

1

BA 301

BA 301 Winter 2011
Chapter 2 - Sense

Research & Analysis of Business Problems

Summer 2010 Group Topics

2

- PSU Administration - Problem Topics (001)
 - ▣ Continuing cuts in state funding (11,4)
 - ▣ Lower than desired ongoing alumni support (9,10)
 - ▣ Dissatisfied students/morale/complaints (8,5)
 - ▣ Low national brand recognition (6,1,2)
 - ▣ Difficulties in attracting high quality tenure track faculty (3,7)

BA 301 Winter 2011 Chapter 2 - Sense

Summer 2010 Group Topics

3

- PSU Administration - Problem Topics (002)
 - ▣ Continuing cuts in state funding (8,6)
 - ▣ Lower than desired ongoing alumni support (10,1)
 - ▣ Dissatisfied students/morale/complaints (5,2)
 - ▣ Low national brand recognition (3,4)
 - ▣ Difficulties in attracting high quality tenure track faculty (9,7)

BA 301 Winter 2011 Chapter 2 - Sense

PSU Problem Solving Process

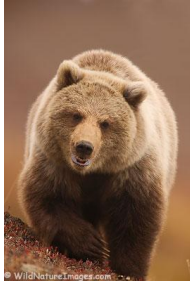
4

```

graph TD
  A[1. Position] --> B[2. Sense]
  B --> C[3. Uncover]
  C --> D[4. Solve]
  D --> E[5. Build]
  E --> F[6. Achieve]
  
```

BA 301 Winter 2011 Chapter 2 - Sense

The "Real" Problem

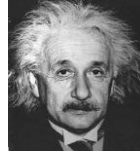


The Professor says, "You can't outrun that bear, even in running shoes!"

The student replies, "I don't need to outrun the bear; I only need to outrun you!"

BA301 Winter 2011 Chapter 2 - Sense

Problem Definition

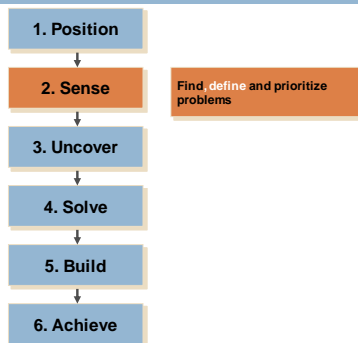


"The mere formulation of a problem is far more often essential than its solution, which may be merely a matter of mathematical or experimental skill. To raise new questions, new possibilities, to regard old problems from a new angle requires creative imagination and marks real advances in science."

- Albert Einstein

BA 301 Winter 2011 Chapter 2 - Sense

PSU Problem Solving Process



What Is The Problem?

- Junior is getting poor grades in school
 - DAD: "He just doesn't apply himself."
 - MOM: "I know. He really isn't interested. His mind wanders."
 - DAD: "I'm tired of harping about it all the time."
 - MOM: "Me, too. It doesn't seem to have any effect."
 - DAD: "Maybe he needs tutoring in how to study."
 - MOM: "Lord knows it wouldn't hurt. He has terrible study habits."
 - DAD: "I'll call the school tomorrow and arrange something."
 - MOM: "Good. I'm sure it will help him."
- How do they define the problem?
 - Poor grades caused by Junior's lack of interest and a wandering mind.
 - These may be symptoms of a deeper problem.
 - What are possible "deeper" problems?

BA301 Winter 2011 Chapter 2 - Sense

Problems Versus Symptoms?

9

- What is the definition of “problem”?
 - A gap between the desired and the actual situation.
 - In business - declining profits, high failure rates, employee attrition.
- What is the definition of “symptom”?
 - An indicator or warning sign.
 - In engineering, it is an undesirable effect occurring in a system.
 - In problem solving - trace the symptom to it's cause, through the cause's cause – until you get to the root cause.

BA301 Winter 2011 Chapter 2 - Sense

What Is The Problem?

10

- Hospital is getting complaints about the food.
 - Problem: Poorly managed and ineffective kitchen?
 - Solution: Outsource food service.
- Ask some questions first:
 - Is the problem with all the food?
 - No, just breakfast.
 - What's wrong with breakfast?
 - It arrives cold.
 - All servings in each breakfast?
 - No, just the eggs.
- Solution:
 - Put procedures in place to ensure warm eggs!
- Result – no more complaints.

BA 301 Winter 2011 Chapter 2 - Sense

Improving Problem Definition

11

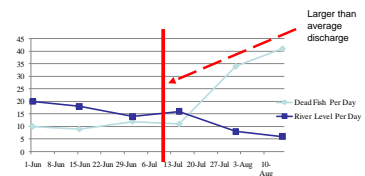
- 1) Collect and analyze information and data.
- 2) Explore the origins of the problem.
- 3) Use the Present State/Desired State technique.
- 4) Try stating and restating the problem.

BA301 Winter 2011 Chapter 2 - Sense

1.) Collect And Analyze

12

- Learn as much as you can about the problem.
 - ✓ Write down everything you can think of.
 - ✓ Determine what is missing and what is extraneous.
 - ✓ Use sketches, drawings, and graphs – make the data talk!



BA 301 Winter 2011 Chapter 2 - Sense

1.) Collect And Analyze

13

- Talk with people familiar with the problem.
 - ✓ Look past the obvious.
 - ✓ Challenge the basic premise.
 - ✓ Dumb questions can produce profound results.
 - ✓ Ask for clarification when you don't understand.



BA 301 Winter 2011 Chapter 2 - Sense

1.) Collect And Analyze

14

- View the problem first-hand
 - ✓ Don't rely solely on interpretations.
 - ✓ "You can see a lot just by looking." – Yogi Berra.



BA 301 Winter 2011 Chapter 2 - Sense

2.) Explore The Problem Origins

15

- When given a problem by someone else...
 - ✓ Where did it originate?
 - ✓ Who posed it in the first place?
 - ✓ Can that person explain the reasoning?
 - ✓ Are the reasoning and assumptions valid?
 - ✓ Has that person considered different viewpoints?
 - ✓ Has information been collected about the problem?



BA 301 Winter 2011 Chapter 2 - Sense

3.) Present State/Desired State

16

- Break your problem statement into two parts:
 - Part 1 – description of the ideal scenario (goals, desired state, or values), from a stakeholder perspective.
 - Part 2 – description of the present state.
- Make sure that both parts are framed consistently:
 - Reworking is a technique that increases the probability of getting to the true problem statement.

BA 301 Winter 2011 Chapter 2 - Sense

3.) Present State/Desired State

17

• Situation:

- During WWII, many bombers were shot down over Germany. Many planes that made it back were riddled with bullet holes in the same places.
- Instructions to solve the perceived problem – reinforce these areas with thicker armor plating.

Present State

- Many bullets penetrating aircraft
- Many bullets penetrating aircraft
- Many bullets penetrating aircraft in critical & non critical areas

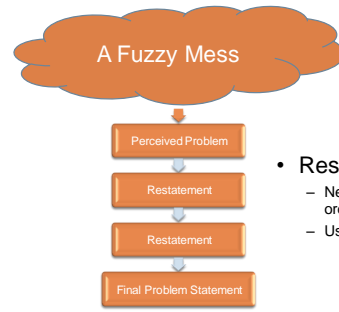
Desired State

- Fewer planes being shot down
- Fewer bullet holes
- Fewer bullets penetrating critical areas

BA 301 Winter 2011 Chapter 2 - Sense

4.) Statement & Restatement

18



• Restating a problem:

- New ideas, not just a new word order
- Use restatement TRIGGERS.

BA 301 Winter 2011 Chapter 2 - Sense

4.) Statement & Restatement

19

- Original Problem Statement: Cereal is not getting to market fast enough to maintain freshness.
- Trigger #1 – *vary the stress pattern*:
 - Cereal is not getting to market fast enough to maintain freshness.
 - (Do other products we have get there faster?)
 - Cereal is not **getting** to market fast enough to maintain freshness.
 - (Can we make the distance or time shorter?)
 - Cereal is not getting to **market** fast enough to maintain freshness.
 - (Can we distribute from a centralized location?)
 - Cereal is not getting to market fast enough to maintain **freshness**.
 - (How can we keep cereal fresher, longer?)

BA 301 Winter 2011 Chapter 2 - Sense

4.) Statement & Restatement

20

- Original Problem Statement: Cereal is not getting to market fast enough to maintain freshness.
- Trigger #2 – *substitute for an explicit term*:
 - Breakfast food that comes in a box is not getting to the place where it is sold fast enough to **keep it from getting stale**.
 - (this makes us think about the box and staleness...what changes might we make to the box?)



BA 301 Winter 2011 Chapter 2 - Sense

4.) Statement & Restatement

21

- Original Problem Statement: Cereal is not getting to market fast enough to maintain freshness.
- Trigger #3 – *make the opposite statement*:
 - How can we find a way to get the cereal to market **so slowly** that it will **never** be fresh?
 - (Makes us think about how long we have to maintain freshness and what controls it.)

BA 301 Winter 2011 Chapter 2 - Sense

4.) Statement & Restatement

22

- Original Problem Statement: Cereal is not getting to market fast enough to maintain freshness.
- Trigger #4 – *use an equation or a picture*:
 - Freshness is inversely proportional to the time since the cereal was baked, i.e.,

$$(\text{Freshness}) = k/(\text{Time Since Baked})$$
 - What does k, the proportionality constant, depend on?
 - How can we change the value of k – storage conditions, packaging?
 - How can we shorten the time component – delivery time, time to sell?

BA 301 Winter 2011 Chapter 2 - Sense

Evaluate The Problem Definition

23

- ✓ Have all of the pieces been identified?
- ✓ Have all of the constraints been identified?
- ✓ What is missing from the problem definition?
- ✓ What is extraneous to the problem definition?
- ✓ Have you challenged the assumptions and information?
- ✓ Have you distinguished fact from opinion?



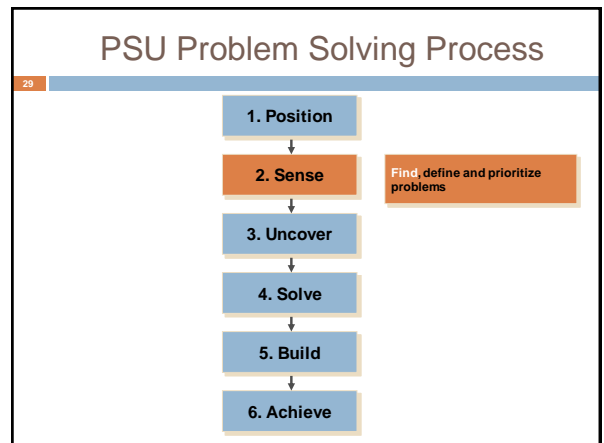
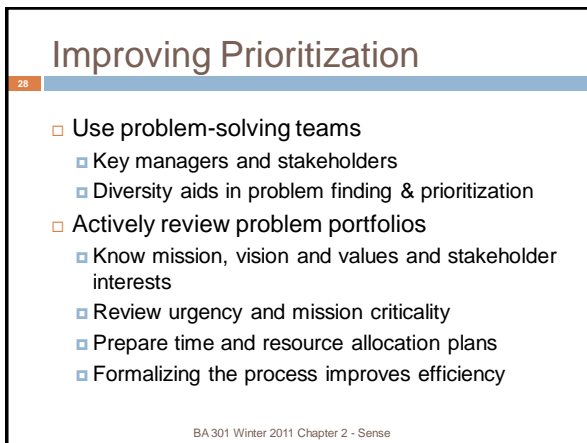
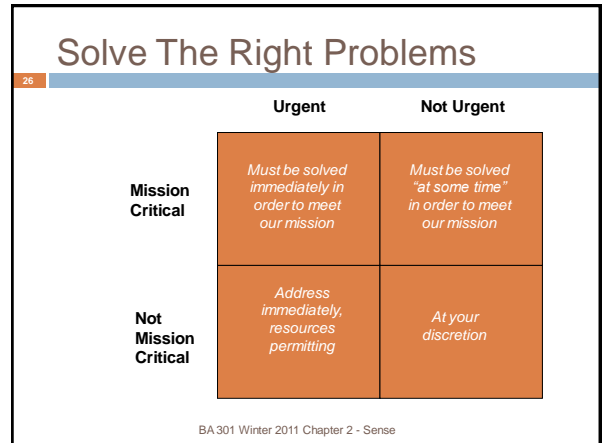
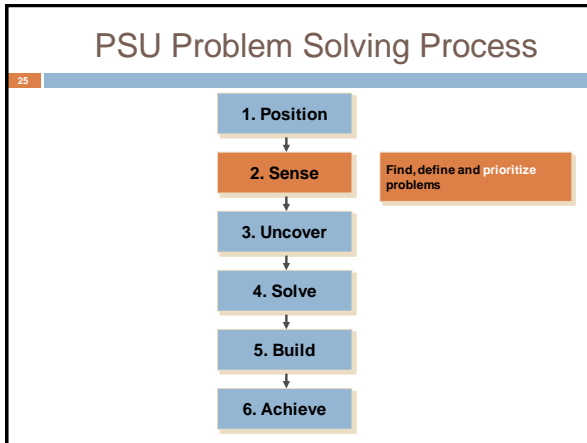
BA 301 Winter 2011 Chapter 2 - Sense

Sample Problem Statements

24

- Amazon
 - The most important issue facing Amazon is their pricing strategy relative to competing retailers.
- Sprint/Nextel
 - Sprint has an inability to retain their subscribers.
- Google
 - For Google – copyright issues are a problem.
- Conoco-Phillips
 - Conoco-Phillips has not achieved its desired 20-25 percent debt to capital ratio.

BA 301 Winter 2011 Chapter 2 - Sense



What Good Is Problem Finding?

31

- Potential problems can be opportunities if identified early.
 - ▣ New markets
 - ▣ New products
 - ▣ New channels
 - ▣ New people
- Bad things can happen to companies and groups that fail to plan and anticipate.

BA301 Winter 2011 Chapter 2 - Sense

Find The Problems Early

32

- Watch the stakeholders
 - ▣ Competitors
 - ▣ Union activities
 - ▣ Political organizations
 - ▣ External distribution channels

BA 301 Winter 2011 Chapter 2 - Sense

Find The Problems Early

33

- Do environmental scanning:
 - ▣ **Economic** – factors and trends related to income levels and production of goods and services
 - Sudden change in market viability
 - ▣ **Political/Legal** – factors and trends related to governmental activities and laws and regulations
 - New regulations affecting promotion or distribution
 - ▣ **Social** – factors and trends relating to groups of people
 - Changing demographics, changing culture
 - ▣ **Technological** – factors and trends relating to innovations in products or production
 - A major competitive technology breakthrough

BA301 Winter 2011 Chapter 2 - Sense

Find The Problems Early

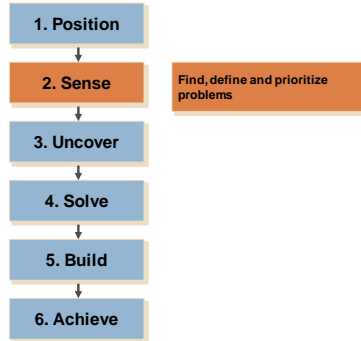
34

- Practice scenario planning
 - ▣ Helps the organization predict and plan for unforeseen circumstances
 - ▣ Planning can uncover assumptions that might impede problem-solving

BA 301 Winter 2011 Chapter 2 - Sense

PSU Problem Solving Process

35



Activity 2.1 – The Video Store

36

- Read the case scenario by yourself:
 - What is Max's mission? What is Max's vision? Who are the key stakeholders? Develop a preliminary analysis of Max's problems – it should be a long list!
- As a group – brainstorm and expand the list of challenges and problems faced by Max.
 - What types of things may have caused these problems?
 - Think about the difference between problems and symptoms.
- Do scenario planning as a group.
 - What's happening in the video industry – political/legal, economic, social and technological – that might affect Max and his business?
- Create a "problem/issue" table – categorizing the problems relative to mission-criticalness and urgency. Consider this question carefully – is it really mission-critical?

BA 301 Winter 2011 Chapter 2 - Sense

37

BA 301

BA 301 Winter 2011
Chapter 2 - Sense

Research & Analysis of Business Problems