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What is all that Activity?

Emerging Measures for Assessing Customer Success on the Web

Services Industry Summit

May, 2007

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Agenda

- First some context:
  - Mindset regarding metrics and precision
  - Terminology/vocabulary
- Assessing demand?
  - The total customer experience and the role of the web
- Triangulation – high confidence approximation
- The model and doing the math
- Summary

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Dangerous Myths

- Incident volume in the support center is a good indicator of the customer demand for support – *(that web activity can't be real…)*
- Solution or page views = self-service success
- Solution surveys represent the population
  - "This document helped" percentage X total interactions = self-service success
- All successful self-service = incident deflection

Mindset

- Web based self-help is not a customer ***avoidance*** strategy it is a customer ***engagement*** strategy.
- With a business focus on intangibles we can not use the same measurement approach we used for tangibles
- The degree of precision required is related to the intent/purpose of the measure (context)

Metrics – our Perspective?

- Manufacturing economy (business legacy)
  - Tangible things (toasters, TVs, cars; physical stuff)
  - Discretely countable outcome
  - Predictable repeatable process and resource inputs
  - Worker activity – strong link to outcome/results
- An experience economy, relationship, loyalty, influence (new business differentiators)
  - Intangibles, emotional connection/reaction
  - Outcome is not discreetly countable, can be inferred from behavior and surveys (approximation)
  - Unpredictable process and resources; they are defined by the situation
  - Worker activity – weak link to outcome/results

Accuracy / Precision?

Sufficient for the Purpose of the Measure

- For example ….. Where *are* you?

  …*Well… it depends on the purpose of who is asking…*

  – Author Dent (Hitchhikers Guide) - Solar system
  – Astronaut – in outer space, on earth, on the moon
  – Spouse – Charleston, SC
  – Friend in who lives in the area – Down town Charleston
  – Taxi driver – Francis Marion Hotel
  – Room service – room 511
  – Cartographer – N32° 47’ W79° 56’ (latitude and longitude of this hotel in degrees and minutes)

Relevance is more important than accuracy!

Endless Debates…

Eliminate the “endless debates” about measurement accuracy or precision by:

1. Agreeing on the purpose of the measure

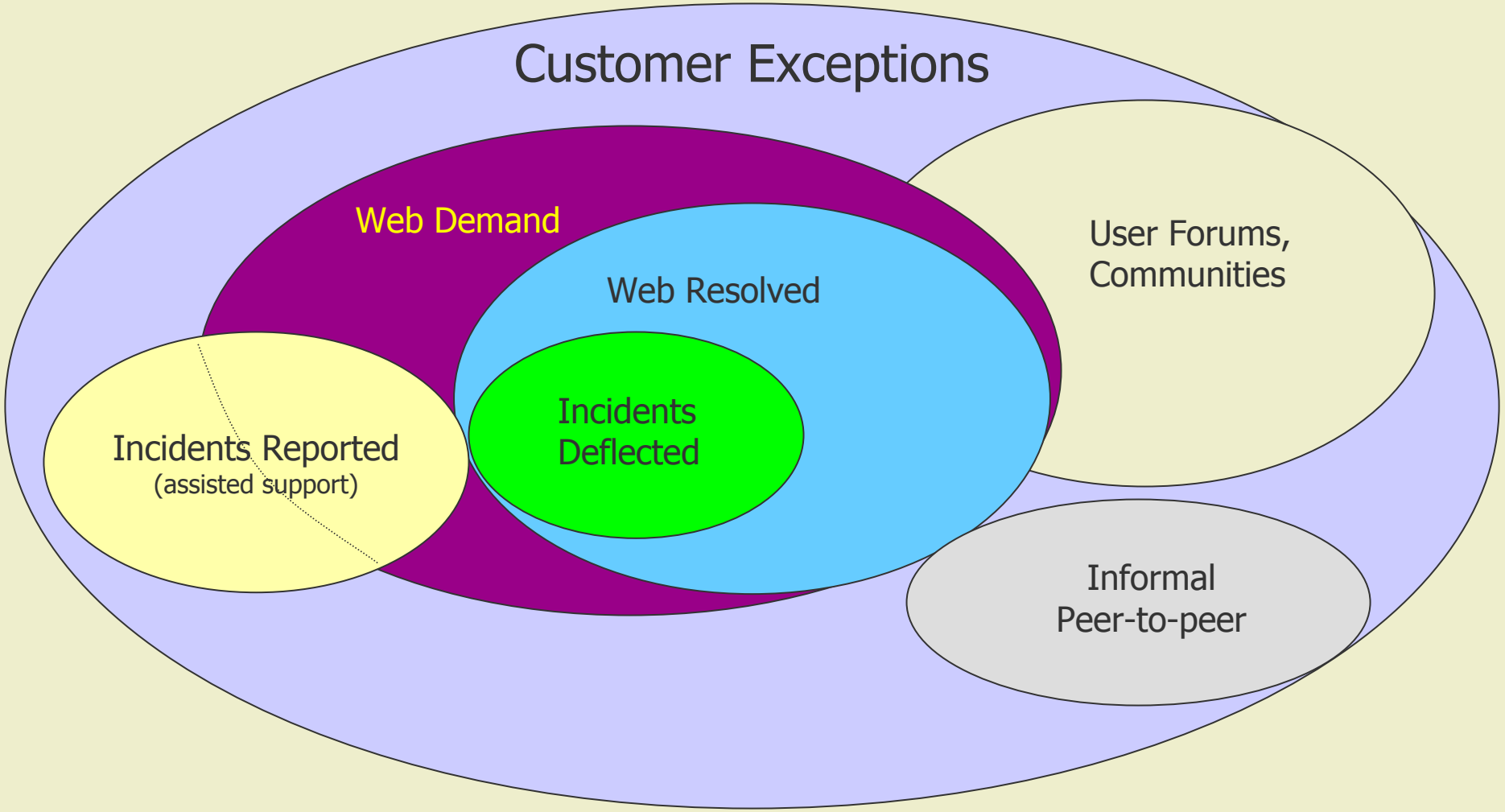
2. Negotiating the criteria for “good enough”?
   - Level of precision
   - Degree of confidence needed

3. Discuss the measure

Customer Support on The Web - A Definition -

- Support traffic on the web is:
  - Post sales
  - Information that improves customers' success and productivity with what they have bought
    - Usage and "how to"
    - Frequently asked questions
    - Basic configuration and/or interoperability information
    - Information about fixes; patches, drivers and work-a-rounds
    - Product documentation; user manuals, guides
- User intent = *solving a problem* vs. purchase, design or value added services

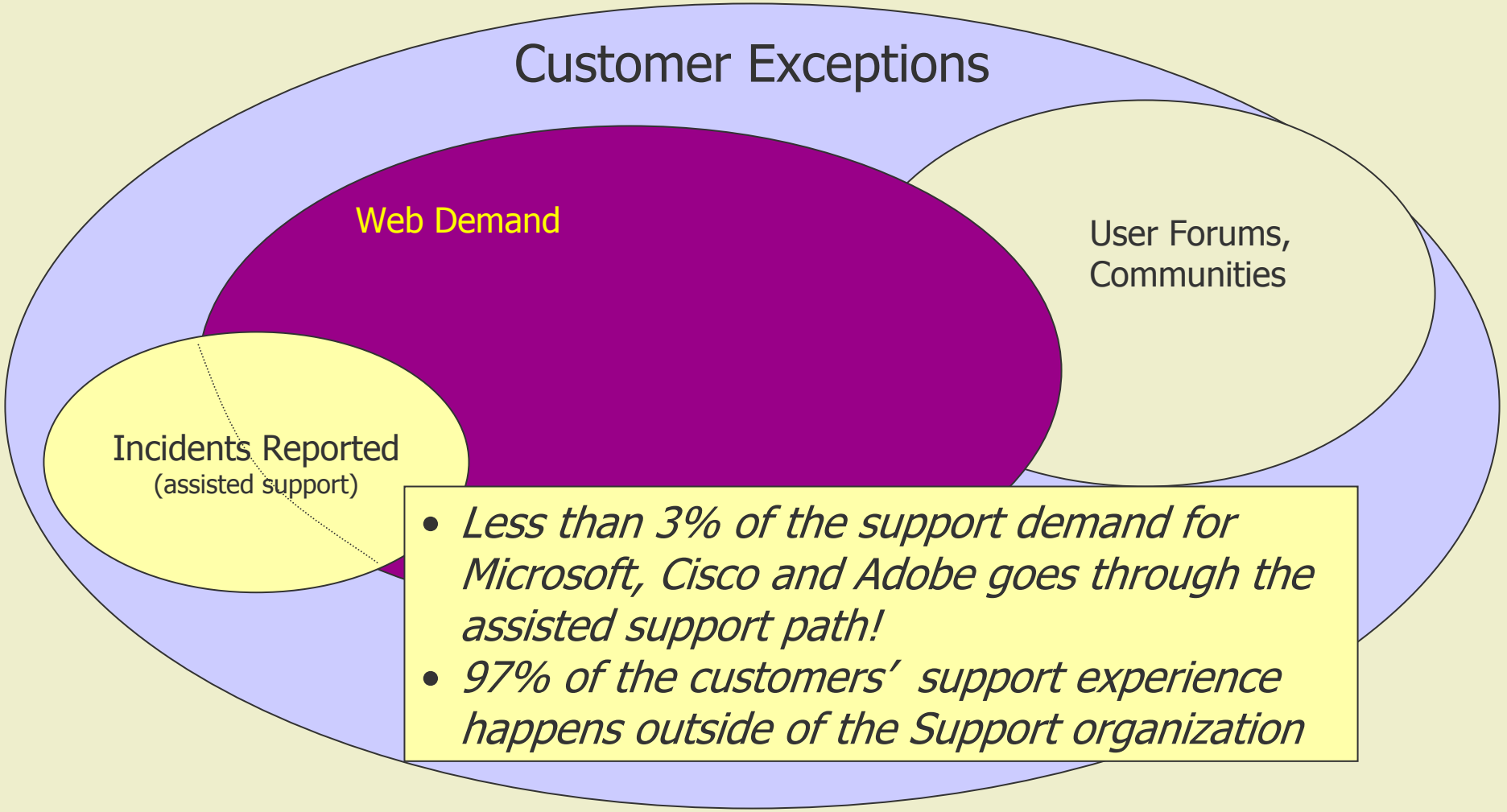
Customer Support Demand
-A Little Context-



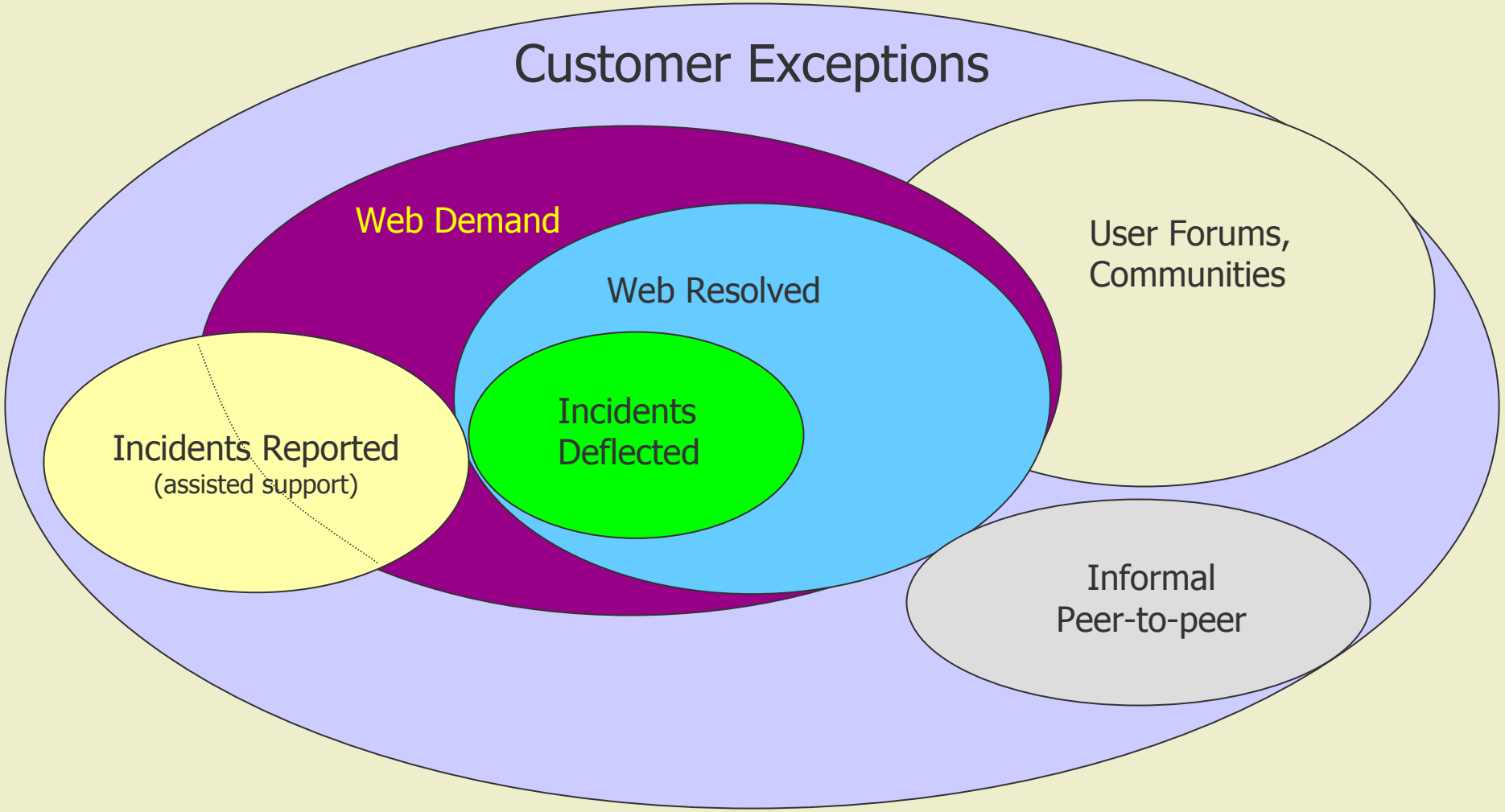
Assessing Total Demand?

- How much demand is there?
  - Incidents + Web activity + Community activity
- Important factors:
  - Path mix
    - % of customers who go to the web first
      - % success on the web
      - % of time customer will escalate to support if unsuccessful
    - % of customer exceptions that go to the community
      - % success in the community
    - % to Support center or onsite (assisted support)
      - Incident volume (normalized to install base)
      - % known and % new
      - Costs (direct labor costs only)

Initial Findings About Support Demand … its Huge!



Our Focus for this Session



4 Web Success Drivers

Short term goal: :

- *"Make the web the path of least resistance and best results"*

1. **Context** - Content in the context of the audience being served
2. **Completeness** – the majority (90%) of what you know gets to the web in 90-120 minutes of when you know it
3. **Access** – the portal design offers choices on accessing content and no dead ends (click to chat, click to submit)
4. **Marketing** – the "build it and they will come" doesn't work, you have to have a plan to promote web use

But then… how dow we measrue web success and value?

Calculating Web Demand
The "Simple" Approach

- Total page views = number of solutions (or knowledge articles) opened on the web
- % Tech support = % of the web activity that is tech support in nature – this is derived from customer focus groups or surveys or click stream analysis
- # of page views/exception = the average number of page views per problem/question – this is derived from customer focus groups or usability testing and/or customer surveys. (can also use exceptions/session)
- Web Demand =

$$\frac{\text{(Total page views X \% Tech support)}}{\text{\# of page views per exception}}$$

Indicators of Customer Success on the Web

- Patterns of behavior (know who is logging in) implicit measures (trends)
  - Frequency of visits (by individual)
  - Time between visits
  - Time spent (duration of the visit)
  - Number of searches
  - Number of solutions viewed (page views)
  - Time between searches
  - Solutions downloaded
- Incident opened by user during on-line session or within 24 hours of visiting the web

The Simple Approach?

- Lots of assumptions
- Not high confidence

Can we develop a way to assess the value of the web when we can not explicitly **count *it***?

- Value is abstract…
- We can detect and/or infer its presence through behavior
- We can gain confidence in the presence of value through multiple points of view - triangulation

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The Value of the Web…

A Scenario

Confidence Through
A Combination of Approximations…

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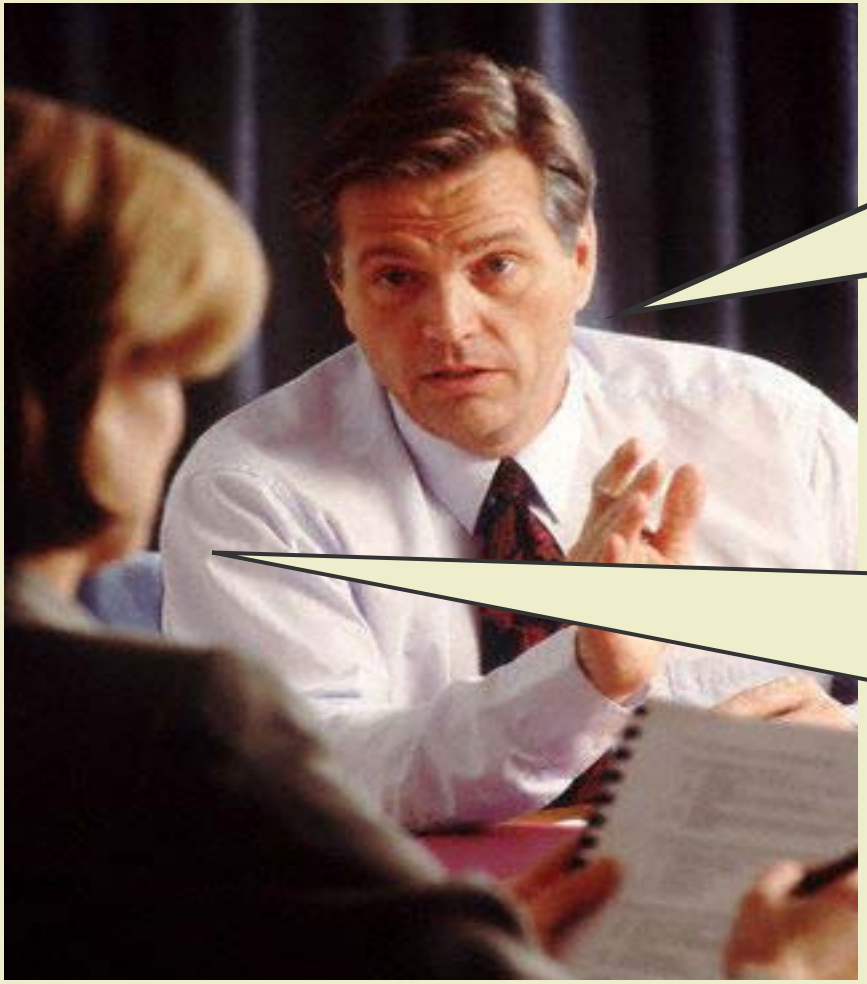
Sources of Web Value

Direct Cost Savings to Support	*Deflected Incidents*: Self-service success on issues customers would have called about
Indirect Cost Savings (harder to measure)	• *Deflected Incidents*: Capturing more customer experience drives relevant product improvements • *Shorter Incidents*: better informed customers • *Customer productivity:* Enabling customers to solve problems they would not call about (solving pent up demand)
Top-line Growth (really hard to measure)	• *Higher margins*: more valuable, relevant products • *Higher loyalty*: deeper product engagement

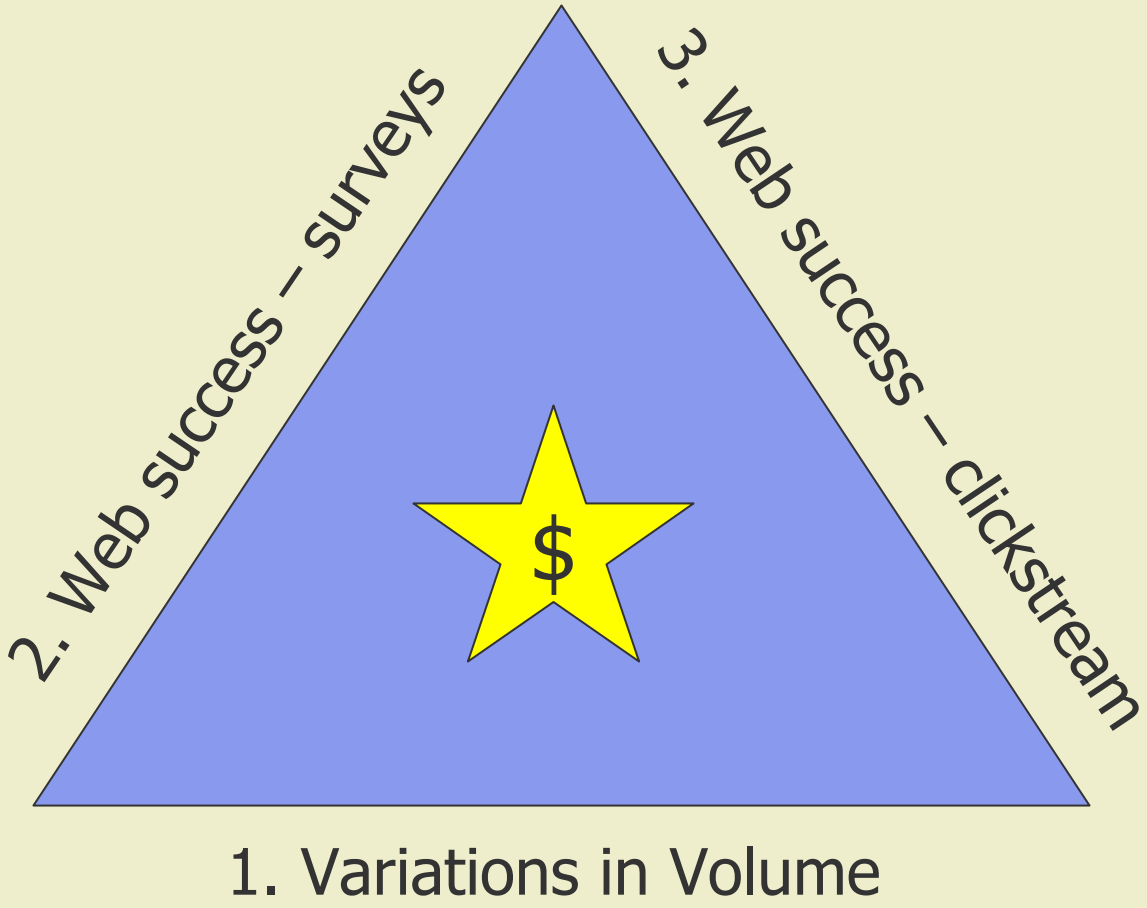
The Executive Response



That's very nice…. Now …show me the money.

Call deflection – We are not incurring the cost of handling the issues that customers solve on our web site.

Using Triangulation to Assess Incident Deflection Value ($$)



Three Indicators of Deflection

1. **Variations in incident volume**
   - Change in the incident volume in the support center
   - Shift in the ratio of known to new (70/30 to 30/70)
2. **Web success – surveys**
   - User survey to determine success rate and "would have escalated factor"
3. **Web success – observed (clickstream)**
   - Observed behavior on the web
   - Click stream patterns and probabilities

Each of the three indicators on their own have ambiguity… But, together we can use them to triangulate on a deflection rate that we have confidence in (precision sufficient for the purpose)

Input Definitions

- **Exceptions** (web demand) **– 100,000/month**
  - Number of issues pursued by customers on the web
    - Exceptions = “sessions/avg # issues per session” (if people sign on) OR
    - Exceptions = “number of searches/avg number of searches per exception”
    - Factors based on customer input, survey or focus group input
- **% Success surveyed – 45%**
  - % of time customers report finding what they need on the web
  - Source = customer experience survey (not event or article based)
- **% Escalations surveyed – 10%**
  - the % of time customers report they would call if they don’t find a resolution on the Web
  - Source = customer surveys or focus group input

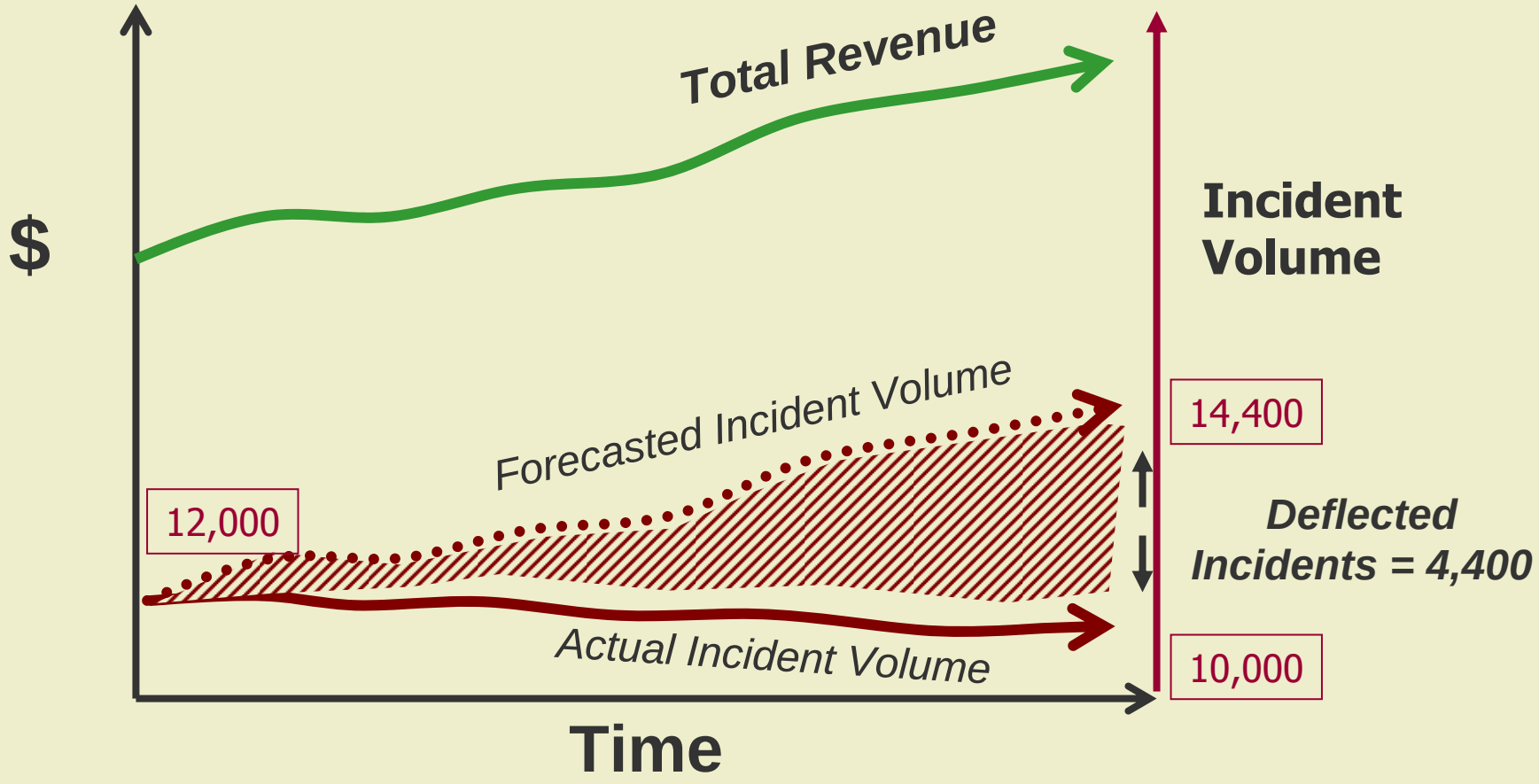
Input Definitions

- **% Success observed**
  - Click stream patterns
  - Identify patterns that are highly likely to represent success
- **Escalations observed**
  - Number of incidents that come from customers who tried the web first
  - Source = CRM and Web reports, incidents generated after a search (for those who have users log in)
- **% Unsuccessful**
  - 1-% successful
  - Source = customer survey of those who try the web and then escalate or observed from click stream
- **Cost/Incident – $250**
  - "support center costs / # of incidents"

1. Variation in Incident Volume

- If incidents drop… delta = deflection
  - If installed base or revenue is growing this may grossly understate the deflection rate
- Normalize incidents to install base with a ratio
  1. Estimate the historical incident rate;
     - Before web delivery, ratio for incident volume per customer/user (or unit, license, revenue)
     - Historical trend = project incident volume (using pre web ratios)
  2. Deflection = "Historical trend projected – actual rate"
- *Shortcoming;*
  - *lots of other factors at play – hard to do direct cause and effect*
  - *Time to build trends*

1. Variation in Incident Volume



2. Web Success – Surveys

Deflection = Exceptions X % Successful X % Escalate

Shortcoming – response bias toward those who escalate; does not capture experience of those who use the web but don't (or seldom) escalate

4,500 = 100,000 X 45% X 10%

Shortcomings:

- *Survey bias – who are you asking? web users*
- *Survey response rates*

3. Web Success - Clickstream

Implicit Success Measures:

1. Define three categories of sessions
   a) Almost certainly unsuccessful
   b) Plausibly successful
   c) Uncertain

2. Define clickstream rules (patterns or characteristics) for each category

3. Decide what % to apply to each category to calculate number successful
   - e.g., a)=0%, b)=66%, c)=25%

4. Assess customers' clickstream and determine how many fit each category, apply percentages to get "success"

5. Improve the calculations
   - Through surveys and correlation to other success indicators
   - Move patterns from c) hard to tell to a) unsuccessful or b) plausibly successful
   - Refine the success percentages

3. Web Success - Clickstream

Of 100,000 exceptions likely success = 40,050:

- a) = 0 , b) = 36,300, c) = 3750
- 3674 are ones that would have been escalated if not solved

$$\textbf{Deflected Incidents} = \frac{\textbf{(Escalations X \% Successful)}}{\textbf{\% Unsuccessful}}$$

$$3674 = \frac{(5500 \text{ X } 40\%)}{(1 - 40\%)}$$

Shortcomings:

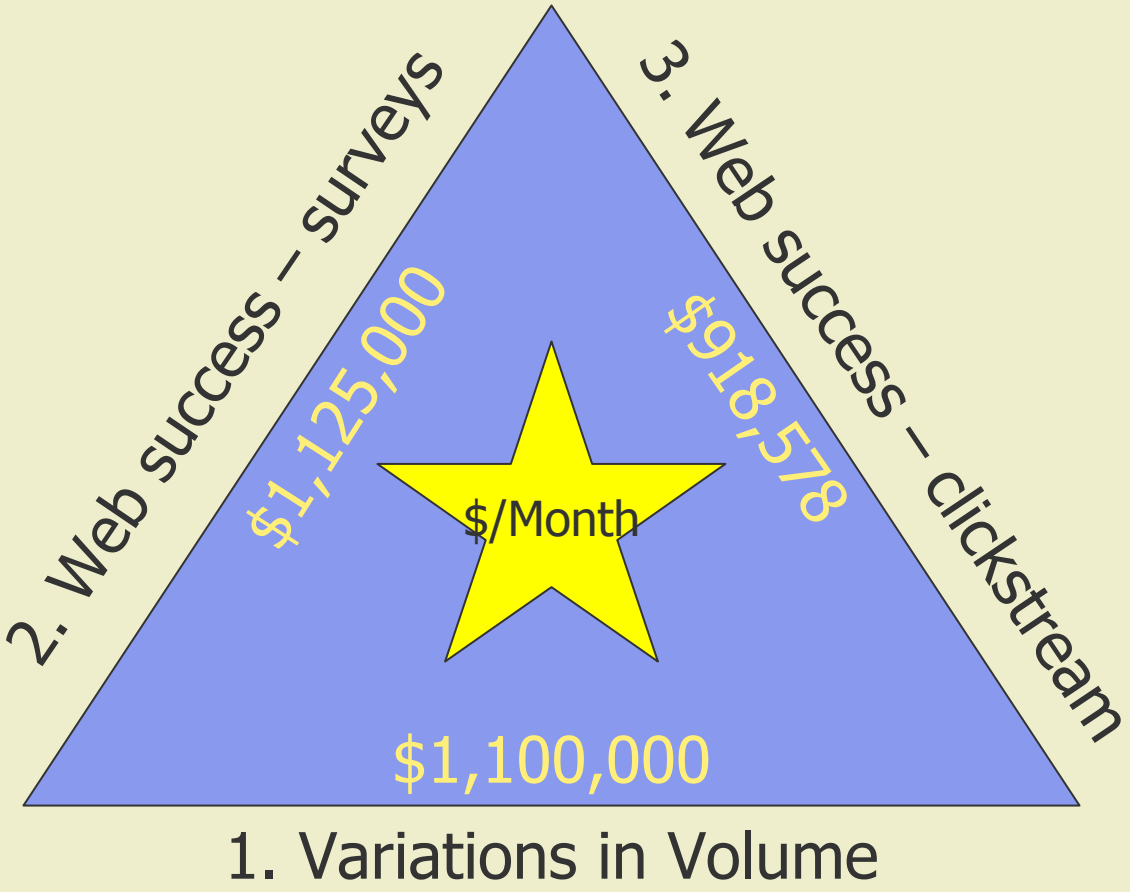
- *Accuracy of pattern characterization*
- *Assumptions of success*

Doing the Math

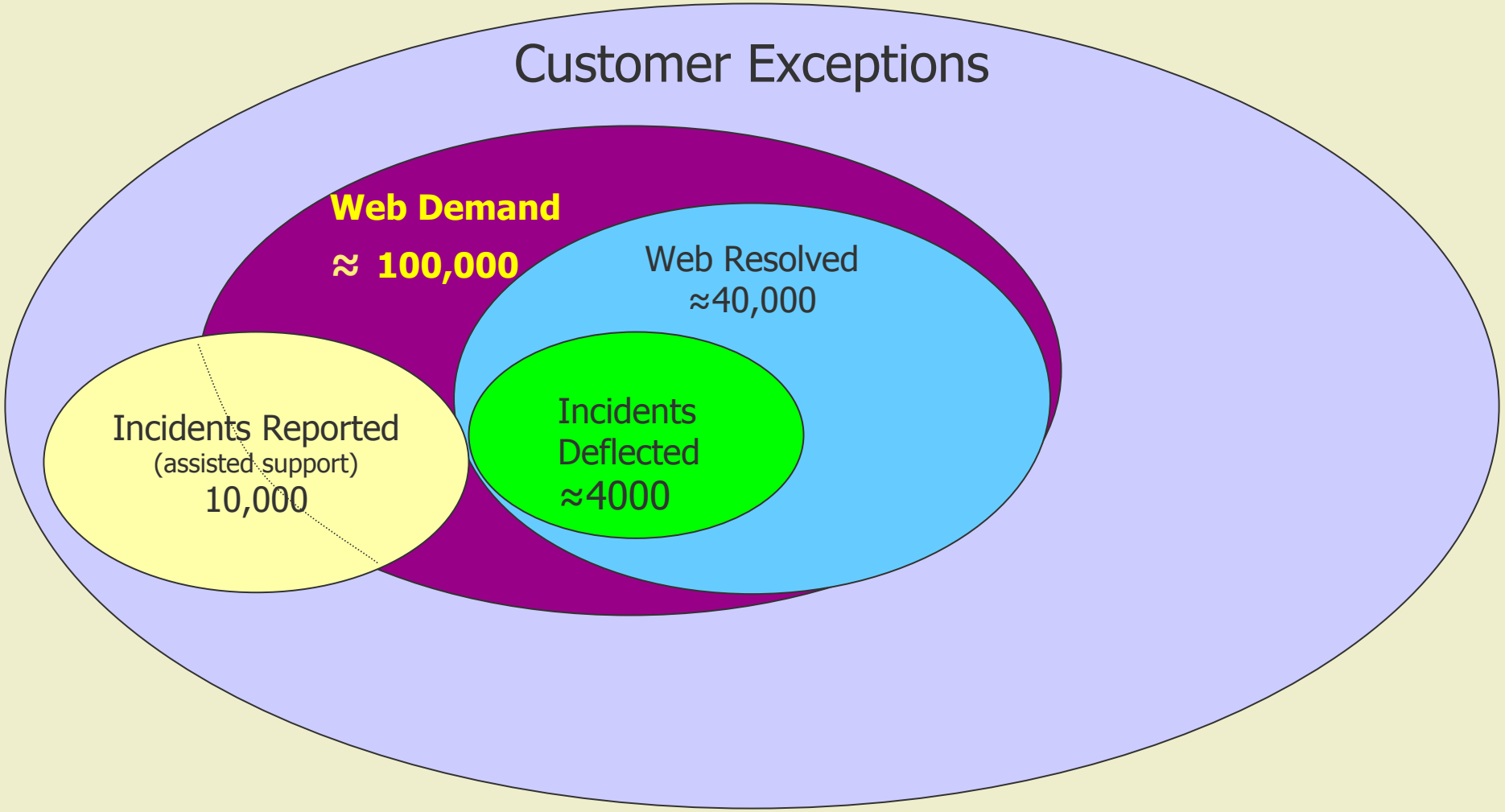
$ = Deflected Incidents X Cost/incident

1. Variation in incident volume
   - 14400 X $200 = **$1,100,000**
2. Web success - surveys
   - 4,500 X $250 = **$1,125,000**
3. Web success – clickstream
   - 3674 X $250 = **$918,578**

Triangulation to Assess Incident Deflection Value ($$)



Our Example Scenario
(Numbers are Monthly)



Key Emerging Measures to Trend

1. ***Customer Web usage*** - % of time customers use the web before "escalating" to the support center (assisted support)
   - is determined via Customer survey(s) and/or number of web submitted incidents Vs non-web
2. ***Customer Web success*** – the % of time customers find what they are looking for
   - is determined via customer survey(s) and a calculation based on number of sessions or page views divided by an average "success rate"
3. **Escalation –** the % of time customers will "escalate" to the support center if they are not successful on the web

Key Emerging Measures to Trend

4. ***Incident ratio*** – the incident volume as a % of revenue or product volume/licenses or number of users
   - Create a historical baseline and track the trend as improvements are made to the web
5. **% New Vs Know incidents in the support center**
6. **Click stream categories and probabilities –** identify patterns for; likely successful, uncertain, likely unsuccessful. Assign probabilities and tune based on correlation to user surveys.

The trends are what's most important!

Thoughts on Surveys

- Customer surveys are an important source of data
- Types of surveys:
  - Document/solution based – “Did this solution help?” (not terrible useful data, tiny response rate)
  - Session based; tell us about your experience during this session (interesting/useful)
  - Relationship surveys; annual survey or periodic survey of users (interesting/useful)
- Helpful references:
  - ***Customer Surveying*** by Dr. Frederick Van Bennekom
  - ***Web Metrics*** by Jim Sterne

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