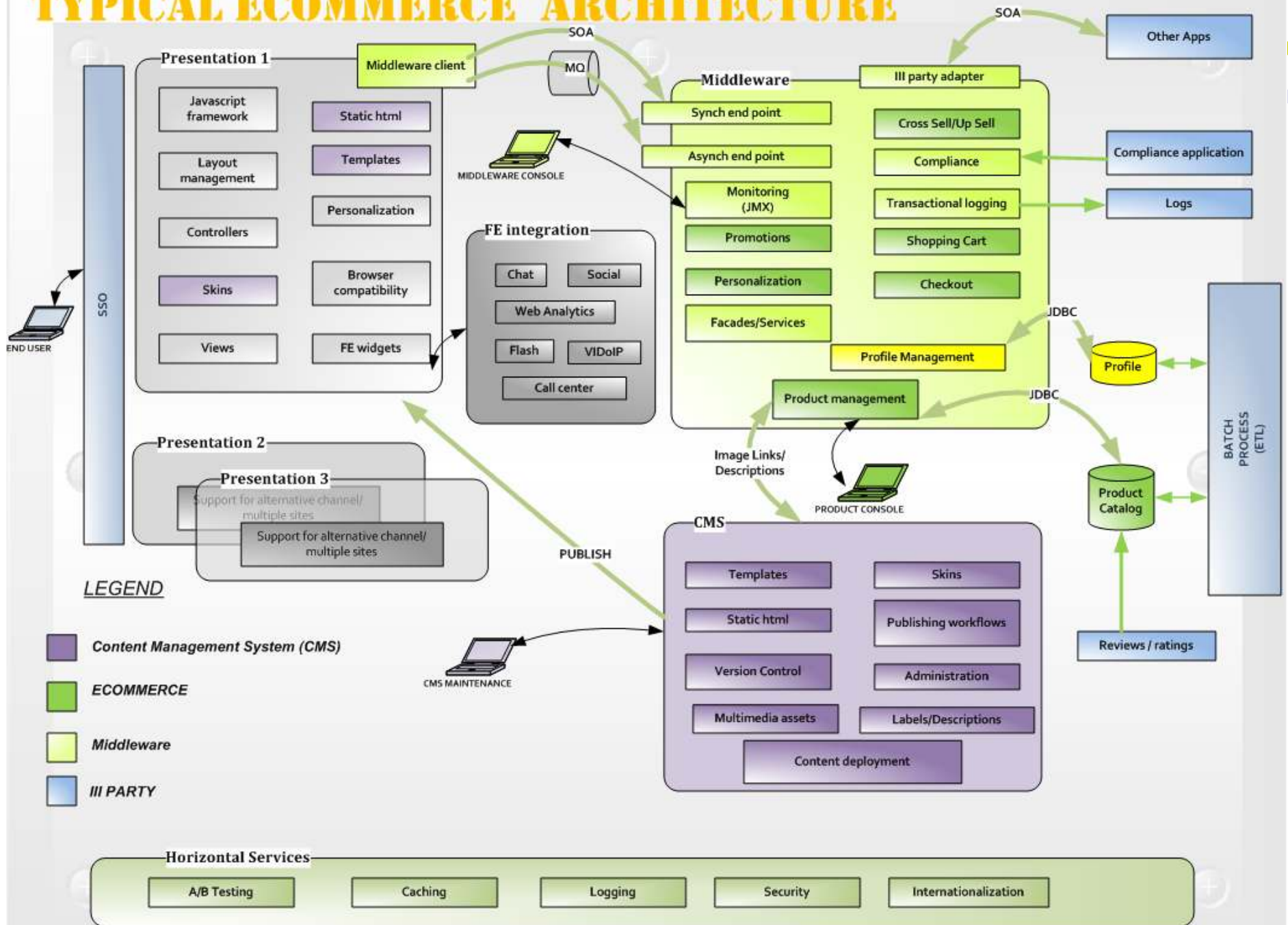
- Provides a fully customized solution with complete control.
- Powerful e-commerce packages are available with the full ability to customize
- The organization owns the complete solution without any requirement for revenue sharing.
- Large upfront investment can be a huge flipside.
- Large licensing, infrastructure, QA, product support costs.
- Players include ATG, IBM, Microsoft

The Outliers:

There are companies such as Amazon, E-bay etc. whose scale is so substantial that no Out of the box packages fit their needs. They have their own highly customized e-commerce implementations.

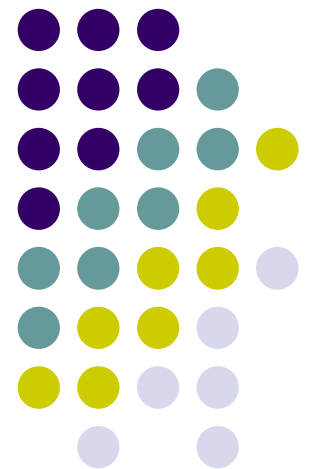
On the other hand of the spectrum, there are companies that invest in the development of their own e-commerce solutions or invest in open source offerings such as Magento and CMS such as Alfresco.

TYPICAL ECOMMERCE ARCHITECTURE

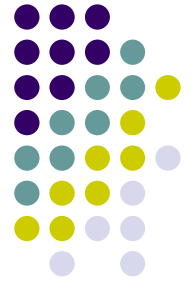


The Solution Providers

Key Players



Key Players

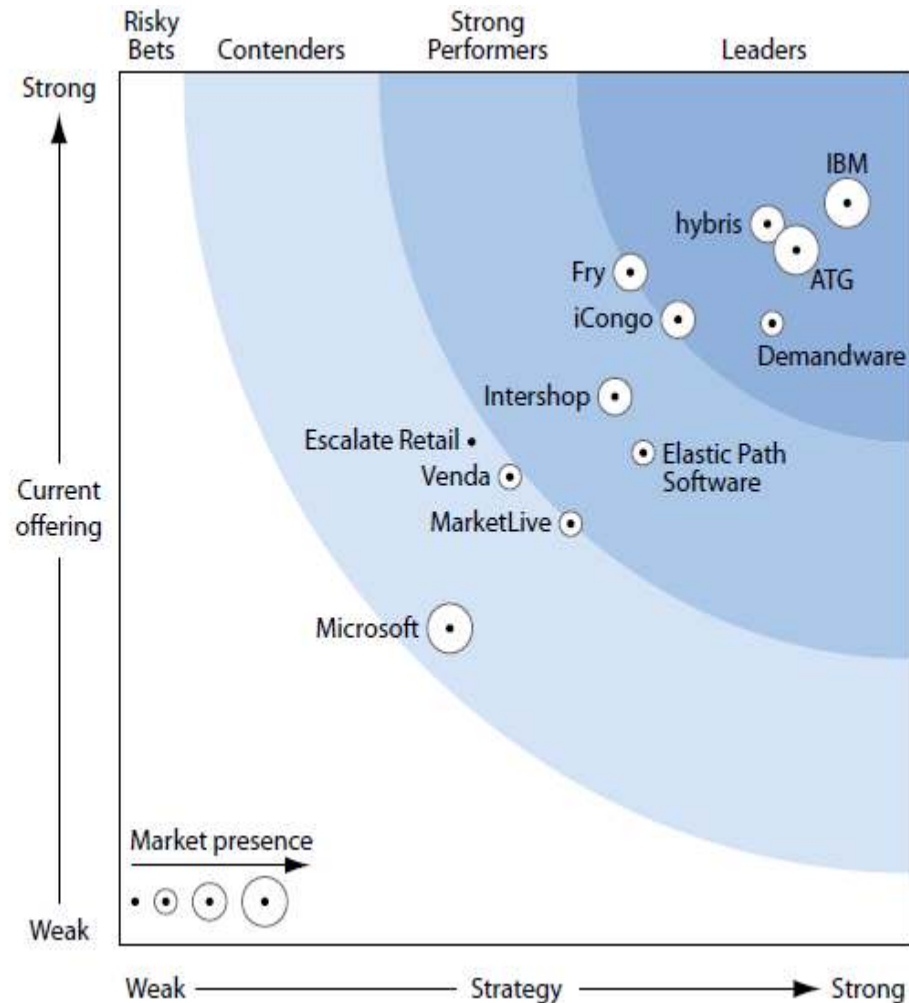


As of Q4 2010 Forrester research identified the key E-Commerce vendors and put them into their famous quadrant as shown here:

ATG, WCS, Hybris, iCongo, Fry and Demandware emerge as market leaders in both their current offering and strategy for the future.

Demandware, Fry and iCongo have been more of platform based solutions whilst **ATG, Hybris and WCS** are licensed software solutions.

Surprisingly. Microsoft despite its strong market presence does not score high because it is an incomplete solution and needs to be matched with their Share point and BizTalk offerings.



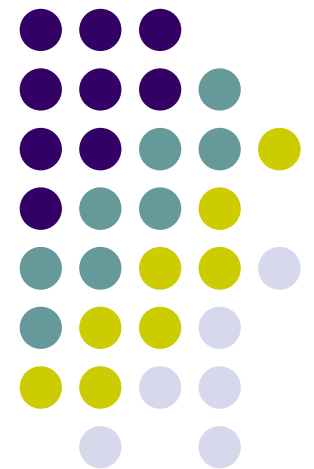
The Java Stack



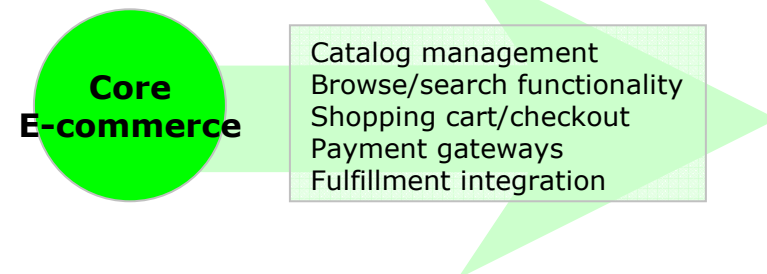
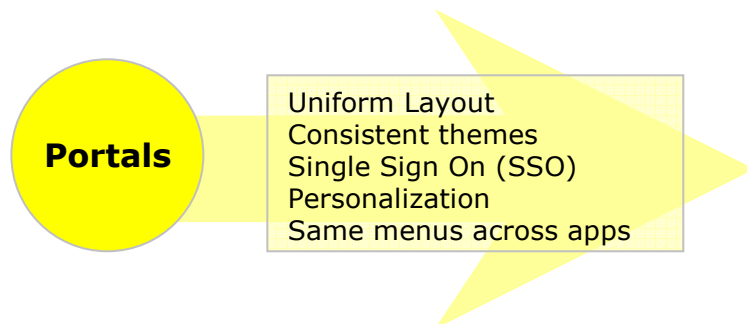
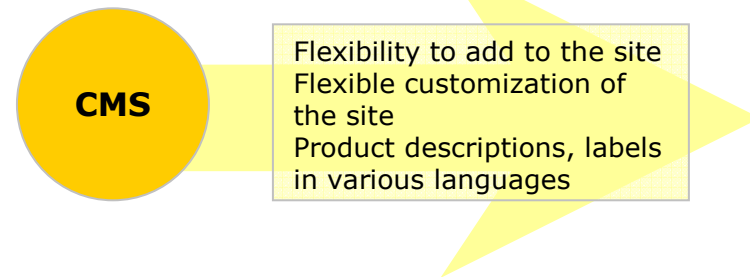
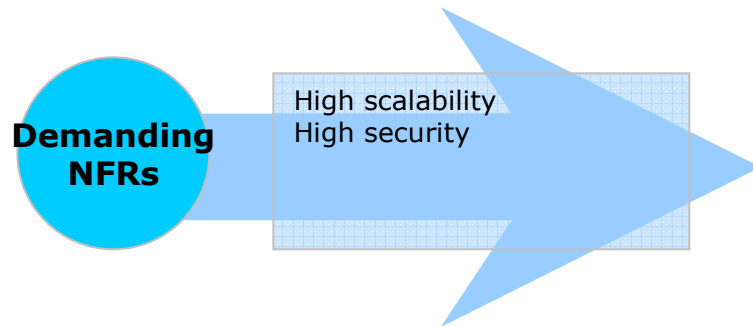
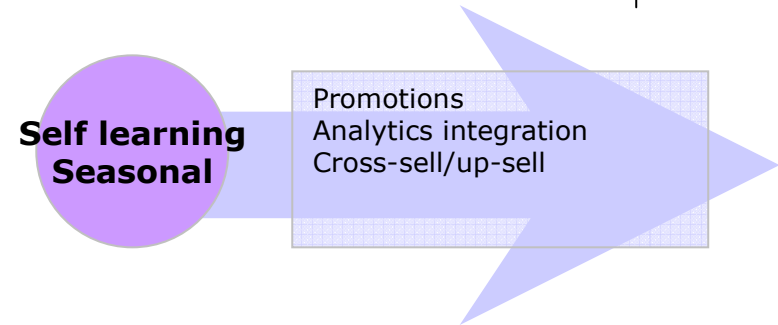
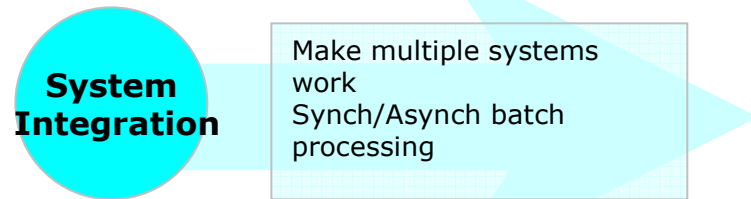
	ATG	Hybris	WCS
Customer base	400	Over 300	1200
Features	<p>Large scale implementations, B2C, Retail, Media, Entertainment, Data Anywhere architecture, personalization, targeters etc.</p> <p>Core platform enhanced with extended capabilities like natural language search, business intelligence, Web analytics, customer service, and chat</p> <p>Great for B2C weak in B2B</p> <p>Strong multichannel abilities.</p> <p>Integrates with LiveHelp to provide click to call, click to chat and email response.</p>	<p>Strong 2010 with significant updates to business user management tools and scalability.</p> <p>Strong product content management tools.</p> <p>Strong catalog management, enterprise integration and globalization/internationalization.</p> <p>Extremely extensible.</p>	<p>Rich set of ecommerce capabilities supplemented with great integration features.</p> <p>IBM Management Center is a great industry leading business user tool.</p> <p>Add on modules include a rich call center application, a natural language search engine, and a multichannel gift registry</p> <p>Strong marketing and campaign management features</p> <p>Lacks content management and sophisticated reporting and analytics.</p>
Customers	Best Buy, American Eagle, Neiman Marcus, Nike, J Crew, Cabela's, AllState	The Body Shop, Bulgari, Ericsson, Henkel, Adidas, Conrad, Berner	Sony, Barnes & Nobel, REI, IKEA, Sears, Dillards', LL Bean, Abercrombie & Fitch

The Opportunity

For Software Professionals




Kind of work



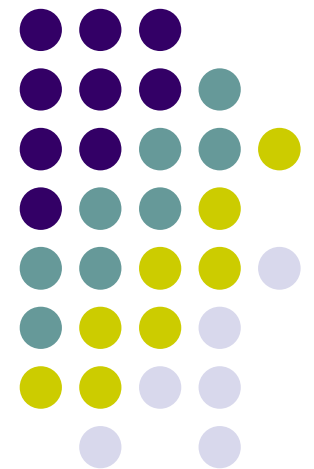


Developer Skills In Demand

<u>CMS</u> <ul style="list-style-type: none">•Knows CMS package.•Creates CMS templates•Publishes CMS workflows•Integrates CMS with other systems	<u>E-commerce</u> <ul style="list-style-type: none">•Knows E-commerce package(s).•Knows to handle product catalogs, shopping carts, pricing, integration etc.	<u>SOA</u> <ul style="list-style-type: none">•Knows web services•May have expertise in REST•Knows about messaging, Enterprise Service Bus etc.
<u>ETL</u> <ul style="list-style-type: none">•Expertise in batch processing.•Can do translations from one format to the other. Might have an expertise on XML if required.		<u>Database</u> <ul style="list-style-type: none">•DBA•Data modeler.•Adept at writing SQL.•Fine tune databases.•Can understand ORM and make sense out of relationships.
<u>Performance</u> <ul style="list-style-type: none">•Knows all about profiling.•Query & ORM optimization•Caching•Monitoring	<u>Infrastructure</u> <ul style="list-style-type: none">•Infrastructure design and set up•Topology design.•Infrastructure tuning and monitoring•Scripting.•Deployment and environment setup.	<u>Build & Release</u> <ul style="list-style-type: none">•Writing build scripts•Configuration Management•IDE setup and integration•Continuous integration set up•Automated testing set up.•Release management

Trends

For the future – a perspective



Emerging Trends



- Multi channel commerce is the biggest trend.
- Of late, T-Commerce – E-commerce in tablets – is gaining popularity with around 50% of mobile purchases being made via Tablets. 7.6% of US population is expected to be on tablets by end 2012.
- Visual searches would rise. Statistics from Bing state that people are able to process video + text 30% faster than just text. Hence e-commerce content with visual content that can be searched for is very powerful.
- Cross channel. Sometimes a user might have a predilection towards one channel rather than another one. A user with an abandoned shopping cart from one channel might be presented with an alternate form of purchase through another channel. Ex: If a user adds a shirt to a shopping cart and abandons it, it is possible that he or she be presented with the nearest store where that shirt is available.

Questions? Thank you

Send comments to
raja@itmusings.com

