



Customer-Inspired Design: Applying Voice of the Customer to Improve New Product Success Rates

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Workshop objectives

 **Understand key best practices in customer needs acquisition and requirements definition and how to structure a Voice of the Customer (VoC) project**

 **Review VoC techniques and their use in gathering needs and converting them into requirements for a project**

 **Conduct a brief workshop to practice selected tools and techniques**

Today's agenda

		Start Time
1	Introduction	9:30 a.m.
2	Using the “Voice of the Customer” to drive successful new products	9:40 a.m.
3	Principles of PRTM's VoC	10:10 a.m.
4	“Redesigning Product Development**” (L.L. Bean Using VoC techniques)	10:30 a.m.
5	VoC Workshop	10:45 a.m.
6	Additional resources	12:15 a.m.

Introduction

PRTM is recognized globally as the leader in helping technology-based businesses achieve superior performance in their core operational processes

PRTM is a worldwide organization dedicated to achieving measurable results for our clients



Focus

PRTM was founded in 1976 with a unique focus

- Core business processes
- “Results, not reports”
- Technology-driven companies

Experience

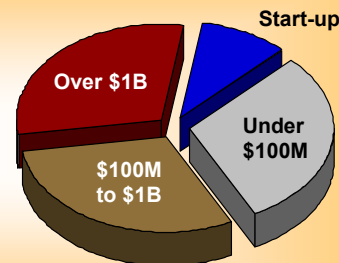
More than 1,200 satisfied clients

- Over 6,000 successful implementation projects
- 90% level of repeat business

Industry Knowledge

Aerospace and Defense
Automotive and Industrial
Computers and Electronic Equipment
Financial Services
Life Sciences
Retail and Consumer Goods
Semiconductors
Software
Telecommunications/Internet

Client Profile



Depth

More than 450 consultants

- Technical backgrounds with practical experience and MBAs from top schools
- Low staff/director ratio with significant director involvement in all projects

PRTM practice areas address all core business processes

Business Strategy

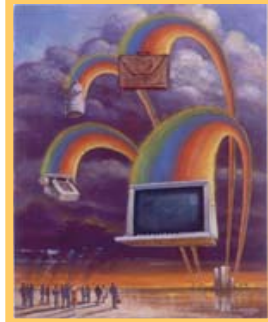
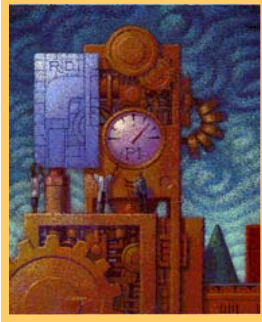
Product Development

Marketing and Sales

Operations and Supply Chain Management

Customer Service and Support

Information Technology Solutions



Strategy, Organizational Design, and Interim Management

Business Process Assessment, Design, and Implementation

Economic Modeling, Benchmarking, Research, and Due Diligence

Program Management, Change Management, and Team Facilitation

Co-Development, Partner Management, and Outsourcing

IT Strategy

IT Operations

System Selection

IT Implementation

IT Outsourcing

Business-Aligned Technology Implementation

Your perspective...

**What is your interest in
this practice?**

**What are your
expectations for today's
session?**



Using the “Voice of the Customer” to Drive Successful New Products

Complex companies have unique strategy, product, service, marketing, and sales challenges...

If we were to look at the most critical list of issues companies face, the following items would certainly be near the top

- ◆ Mistaking “customer experience” for “customer value,” thus creating an outstanding experience for customers who remain vulnerable to competition because the value of the services is perceived as weak
- ◆ Lack of information to leapfrog the competition by developing products, services, or strategies customers love, but would never have thought possible
- ◆ Misunderstanding of the customer’s buying preferences or supplier requirements one level away from the vendor
- ◆ Fear of commoditization and lack of information and analysis skill to determine if current strategic actions will reduce or increase commoditization
- ◆ Lack of a clear strategic focus that creates boundaries for service or product design, packaging, selling, and delivery
- ◆ Misunderstanding the policies, procedures, systems, and information that are needed to produce the best supply chains or internal operations

...that require customer input for success

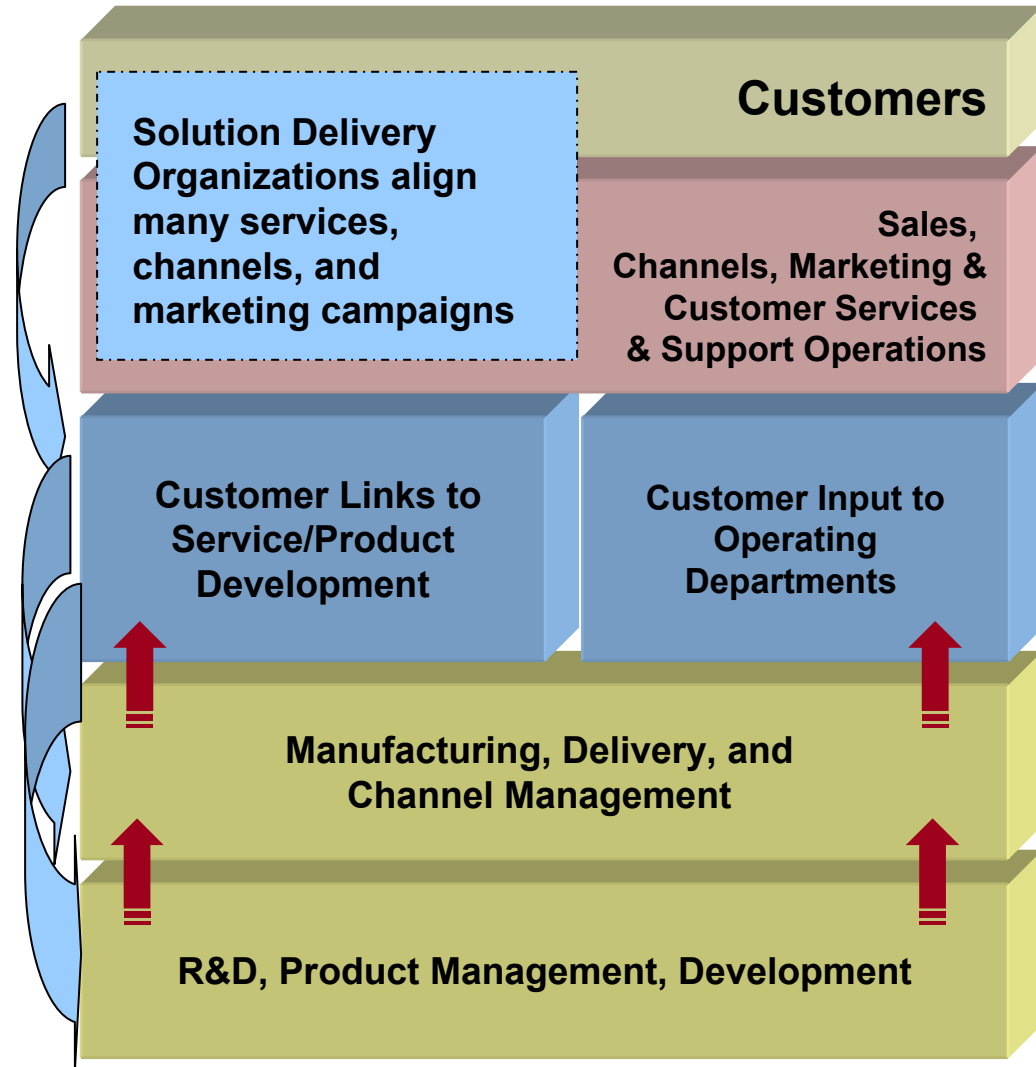
Management needs ideas and continuous feedback from customers to stay relevant

Product organizations must have market-leading strategies for their products

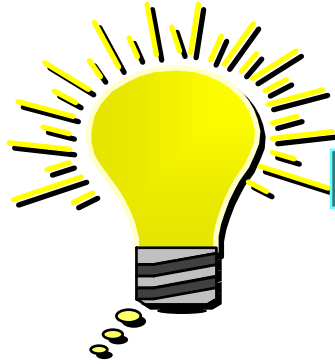
Solution delivery organizations (e.g., channels or unrelated partners) need to represent value effectively

Sources of customer information (e.g., CRM systems, customer inquiries, sales input, trouble reports) are seldom integrated with timely customer input on a specific development project

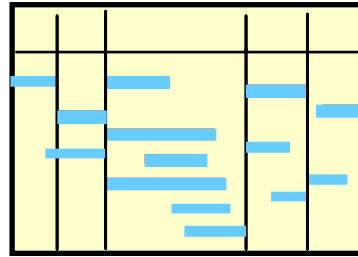
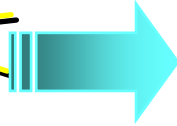
Large customers of one operating company may be insignificant customers of another operating company, thus setting up inconsistent treatment and loss of customer loyalty



However, most companies listen to their customers in a haphazard and non-repeatable way



They generate great ideas



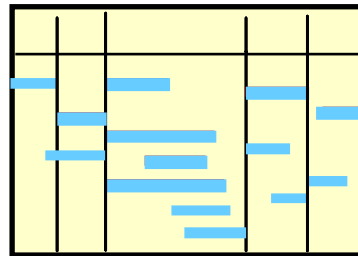
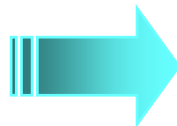
They decide to develop products or services



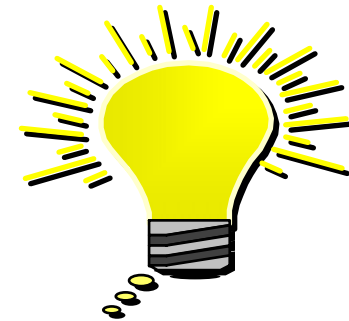
They gain customer insight once the products are in the market



A particular customer demands a specific solution

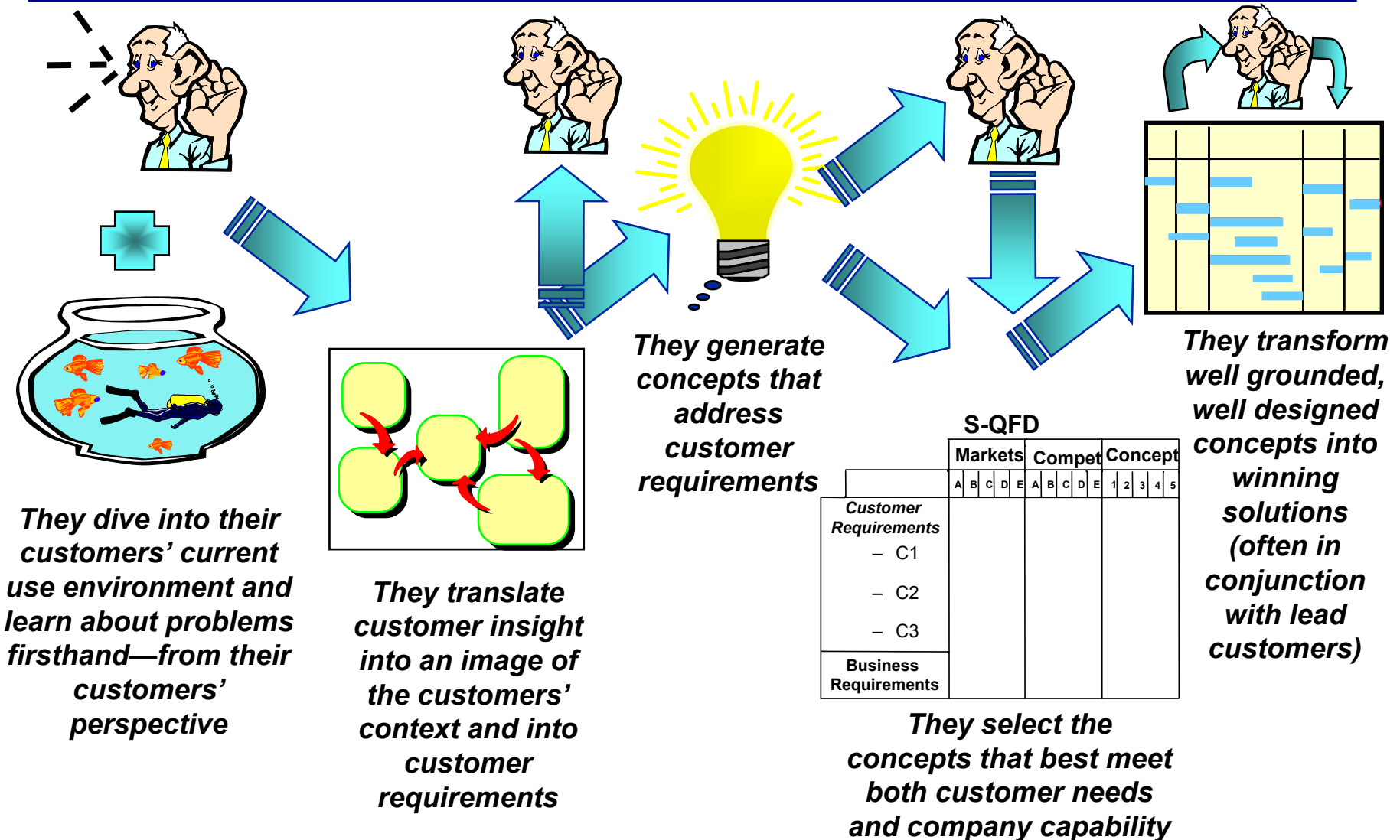


The company develops a product or service to meet those demands



They see what the really great idea could have been...

Best practice companies employ a more robust approach called Customer Inspired Design (CID)



S-QFD


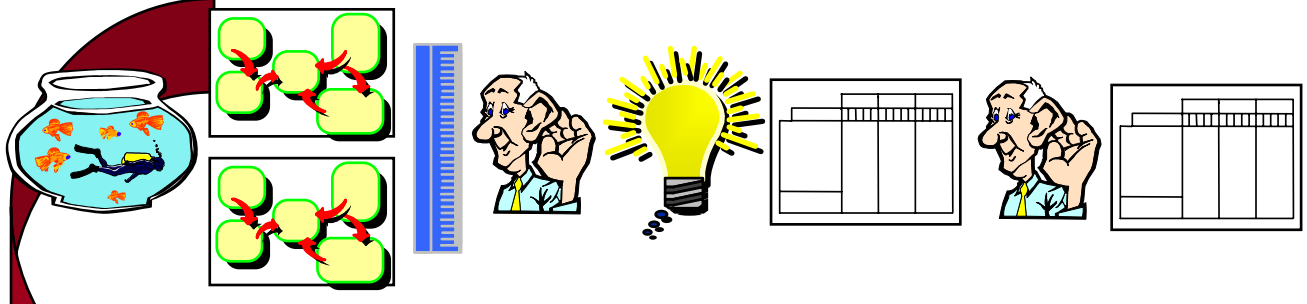

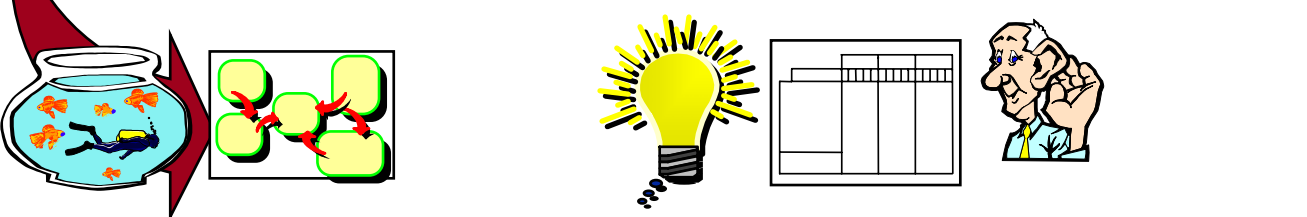


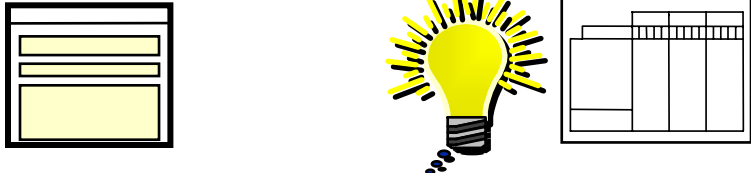
	Markets					Compet					Concept				
	A	B	C	D	E	A	B	C	D	E	1	2	3	4	5
Customer Requirements															
- C1															
- C2															
- C3															
Business Requirements															

Best practice companies employ a more robust approach called Customer Inspired Design (CID)

Continued

Category	Customer-Inspired Design implementation		
	Customer-Inspired Design	FOCUS	Customer-Focused Design
Thoroughness and rigor of the analysis	+ + +	+ +	+
Recommended application	<ul style="list-style-type: none"> ✓ New platform ✓ New product ✓ New market opportunity 	<ul style="list-style-type: none"> ✓ Derivative product ✓ Narrow technical solution 	<ul style="list-style-type: none"> ✓ Product improvement
Key characteristics	<ul style="list-style-type: none"> ✓ Thoroughness of thinking ✓ Potential for discovery latent user requirements 	<ul style="list-style-type: none"> ✓ Targeted towards obtaining explicit customer requirements ✓ Abbreviated metrics 	<ul style="list-style-type: none"> ✓ Intended for situations where customer requirements are known or reside in customer-facing personnel
Time to complete a project	3 – 4 months	2 – 3 months	A few weeks

CID implementation may take various forms to suit specific company needs

Situation	Customer-Inspired Design implementation	Outcome
<p>New Platform or Product/Service</p> 		<p>Significant & innovative—potentially breakthrough</p>
<p>Derivative Product</p> 		<p>Customer delighting extension</p>
<p>Narrow Technical Solution</p>		<p>On-target particular solution</p>
<p>Product Improvement</p> 		<p>Improved product out quickly</p>

The core of any CID implementation is a technique of Voice of the Customer...

...a formal approach to gather and synthesize customer requirements

Voice of the Customer approaches...

- ◆ Are designed for exploratory customer requirements research
- ◆ Structure the “fuzzy front end” of market and product development requirements gathering
- ◆ Ground internal professionals in external realities
- ◆ Assure disciplined, focused thinking
- ◆ Tap the intuitive knowledge of experienced professionals—their experience allows them to see what market researchers cannot
- ◆ Proactively identify explicit and latent customer needs
- ◆ Facilitate a thorough exploration of potential options that are created in response to clearly articulated needs
- ◆ Self-document the teams’ thinking and decision making
- ◆ Align diverse individual perspectives to a common understanding

Our experience goes back to 1992, and we have a track record of satisfied clients

- ◆ We provide a best practice framework to identify the winning customer requirements
- ◆ We facilitate the design of responsive solutions based on facts
- ◆ We integrate the requirements process into product development
- ◆ For companies that know how to develop products the right way, PRTM helps them develop the right products and achieve their target market share and price levels

We'll use some terms today that we should all use in the same way

“A Customer” = any expert, buyers, channel member, influencer, specifier, who has information to add knowledge about a subject

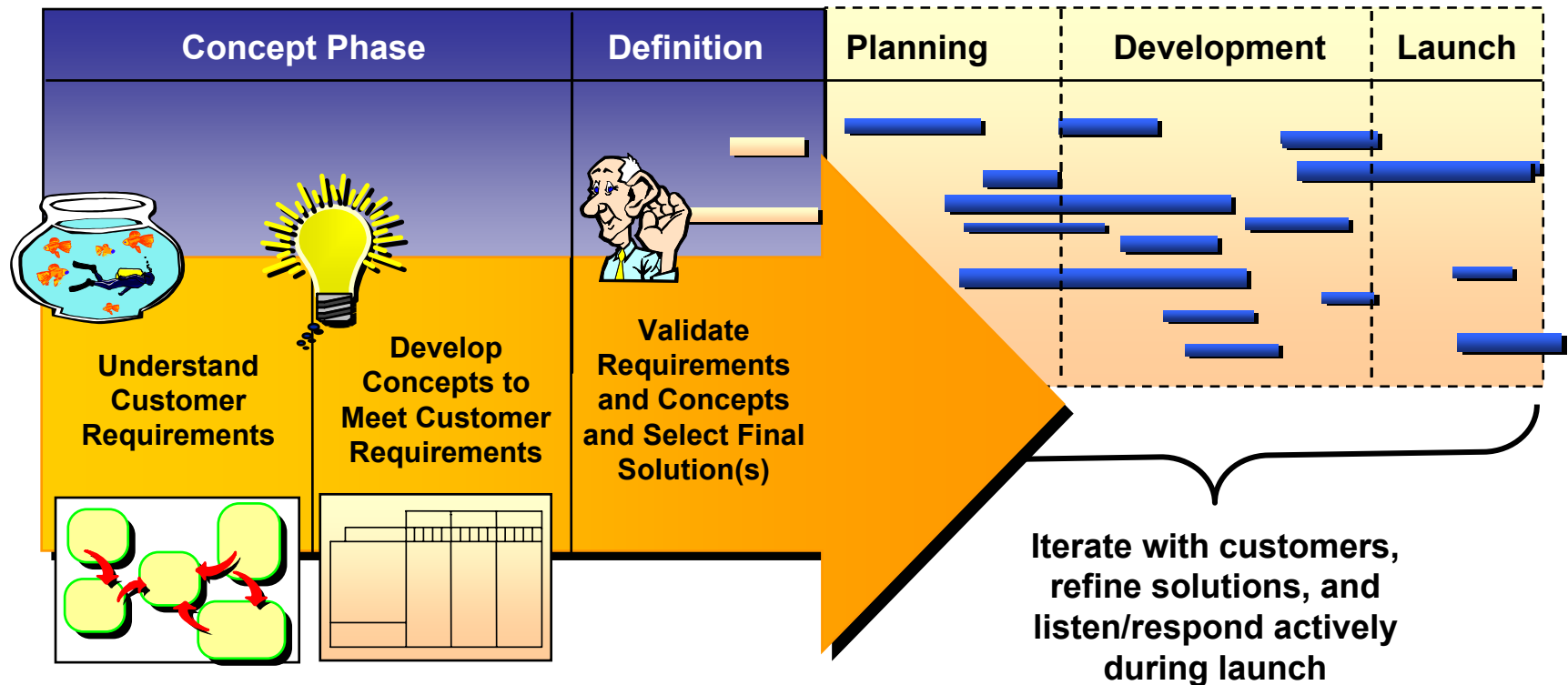
“VOICE” = an actual quote captured directly from an individual, usually in a face-to-face meeting

Need: A problem, concern, or issue, either stated or latent, that a “customer” has, which can be translated into a “requirement”

Requirement: A statement, aligned directly to a “need”, and having specific content on which service or product development can base a decision

One of the key VoC applications is to collect customer requirements for new product development

PRTM created a unique VoC toolkit that integrates into the front end of product/service development



How comprehensively you use the VoC to document customer requirements depends on the situation

Situation \ Steps	Plan	Visit	Understand Context	Translate Voices	Customer Requirements Insight	Generate Metrics	Survey	Create Solutions	Screen	Test Concept	Select	Outcome
Major New Product or Platform	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Innovative, Perhaps Break-through
Derivative	✓	✓	Leverage prior context work	✓	✓			✓		(✓)	✓	Customer-Delighting Extension
Narrow Technical Solution or Routine	✓	✓		✓	✓	✓		✓		✓	✓	On-Target Technical Solution
Continuous Improvement of Existing	✓	Input from sales & service		✓				✓			✓	Customer Inspired Improvements

To summarize, PRTM's VoC approach captures needs and converts them to requirements

VoC is a methodology that is based on using actual quotes captured directly from customers

- ◆ Usually in a face-to-face meeting, but also by phone, and through some new technology-assisted methods
- ◆ From anyone whose interest you represent or whose perspective can add value to your understanding

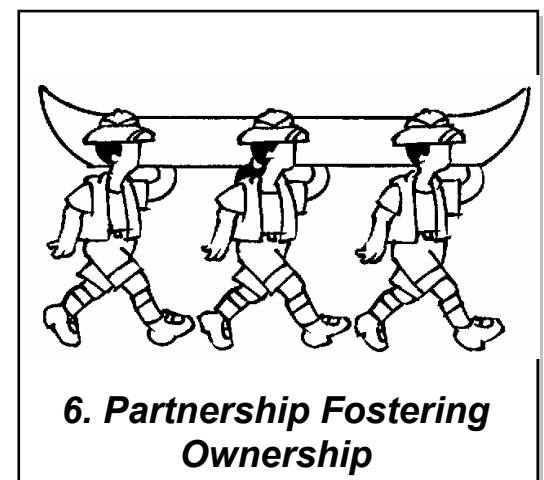
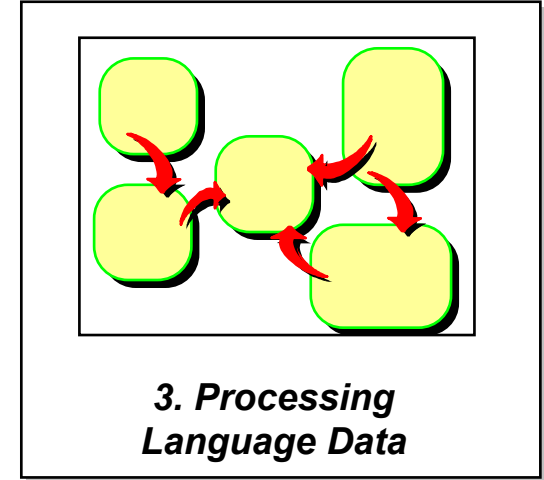
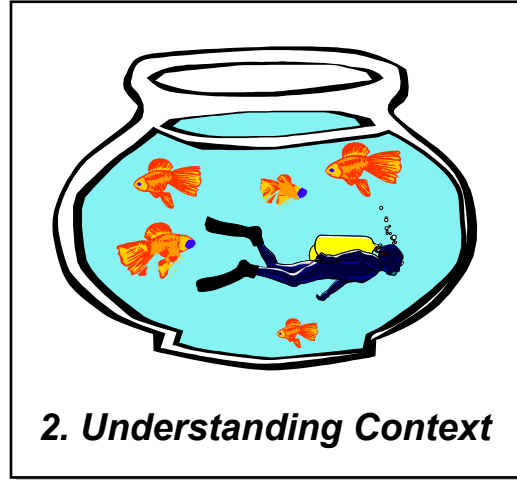
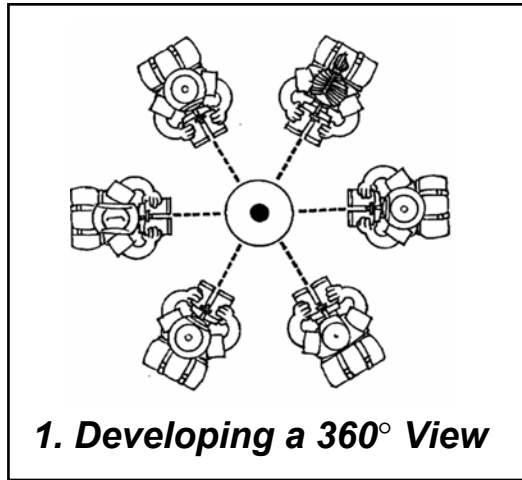
VoC is a process that allows a company to:

- ◆ Structure the “fuzzy front end” of strategic thinking, discovering new markets or new market opportunities, product or service development, or understanding supply chain problems
- ◆ Ground internal professionals in external realities
- ◆ Assure disciplined, focused thinking
- ◆ Tap the intuitive knowledge of experienced professionals—their experience allows them to see what market researchers cannot
- ◆ Proactively identify explicit and latent customer needs
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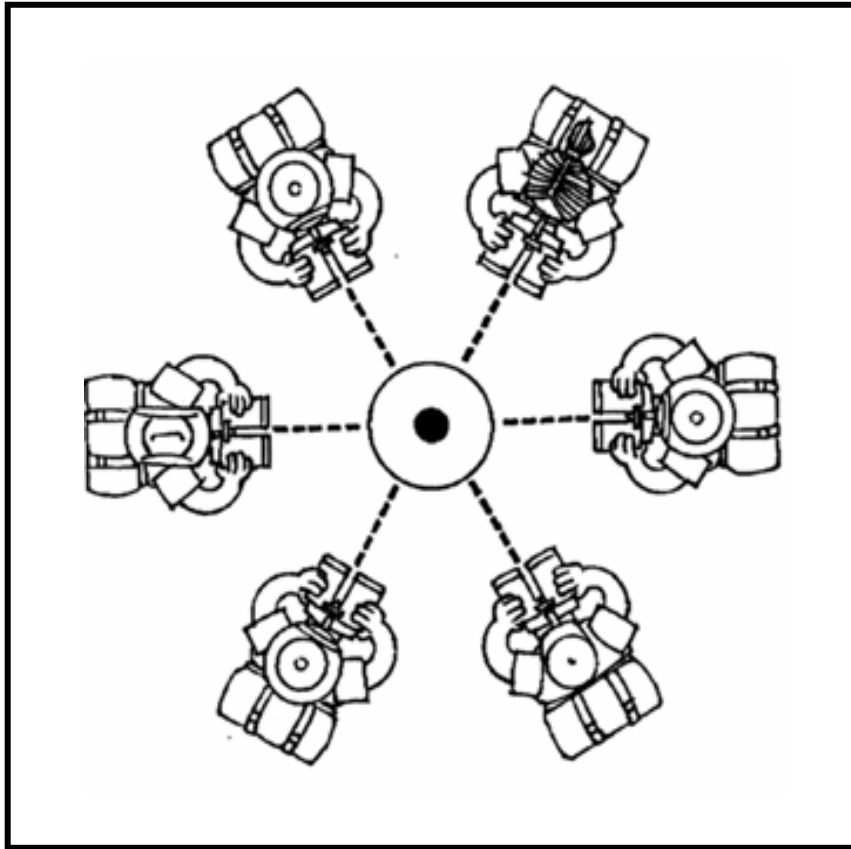
Principles of PRTM's VoC

Several important principles underpin PRTM's process for collecting and using the VoC to design products



Adapted from Center for Quality of Management

1. Developing a 360° View



Means...

Beginning with an attitude of exploration

Viewing the issue of interest from many angles

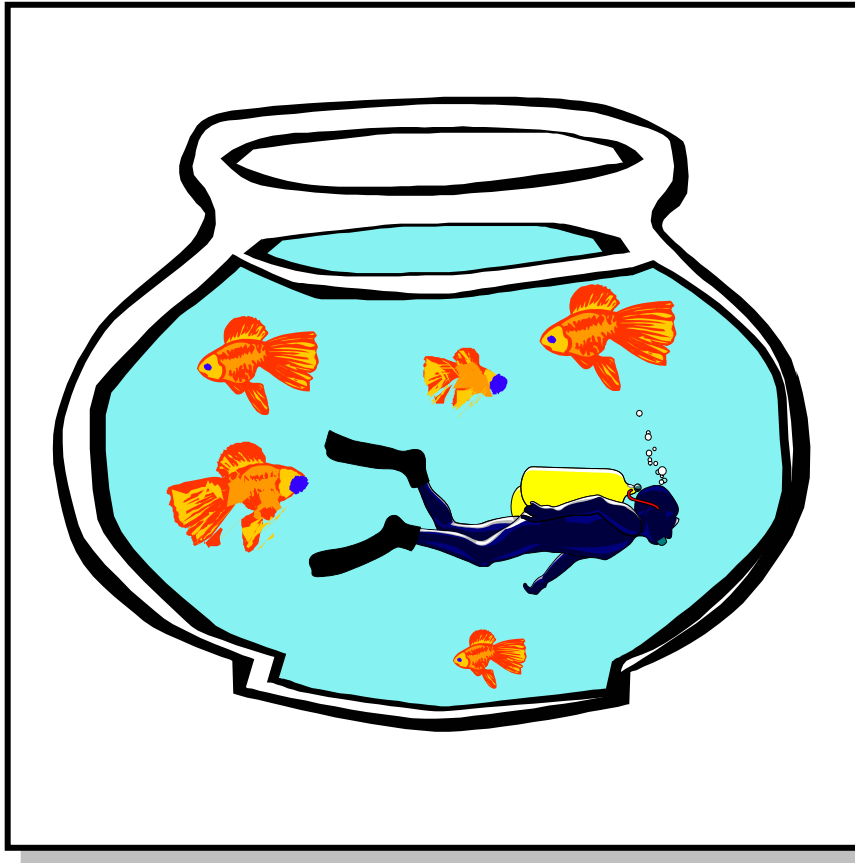
Collecting a diversity of perspectives

Staying open to discovery

Resisting testing one's own hypothesis

Adapted from Center for Quality of Management

2. Understanding Context

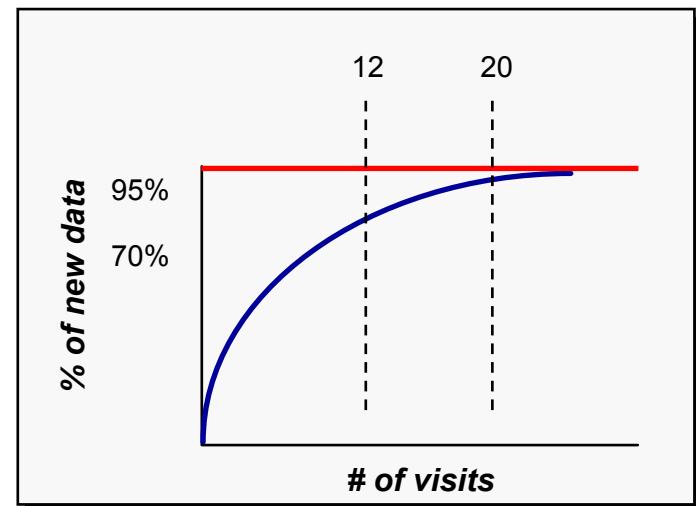


Means...

Swimming in the fishbowl—
viewing products and services from the
vantage point of your customers

- ◆ Understanding customer problems firsthand

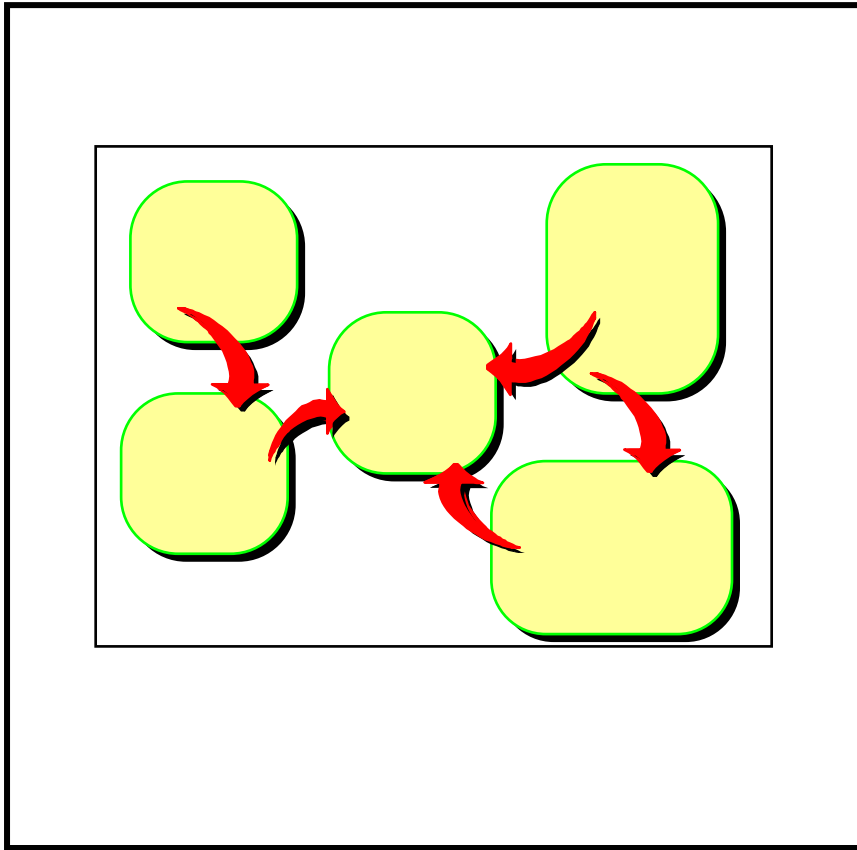
Collecting real experiences, capturing
anecdotes, and stories



Griffin & Hauser

Adapted from Center for Quality of Management

3. Processing Language Data



Collecting real experiences, capturing anecdotes and stories from customers translates to “language data”

- ◆ The nature of language (qualitative data) is that it is often open to multiple meanings, multiple interpretations
- ◆ We tend to bring our own experiences to language we take in

Therefore, the tools used in our processes enable a group of individuals to work with language in a way that facilitates coming to common understanding of the language data

4. Trusting Your Intuition

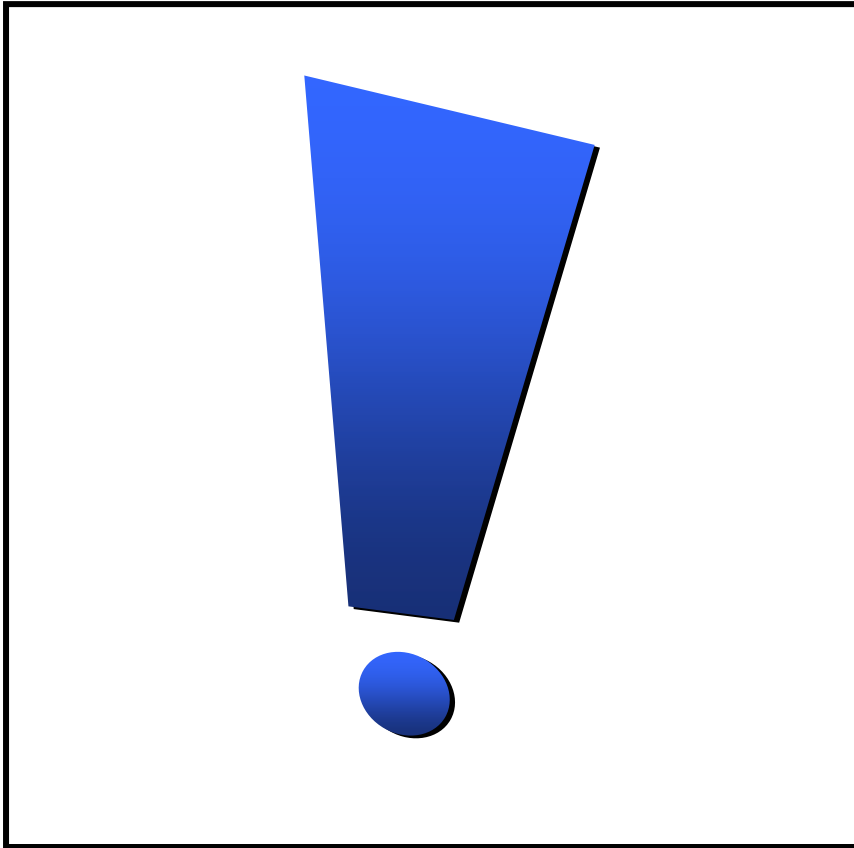


Means...

Focusing the excellent thinking and intuition of your internal experts; their intuition is born of their years of experience in their domain of expertise, your industry, and your company

**“It is by logic that we prove,
but it is by intuition
that we discover.”
– Poincaré**

5. Recognizing “By Chance” Opportunity

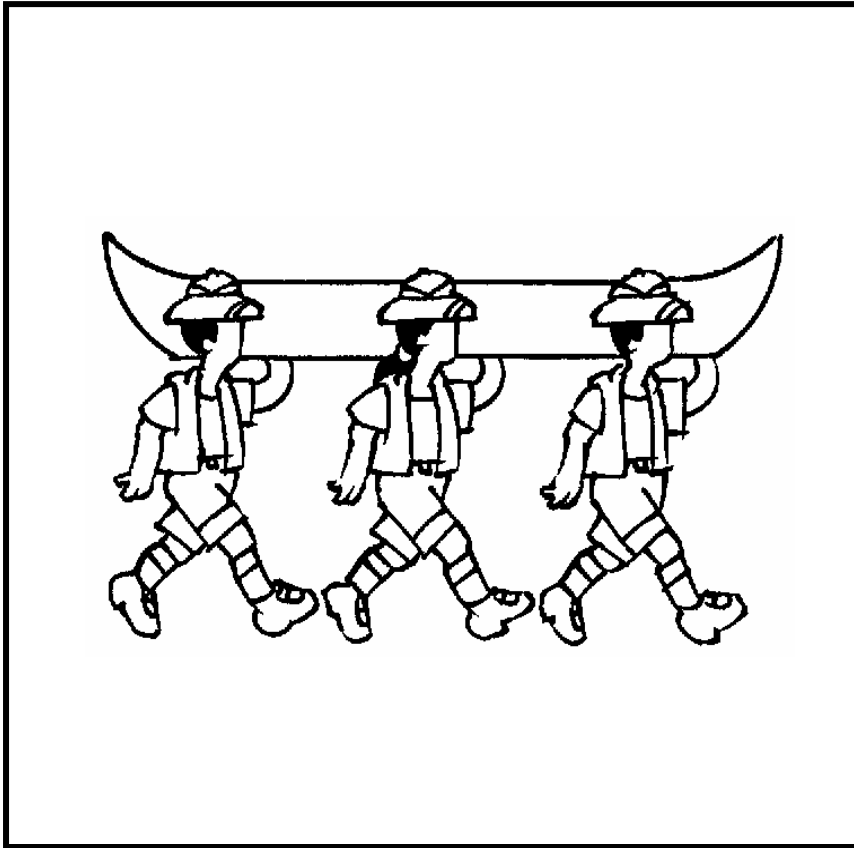


Means...

Clear innovation chartering enables team members to notice relevant input/ideas/solutions as if “by chance”

**“...chance favors only those minds which are prepared.”
– Pasteur**

6. Partnership Fostering Ownership



Means...

Each team member's tacit knowledge becomes more explicit and shared

Each team member experiences the customer's world firsthand

Team members create insight with others who share responsibility

Deciding together what the solutions should be usually means more commitment for implementation



“Redesigning Product Development” Video

“Redesigning Product Development*” (L.L. Bean using the process)

** Reference: Harvard Business School Publications (800) 988-0886*

Workshop

- ◆ ***Introduction***

- ◆ *Exercise 1: Planning a VoC Project*

- ◆ *Exercise 2: Conducting Customer Interviews*

- ◆ *Exercise 3: Developing Customer Requirements*

Case — Developing a next-gen “carrier” for the business traveler

You are the hand-picked lead for helping Carry Co develop a next-generation product line for business travelers

- ◆ Carry Co makes a line of traditional suitcases and travel bags
- ◆ Carry Co has a standard and well received line of laptop bags and carry-on luggage models
- ◆ If the other big names in luggage have it, we have it

You have a cadre of excellent industrial designers, materials experts, manufacturing experts, market researchers, and the like

- ◆ You’ve recently had brainstorming sessions, but all the products end up looking like variations of “me-too” luggage and bags
- ◆ You’ve thought about it, and realized that you are just solving the problems business travelers you already know about, but you haven’t really hit on a problem that has never been solved or even considered before...

If you can get some really interesting “new” customer problems in front of your team, you know they will execute...

...and your star will continue to rise

The focus of the workshop will be on three critical VoC elements

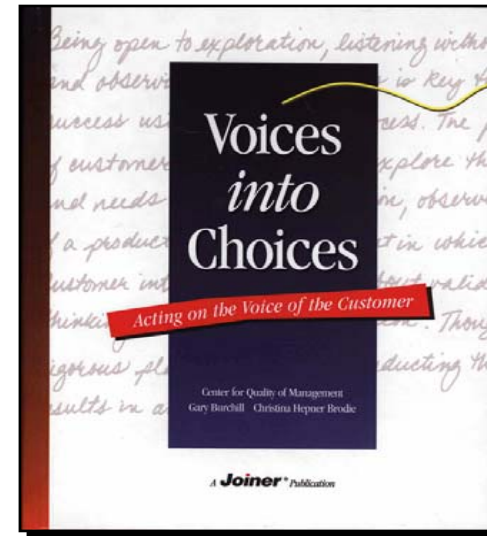
Situation \ Steps	Plan	Visit	Understand Context	Translate Voices	Customer Requirements	Generate Metrics	Survey	Create Solutions	Screen	Test Concept	Select	Outcome
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Narrow Technical Solution or Routine	✓	✓		✓	✓	✓		✓		✓	✓	On-Target Technical Solution
Continuous Improvement of Existing	✓	Input from sales & service		✓				✓			✓	Customer Inspired Improvements

Workshop

- ◆ *Introduction*
- ◆ ***Exercise 1: Planning a VoC Project***
- ◆ *Exercise 2: Conducting Customer Interviews*
- ◆ *Exercise 3: Developing Customer Requirements*

A Project Plan includes

- ◆ Project Participants
- ◆ **Project Purpose**
- ◆ **Objectives for Learning**
- ◆ Company Fit
- ◆ Remaining Questions (for Sponsors)
- ◆ Sources of Existing Data
- ◆ **Customer Profile Matrix**
- ◆ Interview Guide(s)
- ◆ (Observation Guide)
- ◆ (Project Schedule)
- ◆ List of Materials to take on Visits



Source: The Planning Approaches come from *Voices into Choices: Acting on the Voice of the Customer*, Gary Burchill and Christina Hepner Brodie, Joiner, 1997

Example: Project purpose

To explore the experiences of business travelers relative to what they carry with them on a daily basis in order to design, develop and deliver optimal solutions profitably for the next generation of personal carriers for the business traveler

Example: Objectives for learning

To learn from their stories of past and current experiences

To understand what they typically carry

To understand how they typically transport what they need

To understand their problems and challenges with:

- ◆ What they carry
- ◆ How they carry it
- ◆ Where they carry
- ◆ Where they store
- ◆ Specific challenges relating to travel

To better understand how they acquire business accessories

To explore their individual purchasing experience:

- ◆ To learn about where and how they shop
- ◆ To explore their criteria for decision making regarding carrier selection

To explore their vision of the ideal carrier

Which customers to visit?

Consider both traditional and non-traditional segments...

Examples: Traditional

- ◆ Type of industry or sector
- ◆ Large volume vs. medium or low volume users or purchasers
- ◆ Application of product
- ◆ Location in customer chain: Distributor, purchaser, user
- ◆ Geographic location: Region of the country; continent; urban vs. suburban
- ◆ Culture differences
- ◆ Gender
- ◆ Demographics

Examples: Non-Traditional

- ◆ Lead users or thinkers
- ◆ Happy customers
- ◆ Demanding customers
- ◆ Dissatisfied customers
- ◆ Customers you had, but lost
- ◆ Customers you never had
- ◆ Leading researchers, both academic and corporate

After considering the potential segments, organize them in a Customer Profile Matrix

Non-Traditional Segments

Traditional Segments

Other dimensions to consider:

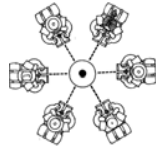
The matrix frames the discussion:
Which diverse set of 20 interviews will
deliver the 360° view?

Workshop

- ◆ *Introduction*
- ◆ *Exercise 1: Planning a VoC Project*
- ◆ ***Exercise 2: Conducting Customer Interviews***
- ◆ *Exercise 3: Developing Customer Requirements*

Interview preparation — Key guidelines

Interview objective is to immerse yourself into your customer's environment...



... and to observe, observe, observe

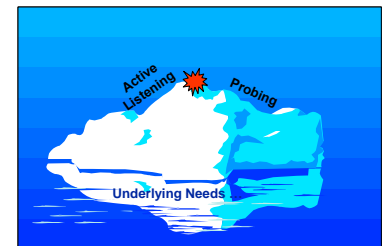
Start with broad topics and then narrow to your area of interest — use a “stepping stones” approach



- ◆ Although you may want some general information about the interviewee's business, do not dwell on it; quickly bring the discussion to your main area of interest
- ◆ Allot certain amount of time to each section of the guide and stay on track

Probe and actively listen to get to the true underlying needs

- ◆ Prepare to ask open-ended questions using phrases such as: “Describe...”, “How...”, “What do you mean by...”
- ◆ Avoid questions that
 - Elicit a single-word answer — yes/no questions
 - Seem to anticipate the “right” answer” – “don't you agree...”



Do not consider the interview guide to be a “script”; it is only a guide

Sample Interview Guide

When you envision yourself traveling for business, what images come to mind relative to what you carry? (or tell me a story about your worst experience relative to using your current briefcase)

Describe the ways you use your briefcase in your daily routine

What benefits do you experience relative to what you currently use?

What are the problems or disappointments you have experienced?

If you were to think about trying a new carrier, what would your considerations be? (or describe your process when you acquired your current ...)

Pretending that you knew nothing about current briefcase or computer case design, and that there were no design constraints, describe the perfect solution for your routine needs ...

- ◆ Why would that be such a good solution?

Workshop

- ◆ *Introduction*
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- ◆ *Exercise 2: Conducting Customer Interviews*
- ◆ ***Exercise 3: Developing Customer Requirements***

We distinguish terminology related to requirements

Customer Voice: A direct quote from the verbatim notes of a customer interview; it might be a word, a sentence fragment, a sentence, or a passage. The chosen voice contains the seed of a customer requirement



Customer Requirement: A sentence that describes the need/issue/problem that needs to be solved from the customer's vantage point

Product Requirement: A sentence that describes the functionality of the product that will solve the customer's problem

Product Specification: The specific technical solution(s) and performance targets for a given product requirement

Key themes and supporting voices — Our example

	I like to put my keys and sunglasses
	in two outside pockets

	Sometimes I carry my laptop, and
	sometimes I need to carry
	awkwardly shaped samples

	It has to be small

	Not expensive, but tasteful

Customer Requirement Guidelines

Requirement Statement Criteria

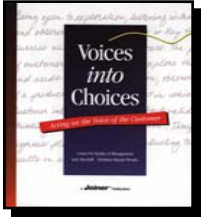
- 1. Identify a functional need, not a solution**
 - ◆ A functional need tells *what* the solution should do; a solution tells *how* it should be accomplished
- 2. Be as specific as possible**
 - ◆ Abstract or vague terms allow for multiple interpretations
- 3. Use multi-valued language**
 - ◆ Allows for a requirement to be measured along a scale
- 4. Phrase the statement in positive language**
 - ◆ The word "*not*" indicates a weakness-oriented requirements statement



Additional Resources

Media Resources

Books:



Voices into Choices: Acting on the Voice of the Customer
Gary Burchill and **Christina Hepner Brodie** (1997 Joiner)



Setting the PACE[®] in Product Development: A Guide to Product And Cycle-time Excellence
Michael E. McGrath, Editor (1996 Butterworth-Heinemann)

Focus:

Cross Functional Project Excellence, Pipeline Management and Technology Management



Product Strategy for High-Technology Companies, 2nd edition
Michael E. McGrath (2000: McGraw-Hill)

Focus:

Core Strategic Vision, Planning and Managing Platforms, Portfolio Management and Product Line Planning

Video:

"Redesigning Product Development"

Harvard Business School Publications (800) 988-0886

Articles:

"Invigorating Strategy with Voices of the Customer", by Christina Hepner Brodie, *Insight*, Summer 2000

"Beyond Product Development: Creating a Process That Drives Innovation", by Thomas J. Lenk, Aritomo Shinozaki, and Christina Hepner Brodie, *Medical Device & Diagnostic Industry*, November 2000