

T.I.M 105 MOT 1: Homework 1

1. Structured Problem-Solving

Schedule:

Review the homework -(5 minutes)

Brainstorm-(5 minutes)

Work on structure problem solving (75 minutes)

Define the problem (5 minutes)

Plan the treatment of the problem(10 minutes)

Execute the plan(30 minutes)

Check your work(10 minutes)

Learn and generalize(20 minutes)

Product needs analysis (25 minutes)

Extra Credit (30 minutes)

Total time (140 minutes)

1) **Define** The problem

Create or improve the existing cell-phone in regards to customer needs

2) **Plan** the treatment of the problem,

What information is available for solving the problem?

There are customer feedback or surveys and everyday improvements or suggestions that can be made by customers as well as engineers. There is also the market place to that shows which cell-phone has a larger market share(assumption is that consumers like their product so they must be doing something right). There is also video reviews online regarding cell-phones that can be used to improve the existing design. There is also personal experience with the devices.

Source: (<https://www.forbes.com/sites/chrisversace/2013/08/21/what-do-consumers-want-in-a-new-smartphone/#17d2a6fd2ee8>)

Customer use cell-phones to communicate with friends, family, and others.

Other uses:

 Store pictures

 Keep track of appointments

 Calculator

 Send and receive email

 Video games

What assumptions need to be made to make the solution process manageable?

Assumptions:

Role: product manager for iPhones

Who is the audience? Product development team

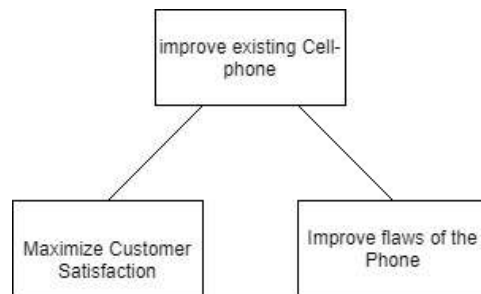
What cell phone should focus on ? Iphone

How does the cell-phone work?

Circuit board, antenna, LCD, OLED, keyboard, microphone, touchscreen, speaker, battery

(Source: howstuffworks.com)

What is the issue tree, if any, for the problem?



What analysis needs to be performed to resolve the issues defined in Step 1?

Test through experience- I own a iphone 6

Internet consumer research- What the iphone needs? (discussion.apple.com)

Consumer survey - survey friends with cell phones

3. Execute the plan:

NEEDS	Assessment	Improvement
Battery life	Battery life tends to die after a few hours of use	Enhance the battery life
Storage	Prices for storage is expensive	Lower the prince for storage
Build Quality	Phone tends to crack and bend and scratch	Steal body and crack resistant glass
Improve performance of older phones	Older phones are slow	Optimize older devices

Table: improvements for the existing phone

Many of the needs of the phone are hardware and software issues. With enhancing the battery life results in a higher MSRP. having a steel body and crack resistant glass adds cost and weight of the phone. The software optimization results in lessening of the battery life. Once main consumer issue is the price tag on the phone, lowering the price of the phone leads to quality getting worse which is counter productive to the consumer needs. As a consultant, I would take action to improve the quality of the phone and outsource to save capital to gain as much market share as possible. Apple already has a cult like following and pioneered the first phone to retail for 1,000 dollars. Furthering Apples legacy as visionary high quality product.

4.Check your work

Are my assumptions reasonable?

The results are reasonable in the sense that the price of the iphone and other phone devices are ever so increasing to be 1,000 per phone which is astronomically high. And the general consensus that apple is a producer of high quality products.

In terms of the things I know, do the results make sense? Yes companies are outsourcing as much as they can to save cost. And battery life and storage along with performance for older devices will always be a discussion for any company.

5. Learn and Generalize

What have I found out? What does the result mean?

The results indicate that there are not many ways to improve the iphone. Improving the iphone would not be cost effective but differentiation wouldn't necessarily hurt their market share.

How may the result be affected by my assumptions?

The results affect my assumptions because improvement would lead to a higher msrp and that would go against the general consensus that a higher price would be bad in the long run. Consumers generally buy products that are affordable and durable. In addition to if I was in a different role my suggestion for improving the iphone would be different. Ex if i was the ceo I would have a vision such as 99% screen phone then if a consumer who would want the price to be lowered.

Are the results good enough to act on, or must I refine the solution?

Although the results are not enough to act on, the small improvements such as software optimization would make customers believe in a durable product. With making the the phone more durable the price increases and potentially could be become unaffordable. I believe that an incremental improvement would be good enough to act on.

2. Product Needs Analysis

Cell-Phones	Ipods	Notebook Computers
Entertainment video games E-Mails Calculator Reminders Contact info Music Camera Communication text call Use the internet GPS maps mobile	Camera Music Customize music Radio Entertainment Video Games Facetime Communication call text Internet (WIFI) Mobile	MS products Communication Mobile Entertainment Video Games Programming Music Use the internet

3. Extra Credit

Scaling needs on a scale(1-10)

10 most use, 1 least use

Weighted decision matrix-A *weighted decision matrix* is a tool used to compare alternatives with respect to multiple criteria of different levels of importance.

Cell-Phones	Ipods	Notebook Computers
Entertainment video games 8	Camera 3	MS products 5
E-Mails 8	Music 10	Communication 6
Calculator 4	Customize music 9	Mobile 9
Reminders 4	Radio 3	Entertainment 10
Contact info 9	Entertainment 5	Programming 8
Music 8	Facetime 5	Music 10
Camera 5	Communication 5	Use the internet 10
Communication text call 9	Internet (WIFI) 8	
Use the internet 9	Mobile 9	
GPS maps 8		
Mobile 9		
Total:81	Total:52	Total:58

(source: Personal usage)

Conclusion: Cellphones are used more and more often than ipods or Notebooks computers. Thus Cellphones should be the ideal choice if I were to pick one product.