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# Technology meets business: An introduction to web analytics

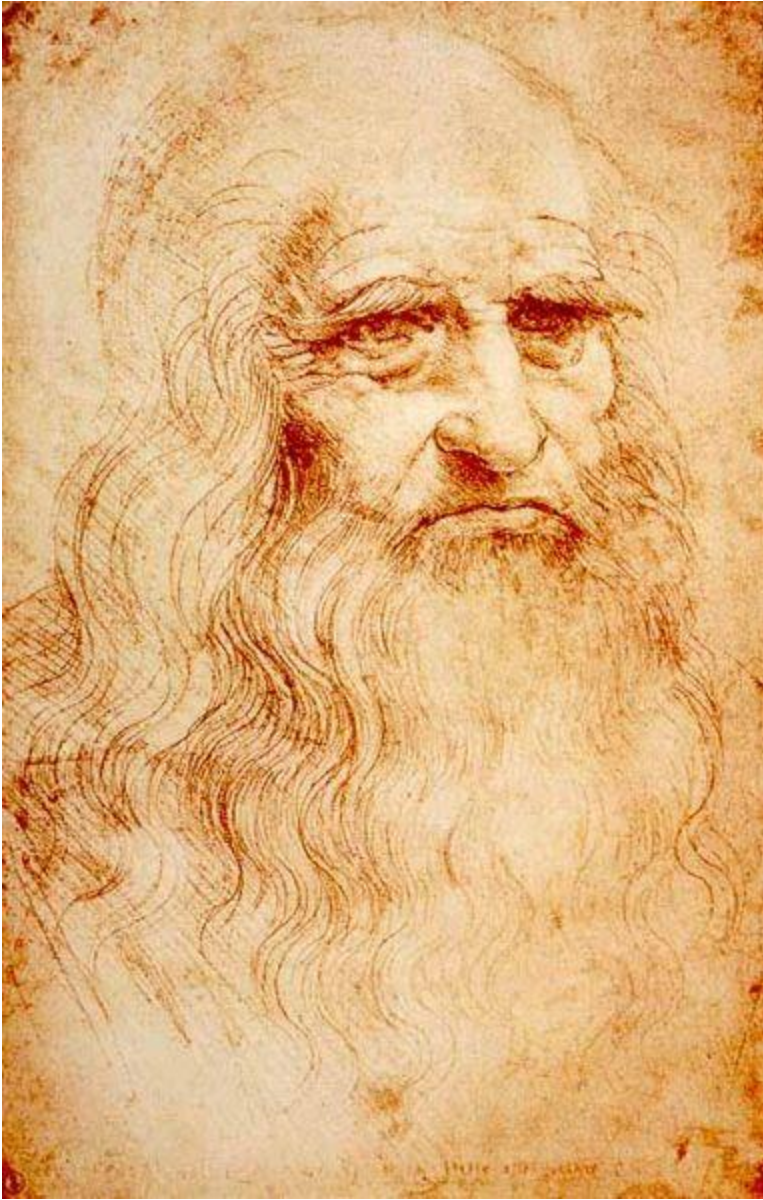
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SORA Seminar, April 9, 2008

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# Agenda

1. Technology
  - How web technology creates activity measurements
2. Business
  - How web measurements contribute to business
3. A practical example



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# The Golden Age



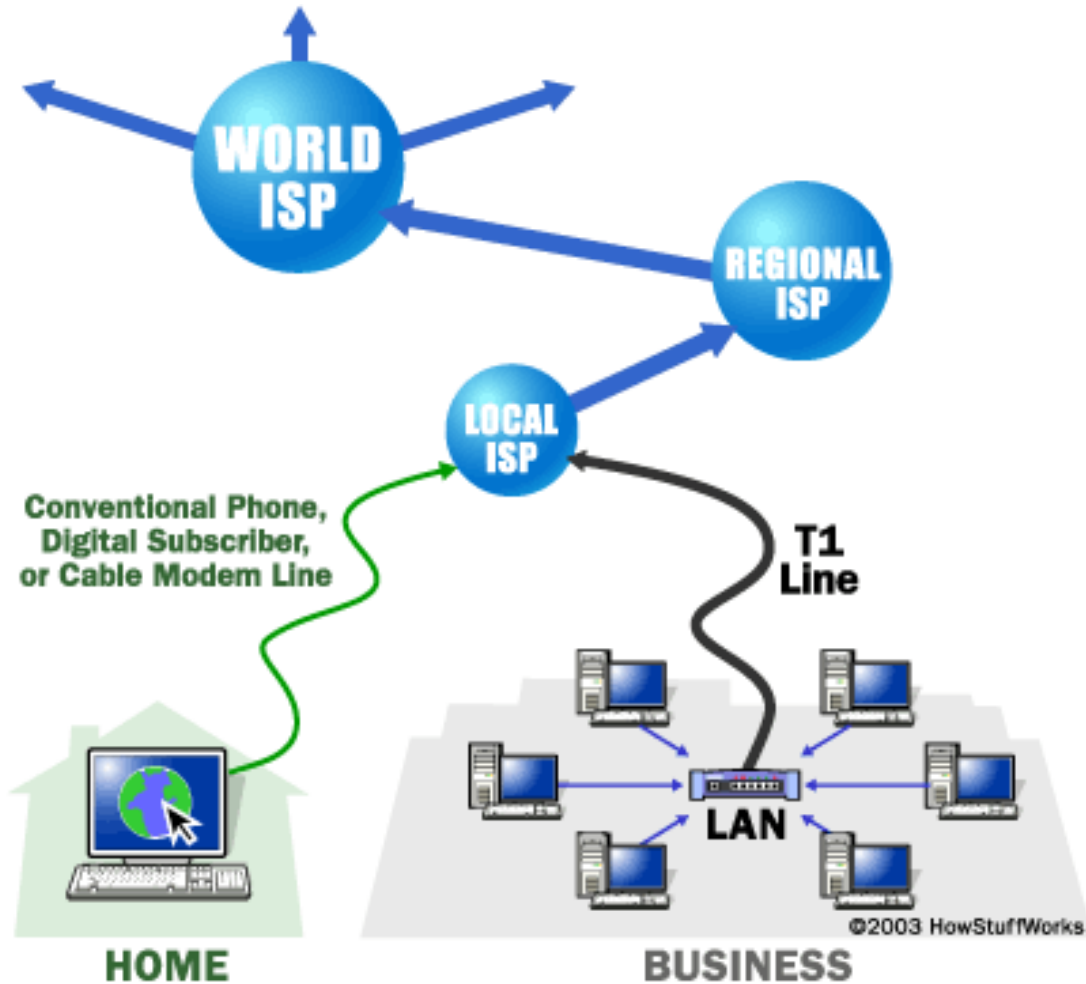
# 1. Technology



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# Where do web sites come from?



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# A few useful metrics

- Visit (session)
- First visit
- Unique visitor
- Page views



# The Hotel Problem

(A counting problem)

	Day 1	Day 2	Day 3	Total
Room A	John	John	Jane	2 Unique Users
Room B	Jeanne	Jane	Joe	3 Unique Users
Total	2	2	2	???

What total is correct for number of visitors?

In fact, a new 'visitor' is **not** an individual: it is a web measurement that the industry has decided to call a visitor by convention.



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# Some less useful metrics



- Hits
- Page views

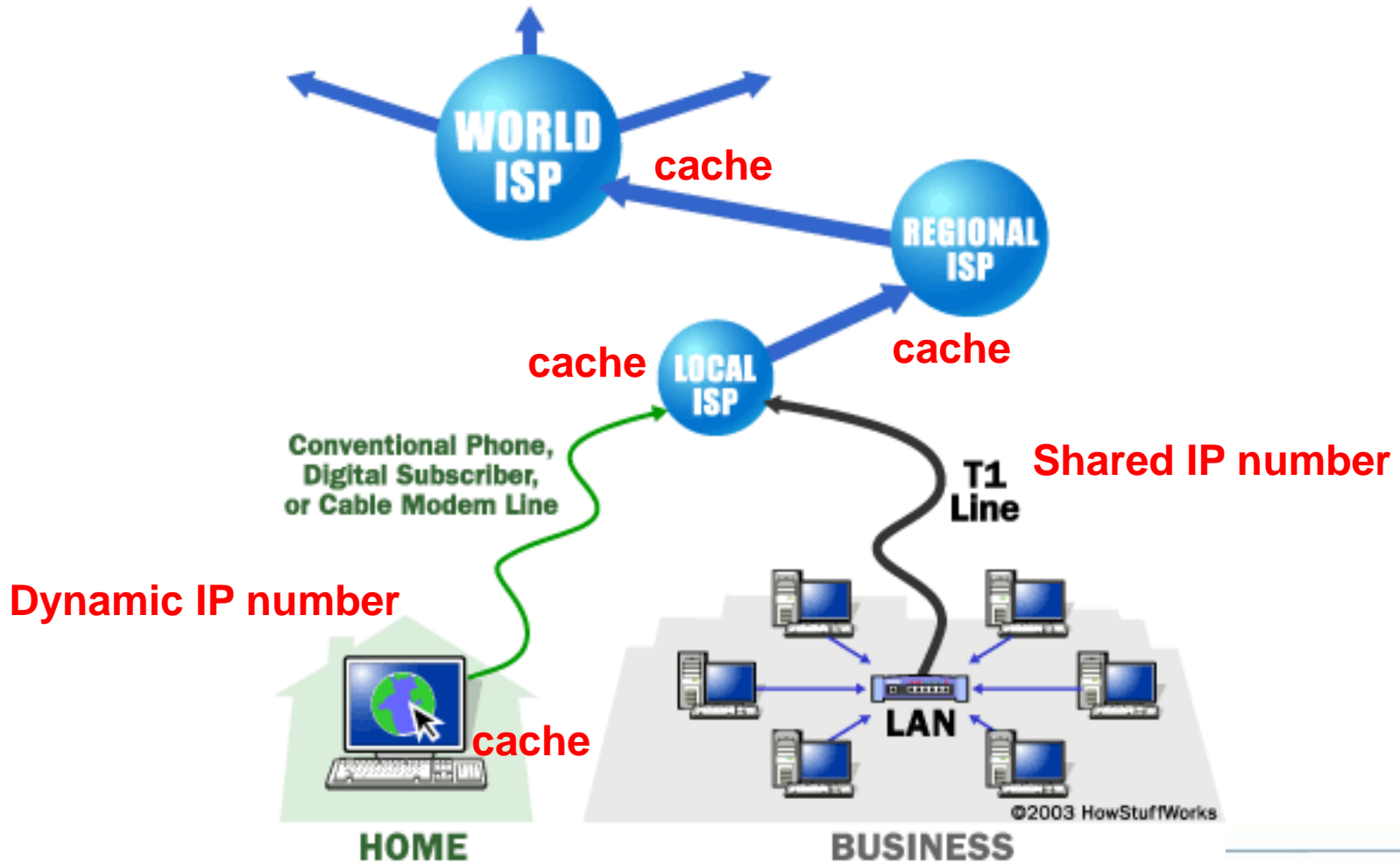
(easily affected by page design)



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# Another Counting Problem



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# Technology for Counting

- Log file analysis
  - Cookies to combat dynamic ISP
- Page Tagging
  - ‘Web bugs’ (beacons)
  - JavaScript
  - Ajax-based solutions
  - XMLHttpRequest (XHR)



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# Advantages of Logfile Analysis

- The server already produces logs, tagging requires page changes.
- Server records all transactions. Page tagging relies on the visitors' browsers (for example, JavaScript may be disabled).
- The data is non-proprietary. Switch programs, use several, and analyze historical data. Page tagging solutions have vendor lock-in.
- Logfiles track search-engine visits (spiders), handy for search engine optimization.
- Logfiles contain information on failed requests; page tagging only records when the page is successfully viewed.



# Advantages of Page Tagging

- The JavaScript is runs every time the page is loaded. Caching issue solved.
- Add information to JavaScript. (visitors' operating system, price of purchased). Logfiles only records what's in the URL.
- Page tagging can report on events which do not involve a request to the web server, Flash applicaions.
- Page tagging service assigns cookies to visitors; with logfile analysis, the server has to be configured to do this.
- Page tagging is available to companies who do not run their own web servers.



# Economic Factors

- Logfile analysis = in-house. Page tagging = third-party service.
- Logfile analysis can be a one-off software purchase (vendor dependent, it can be page-view limited).
- Page tagging = monthly fee (vendor dependent)



*“Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted.”*

Albert Einstein



# Other Technology Challenges



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# Dynamic Pages & Parameters

<http://www.lycos.com/cgi-bin/pursuit?matchmode=and &cat=lycos&query=testing&x=10&y=9>

- matchmode=and
- cat=lycos
- query=testing
- x=10
- y=9

(That third one is your search string)



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# Flash Pages & Applications

- Downloaded to the users computer
- Can not tracked without planning
- Separation of church and state in a typical development environment
- Use of Web Bugs



# Bug and Beacons, for Sites and Email

Here's one from [www.quicken.com](http://www.quicken.com)

```

```

```
<IMG WIDTH=1 HEIGHT=1 border=0  
SRC="http://media.preferences.com/ping?ML_SD=IntuitTE_Intuit_1  
x1_RunOfSite_Any &db_afcr=4B31-C2FB-  
10E2C&event=reghome&group=register& time=1999.10.27.20.5  
6.37">
```



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# Web Bug FAQ

## What information is sent to a server when a Web Bug is viewed?

- The IP address of the computer that fetched the Web Bug
- The URL of the page that the Web Bug is located on
- The URL of the Web Bug image
- The time the Web Bug was viewed
- The type of browser that fetched the Web Bug image
- A previously set cookie value



# Web Bug FAQ

## What are some of the uses of a Web Bug on a Web page?

- Ad networks add information to a personal profile of sites a person is visiting, and used to determine what banner ad is shown.
- Independent accounting of how many people have visited a particular Web site.
- Web Bugs are also used to gather statistics about Web browser usage at different places on the Internet.



# Web Bug FAQ

## Where can I find Web Bugs being used?

- Quicken
- FedEx
- Metamucil
- Oil of Olay
- StatMarket
- Everywhere



# Web Bug (Email) FAQ

## What uses does a Web Bug have in an Email message?

- Find out if a particular Email message has been read and when the message was read.
- A Web Bug can provide the IP address of the recipient, oft times even if the recipient is attempt to remain 'anonymous'.
- Can give an idea how often a message is being forwarded and read.



# Web Bug (Email) FAQ

## Why are Web Bugs used in marketing Email messages?

- To measure how many people have viewed the same Email message in a marketing campaign.
- To detect if someone is viewed an Email. (People who do not view a message are removed from the list).
- To synchronize a Web browser cookie to a particular Email address,



# Web Bug (Email) FAQ

**What are some of the Email marketing companies who are known to use Web Bugs?**

- Exactis
- Digital Impact
- Responsys
- Epsilon Analytics
- DidTheyReadIt (you can track your own email!)



# *Emerging* metrics

- Impressions
- Singletons
- Bounce rate
- Abandonment rate



# 2. Business



# Business Value Chain



(From: Kent Bauer, DM Review Magazine, September, 2004)



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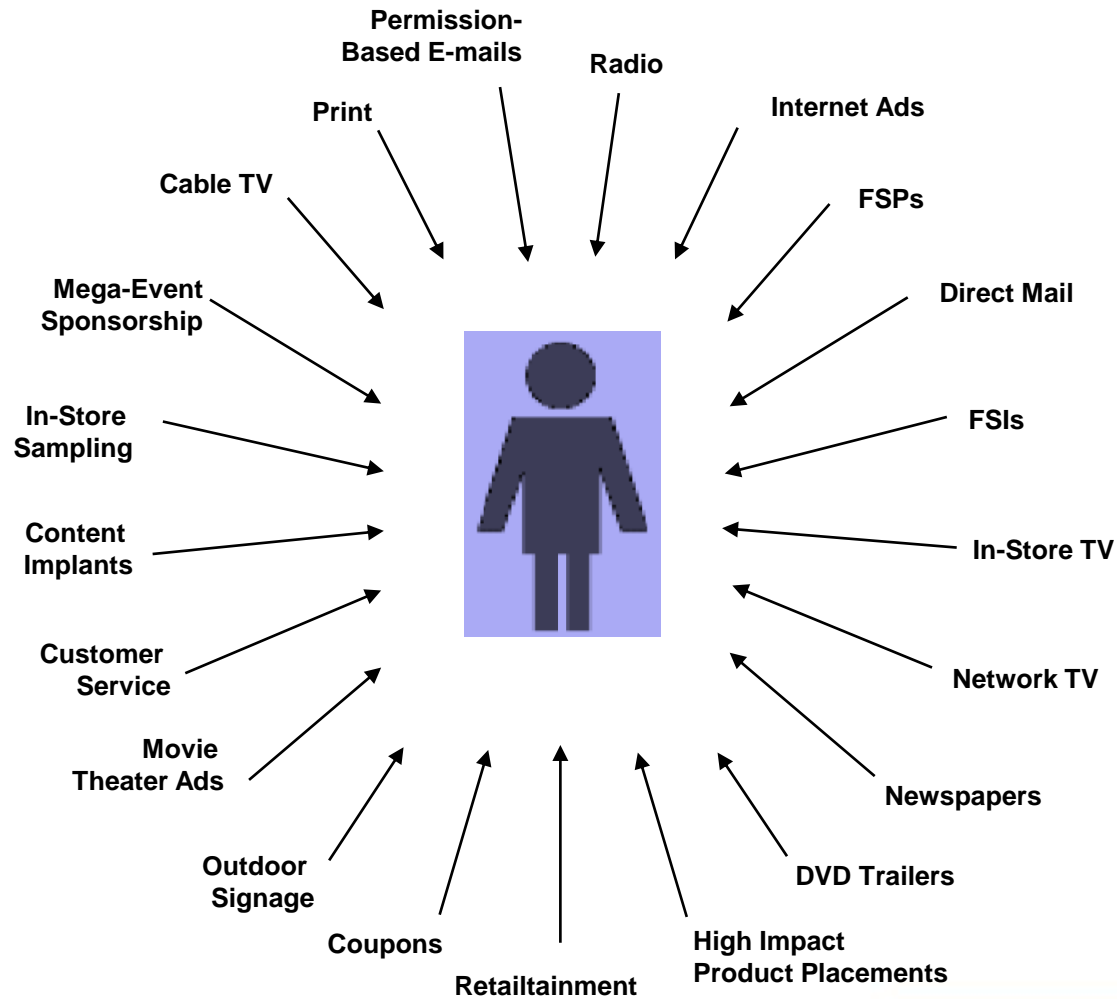
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# Promotion Over Product Life Cycle

Stage of product life cycle	<i>Introduction</i>	<i>Growth</i>	<i>Maturity</i>	<i>Decline</i>
	<b>To inform...</b>	<b>To persuade...</b>	<b>To remind...</b>	
	<ul style="list-style-type: none"> <li>• Publicity in targeted magazines</li> <li>• Advertising</li> <li>• Sales force calling on intermediaries</li> <li>• Sales promotion in form of free samples</li> </ul>	<ul style="list-style-type: none"> <li>• Personal selling to intermediaries</li> <li>• Advertising to differentiate product attributes from those of competing brands</li> </ul>	<ul style="list-style-type: none"> <li>• Reminder advertising</li> <li>• Sales promotion in form of discounts and coupons</li> <li>• Limited personal selling</li> <li>• Direct mail reminders</li> </ul>	<ul style="list-style-type: none"> <li>• Little money spent on promotion</li> </ul>
	Promotional objective	Promotional objective	Promotional objective	Promotional objective
Promotional activity	Promotional activity	Promotional activity	Promotional activity	Promotional activity



# Imagine all your customer touch-points:



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# Types of Sites

(from WebTrends)

**Commerce**

**Intranet**

**Content**

**Self Service**

**Branding/Campaign**

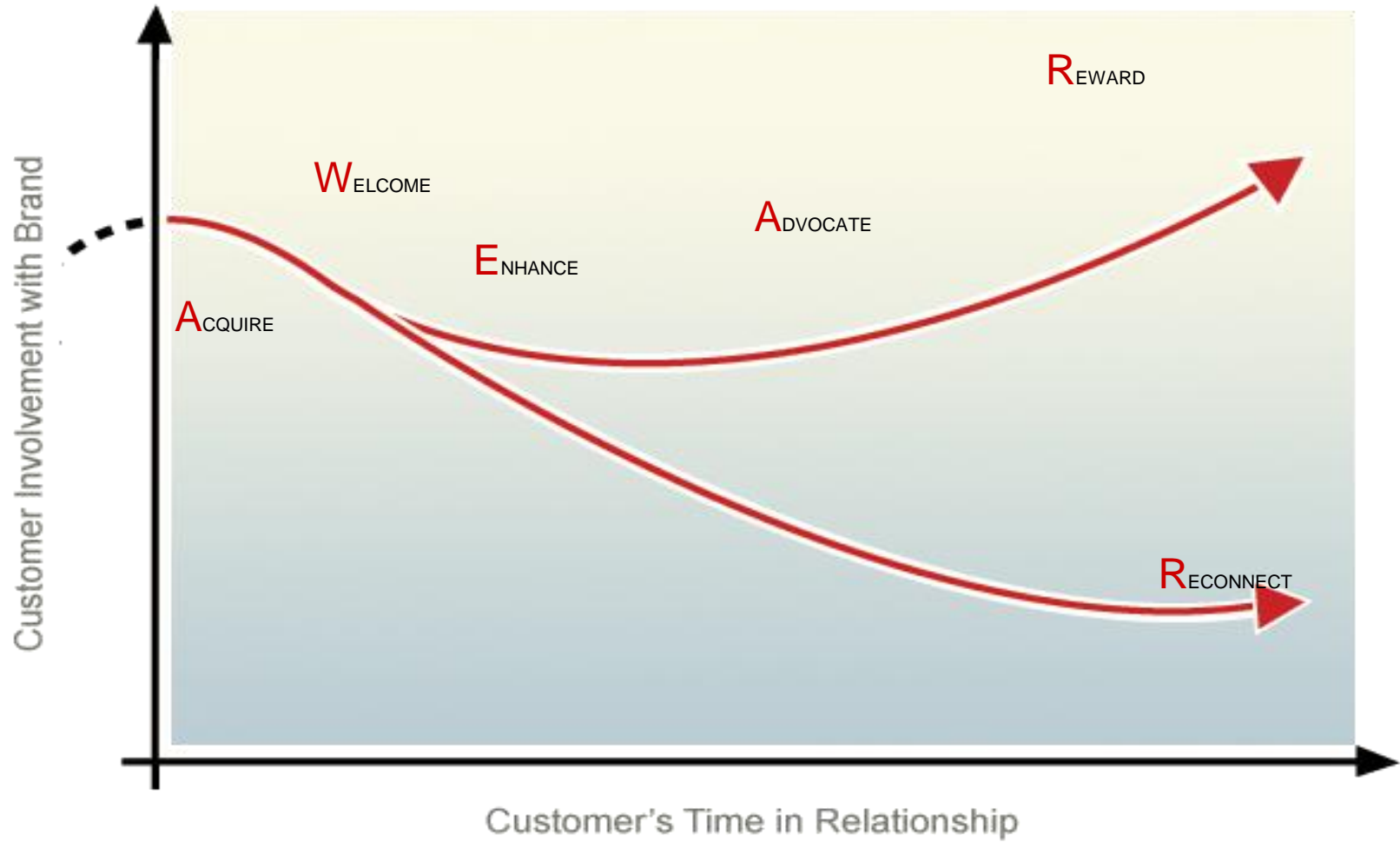
**Lead Generation**



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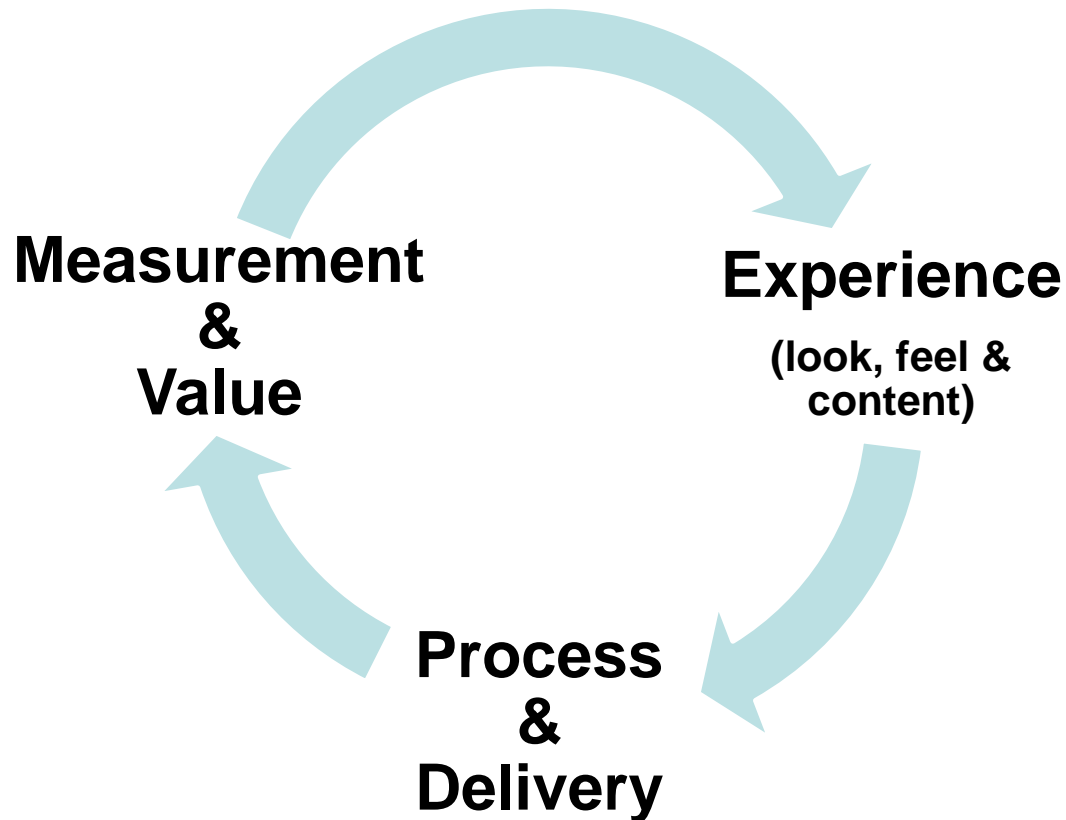
# Digital Cement Approach



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# Digital Cement Approach



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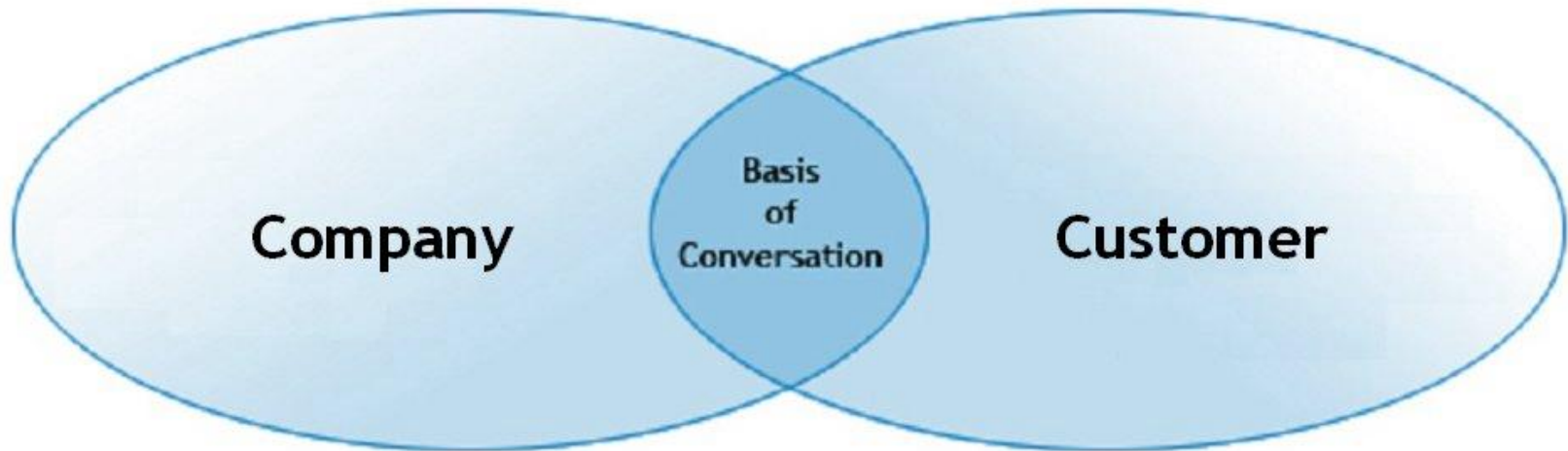
# Loyalty Programs as a Dialogue

- What kind of relationship do you want to build with your customers?
- How do you foster this exchange?
- How do you work together and share control?



# Basis of Conversation

**A sustainable basis of conversation, in simple terms, is something that customers want to hear about and is beneficial for the company to talk about.**



**The final communication must be in language understood by customer**



# Basis of Conversation

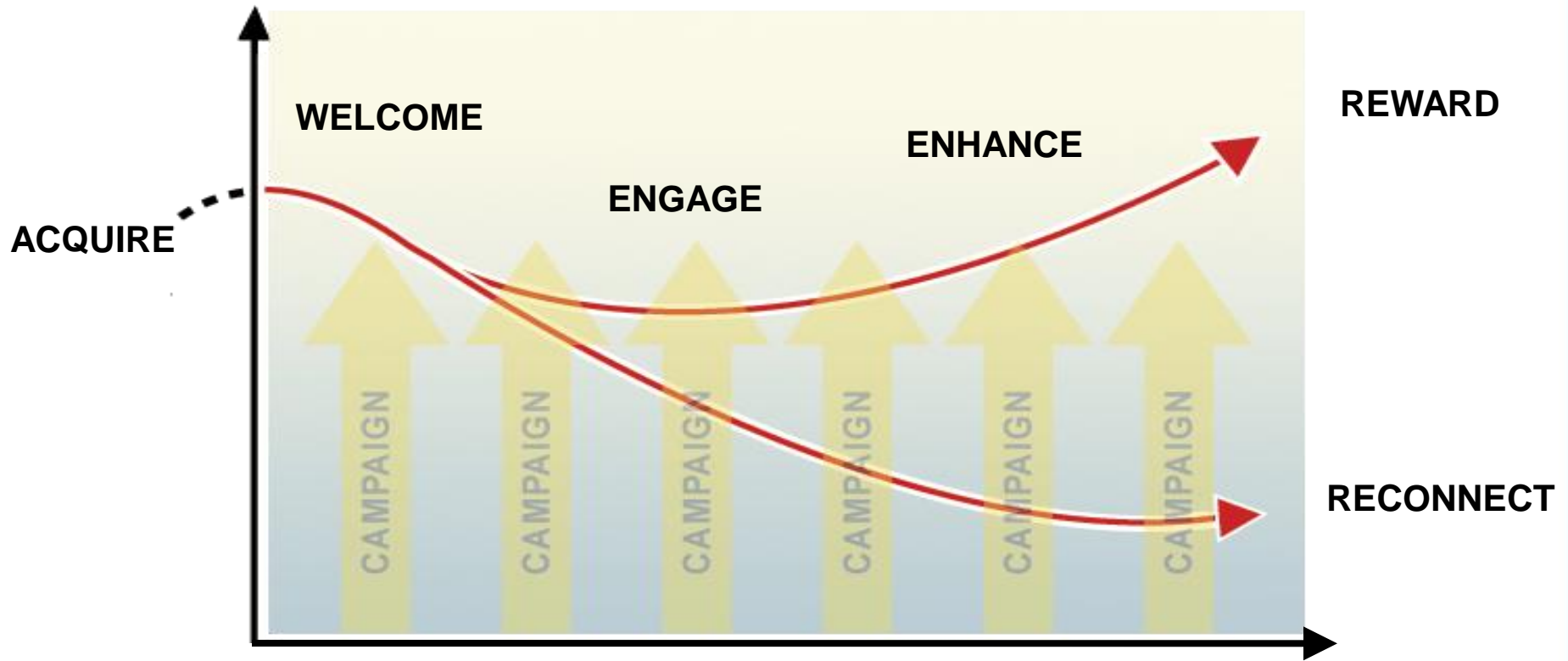
- Credibly connectable to product portfolio
- Connection will drive purchase frequency
- Connection will drive awareness of brand portfolio
- Conversation can enable advocacy
- Conversation will grant access to target customers
- Topic has sustainable interest with focus customers
- Product can be solution, but not introduction
- Conversation is credibly linkable to company
- Conversation is competitively open for ownership



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# Digital Cement Approach



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# Campaign data capture

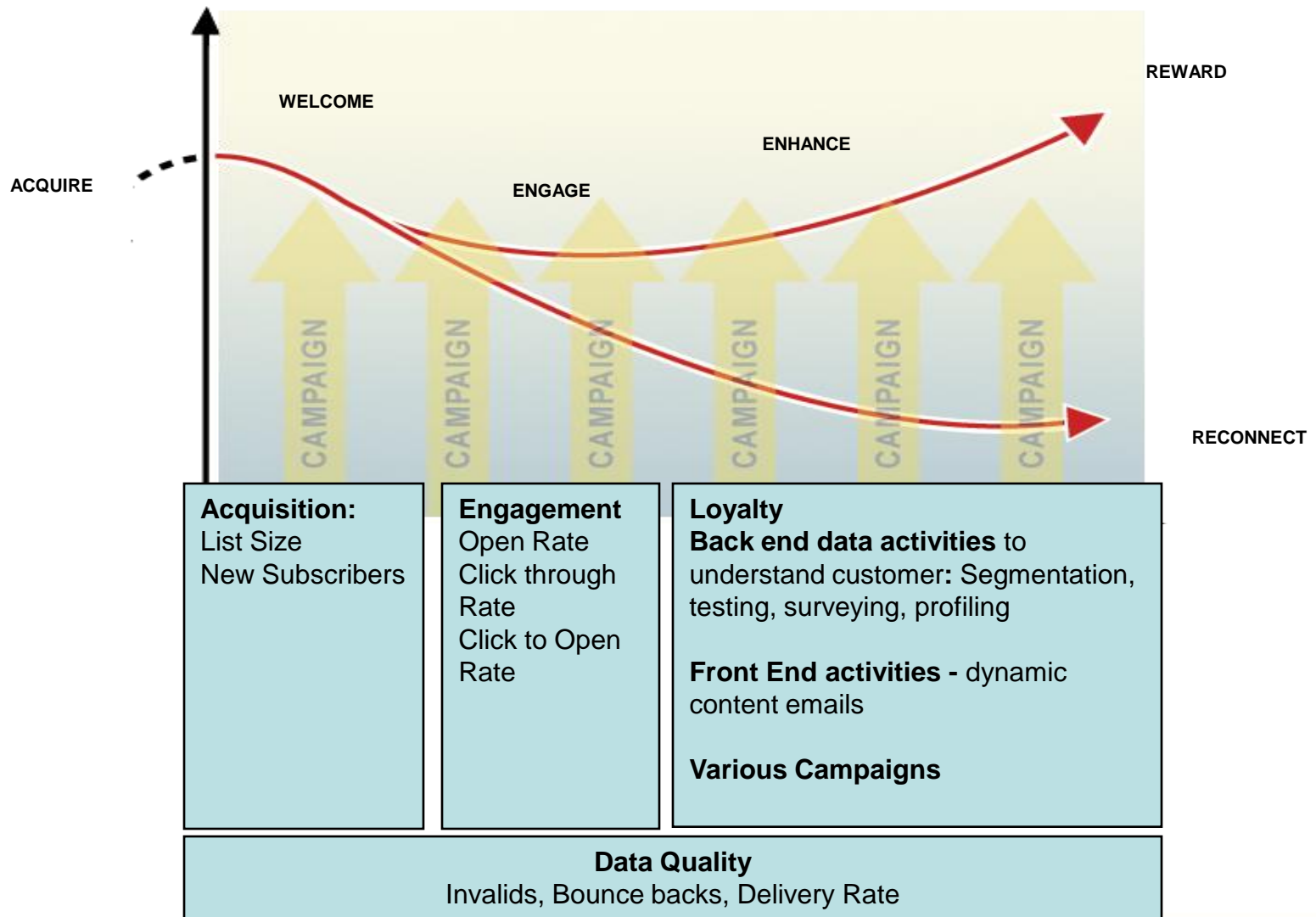
## Individual data capture



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# Digital Cement Approach



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Acquisition

- Awareness
- Data
- Lead Gen
- Pre-Sales
- Sales
- Planning
- Implementation

Welcome

- Support

Enhance

- Consumables
- Communication

Retain

- Maintenance
- Account Diversification

Reconnect

- At risk

Roles

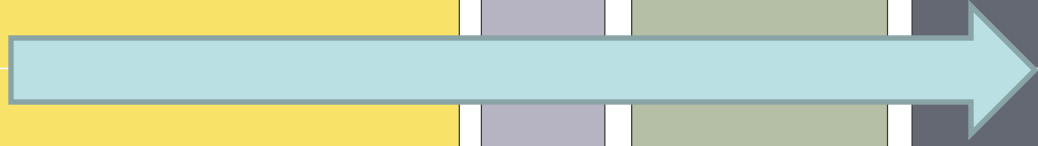
Who does what

Activities

What they do

Touches

How they do it



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# Remember the types of sites?

The collage features several icons and UI elements: a shopping cart with a dollar sign, a calendar for July, a film reel with a musical note, a login form with 'USER', 'PASS', and 'BANK LOGIN' fields, a 'register now' button, and a 'Your Brand Here' logo with a pencil.

**Commerce**

**Intranet**

**Content**

**Self Service**

**Branding/Campaign**

**Lead Generation**



# Unique Site Objective

**Branding**

**Self Service**

**Lead Generation**



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# Unique Site Objective

## Branding

*Goal: increase traffic to site, increase brand awareness*

*Web Analytics: Increase site stickiness, increase usefulness of information on site, increase visitor registration*



# Unique Site Objective

## Self Service

*Goal: Reduce Business costs and increase customer satisfaction  
Shift people to online support from phone support*

*Web Analytics: Increase usefulness of online information, Decrease time needed to find info*



# Unique Site Objective

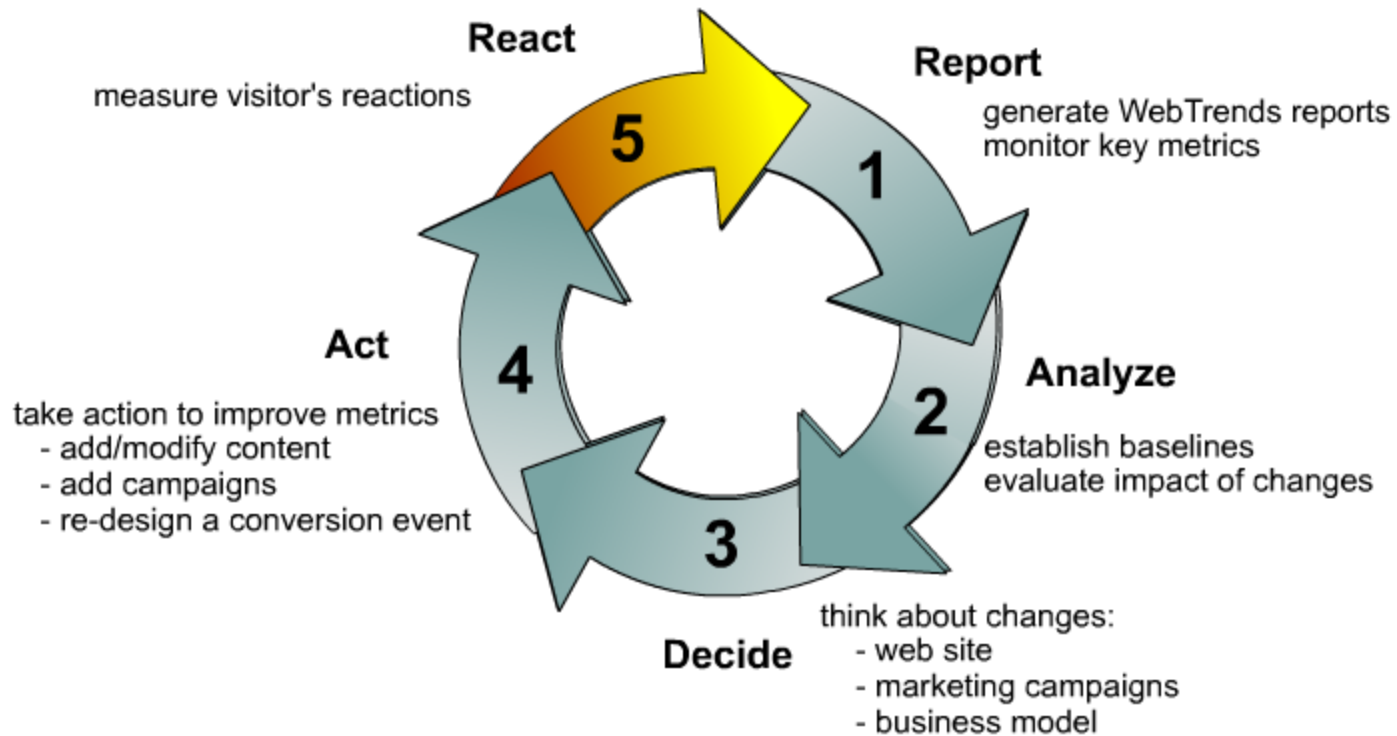
## Lead Generation

*Goal: Provide value other than product for online sale, Lower cost of acquiring leads*

*Web Analytics: Increase usefulness of online information, increase use of offline purchase incentives, increase visitor registrations*



# Measurable Improvement Cycle



# Unique sites objectives

## Commerce

Amazon.com, eBay.com, WalMart, Converse, and Diamond.com

Goal: Generate Revenue

Close sales, Up-sell, cross-sell

Web Analytics goal is: Increase conversion rate, average order value

## Content

ESPN.com, NBA.com, Yahoo, CNN.com, Salon.com, and Consumer Reports

Goal: Generate Revenue

Advertising, sell marketing data, rent names

Increase frequency of visits and duration (more ads seen!)

Web analytics: increase stickiness, and user registrations

## Self Service

Goal: Reduce Business costs and increase customer satisfaction

Shift people to online support from phone support

Web Analytics: Increase usefulness of online information, Decrease time needed to find info

## Lead Generation

Goal: Provide value other than product for sale, Lower cost of acquiring leads

Web Analytics: Increase usefulness of online information, increase use of offline purchase incentives, increase visitor registrations

## Branding

Goal: increase traffic to site, increase brand awareness

Web Analytics: Increase site stickiness, increase usefulness of information on site, increase visitor registration



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# 3. An example

Understand your customer



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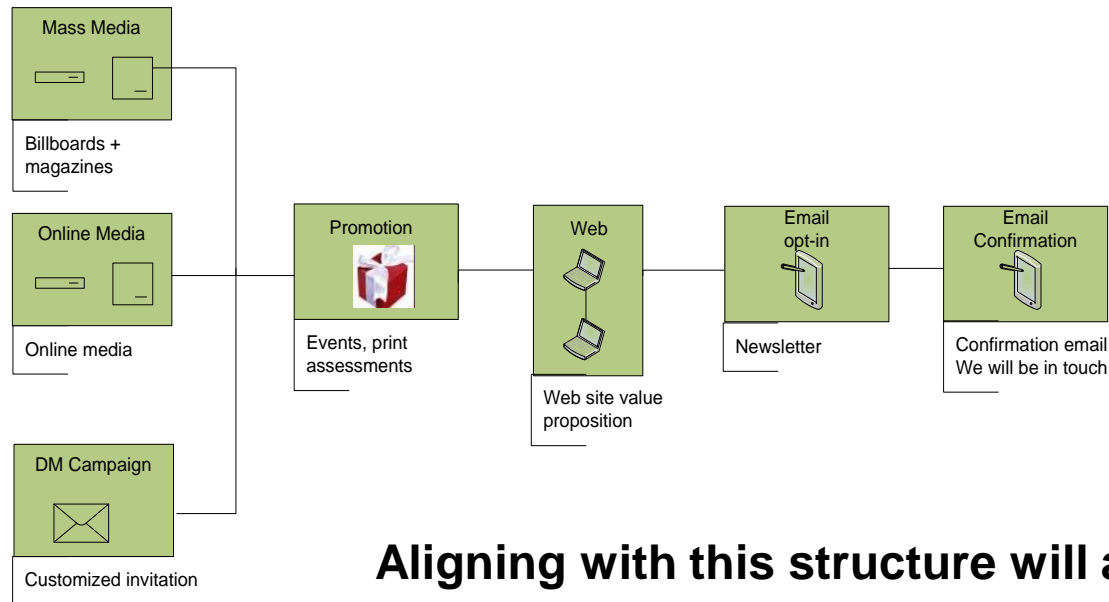
# Your Goals for each Customer Stage

<b><i>Customer Stage</i></b>		<b><i>Your Goal</i></b>	<b><i>Measured by...</i></b>
Precustomer	➔	Identify	x, y, z
Acquisition	➔	Differentiate	x, y, z
Renewals	➔	Interact	x, y, z
Extended	➔	Customize	x, y, z



# Customer Lifecycle

Lifecycle and behavioural objectives are core to the customer relationship



**Aligning with this structure will allow clients to:**

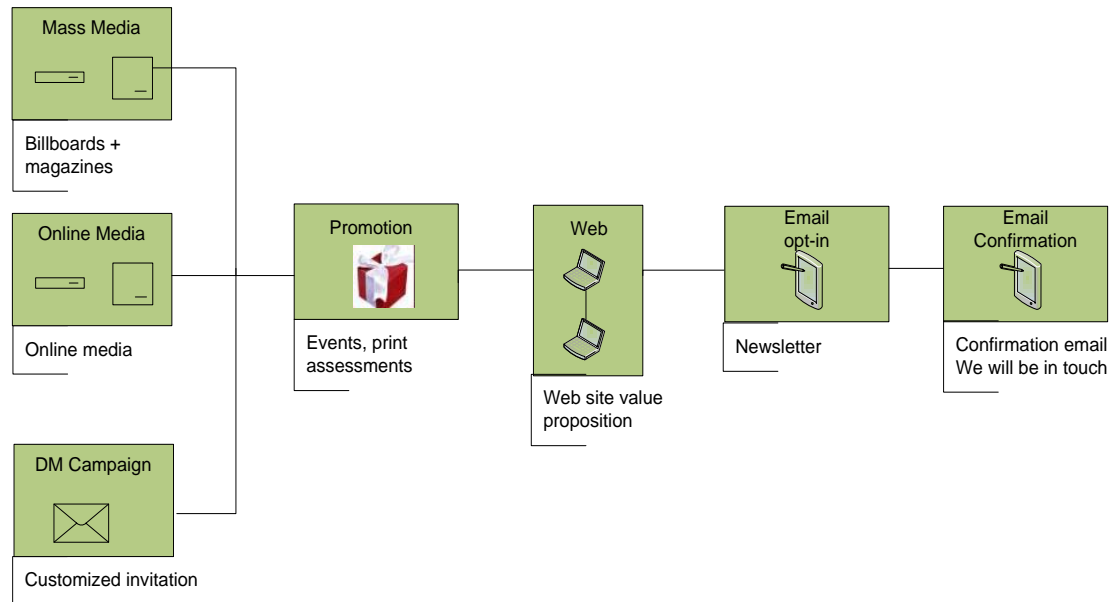
- Focus tactics on generating *permissioned* relationships
- Communicate consistent content
- Develop relationships in a cost-effective manner



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# Customer Lifecycle



## Typical Tactics

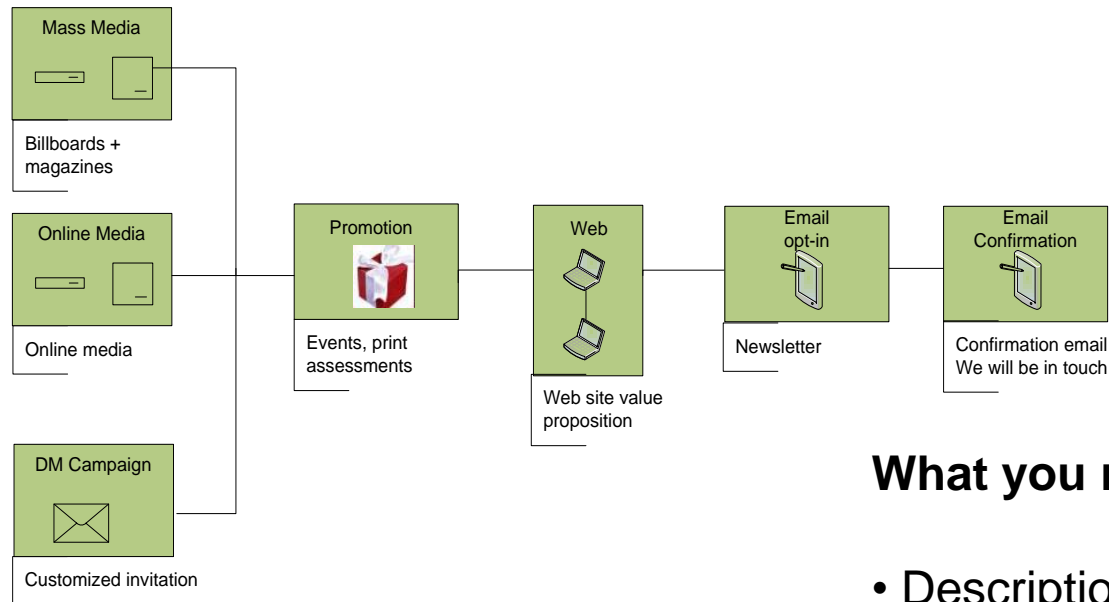
1. Mass media
2. Online media
3. DM campaign
4. Leverage Promotion
5. Web site activity
6. Gain Permissions
7. Use Confirmations



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# Customer Lifecycle



## What you need for each stage:

- Description (and vanity URL)
- Agreed business objective
- Call to action
- Agreement on desired behaviors
- Clear Messaging



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# Product Adoption and your Program

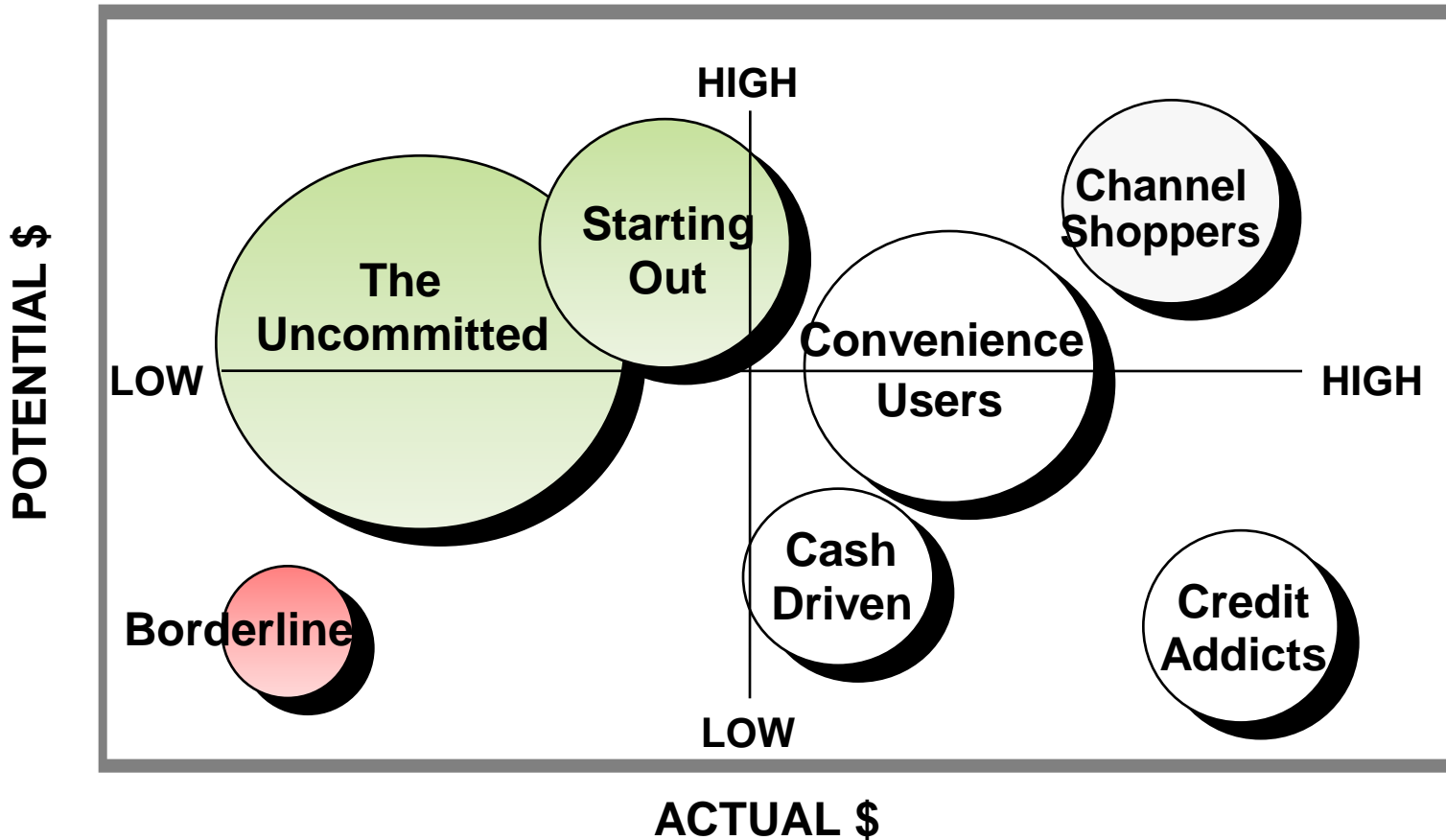
Customer Stage	Promotion & Activity	Trigger Points	Measure
Acquisition	X	X	X
Welcome	X	X	X
Enhance	X	X	X
Reward (Retain)	X	X	X
Reconnect	X	x	X



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# Identify and plan segment development



 INVEST

 DIVEST

 MAINTAIN



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# Objectives and Critical Metrics Worksheet

**Some leading questions to frame high-level goals, specific objectives, and web site metrics:**

- What are the high-level goals of your web site?
- What would a successful visit to your web site be?
- What business model is your site? (Commerce, Content, Self-Service, Lead Generation, Intranet, or Branding/Campaign)
- How would you improve your web site?
- What are more specific objectives for your web site?
  - Business goals
  - Visitor goals
- What do you need to measure to improve your site?



# Characteristics of Relationship Oriented Organizations

- Do you organize around your customers?
- Do you keep your customers?
- Do you create a learning relationship with your customers?
- Do you treat your customers differently?



# *Thank You*

## *Doug Gavin*

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(Please email me or leave a business card for a soft copy of the presentation)



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