DESIGN PHASES

...the beginning of the process...

Mindmapping, Brainstorming & Storyboards

By Ertan Demirkan 2011



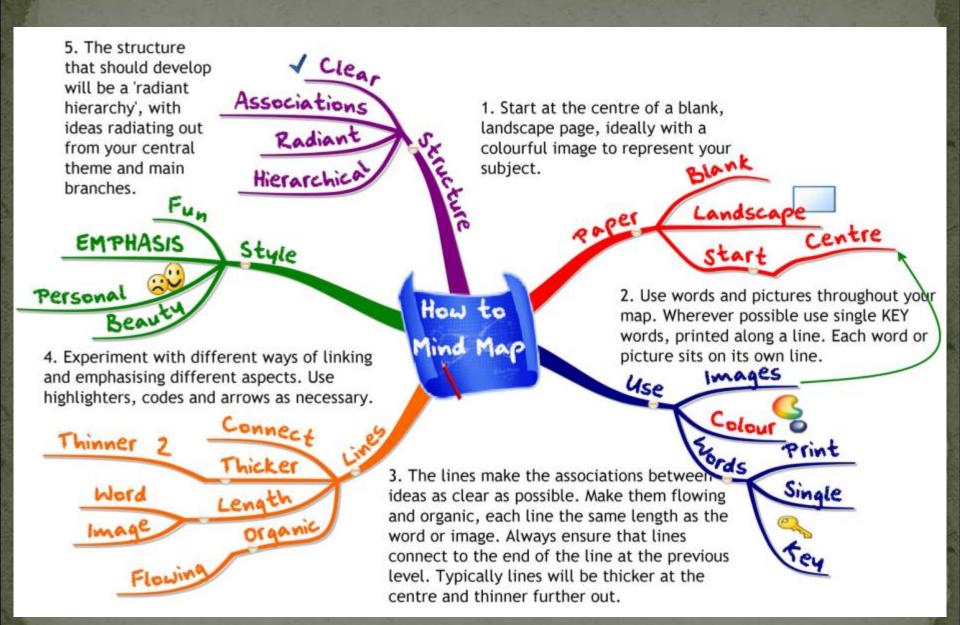
" QUICK, TED, GET THAT ONE DOWN ON PAPER BEFORE YOU FORGET IT."

- The Mind Map is an expression of Radiant Thinking and is therefore a natural function of the human mind.
- It is a powerful graphic technique which provides a universal key to unlocking the potential of the brain.
- The Mind Map can be applied to every aspect of life where improved learning and clearer thinking will enhance human performance.

- Mind maps are diagrams using words, symbols and drawings used as a way to record ideas and thoughts on paper.
- You can use mind maps to describe any situation, task or problem etc.
- In the design process mind maps provide a means for the designer to consider all the aspects of a design project or a particular design problem.

The Mind Map has four essential characteristics:

- The subject of attention is crystallized in a central image.
- The main themes of the subject radiate from the central image on branches.
- Branches hold a key image/word printed on the associated line details radiate out.
- The branches form a connected nodal structure.



The mind map process:

Step One: Prepare

• To map out your own thoughts, set aside 30 minutes, find a comfortable, well-lit place to work, and think of a topic that is important to you.

Step two: Generate

Center image

• Begin by drawing a picture or symbol that represents your topic in the center of the page. From this central image draw branching lines that radiate out.

Key words

 Use key words in your mapping. Learning to select just one key word will help you develop the habit of paring down your notes to the truly essential elements.
 Print words clearly so there is no confusion when you return to the map later.

Lines

 Print your key words on top of the lines so that the words will look and feel connected to the central image and other branches of the map.

Add emphasis

• When a word is important, record it so that it jumps out

Stick to the rules (especially at first)

• The one-word-per-line rule is one of the most challenging guidelines, and for good reason. You are forced to distil the information *before writing it down*.

Symbols

• As you generate ideas, you can use symbols either with keywords or instead of them. With practice it is often faster to draw an image than it is to write the word.and grabs your attention.

Associate freely

- Let your mind move to any associations related to your topic. Use several colors for branches, symbols, and key words, and add dimensions if possible.
- Remember that this map is for you. These drawing should help you remember your ideas, but they don't have to be masterpieces – just recognizable.

If you need more space, try these options:

- If you have room elsewhere on the map, continue there.
- Take an idea that you want to expand and make it the basis for a new map.
- Tape your map to a larger sheet of paper and continue.

Step three: Incubate

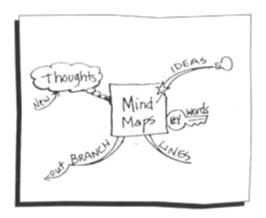
- Moving completely away from the task if only for a moment – and then returning to it helps integrate the information.
- After creating your initial map, post the map where you can see it, think about it, and add new ideas that occur to you over a period of several days.

Step four: Organize

- After you have taken a break you can return to the map with a fresh perspective.
- You can prioritize and highlight important points and group related ideas using symbols, arrows, and lassos.

Review

- The organizing phase offers another chance for you to review your map and ask yourself some revealing questions:
 - What were your objectives when you started? Are they still the same?
 - How does seeing the whole picture and all the parts influence your thinking?
 - What was surprising?
 - Do you notice any imbalances?
 - Do you need to fill in any areas?



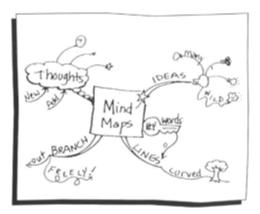
Generate

Draw a central image and add main key words and symbols.



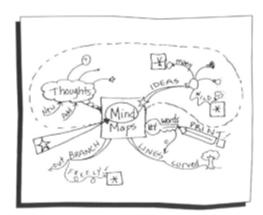
Incubate

Take a break from the task . . . then return with a fresh perspective.



Associate Freely!

Branch out with more ideas and connections. Don't judge your ideas during this phase.



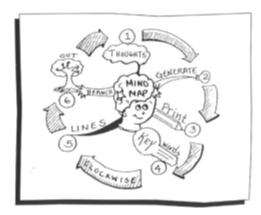
Organize

Prioritize and highlight important points. Group related ideas with symbols, arrows, and lassos.



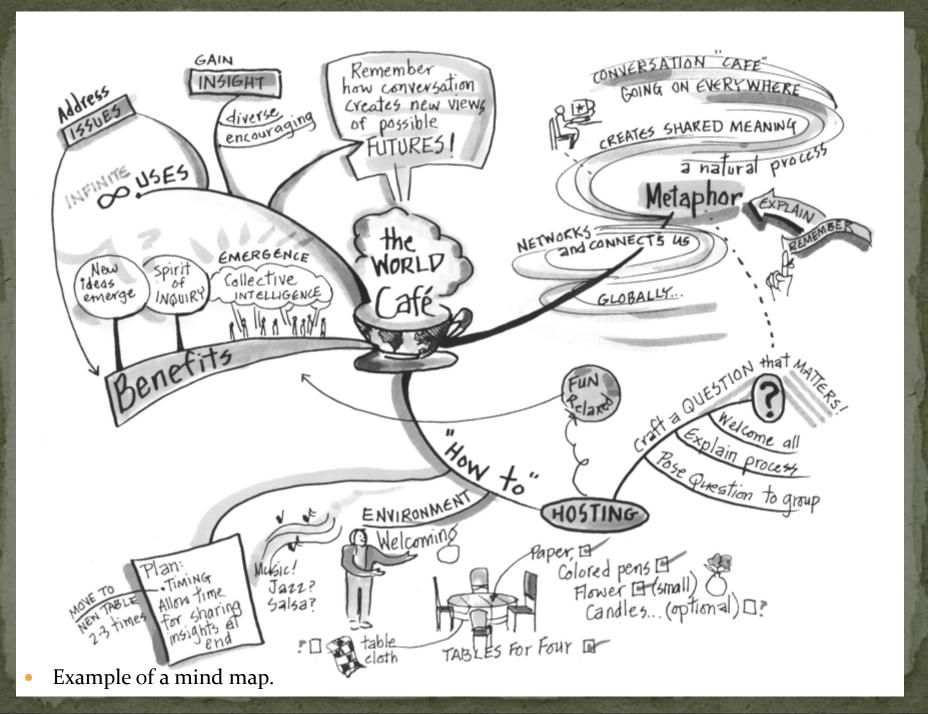
Review

Review the map as a whole, adding new ideas as they occur to you.



New Map!

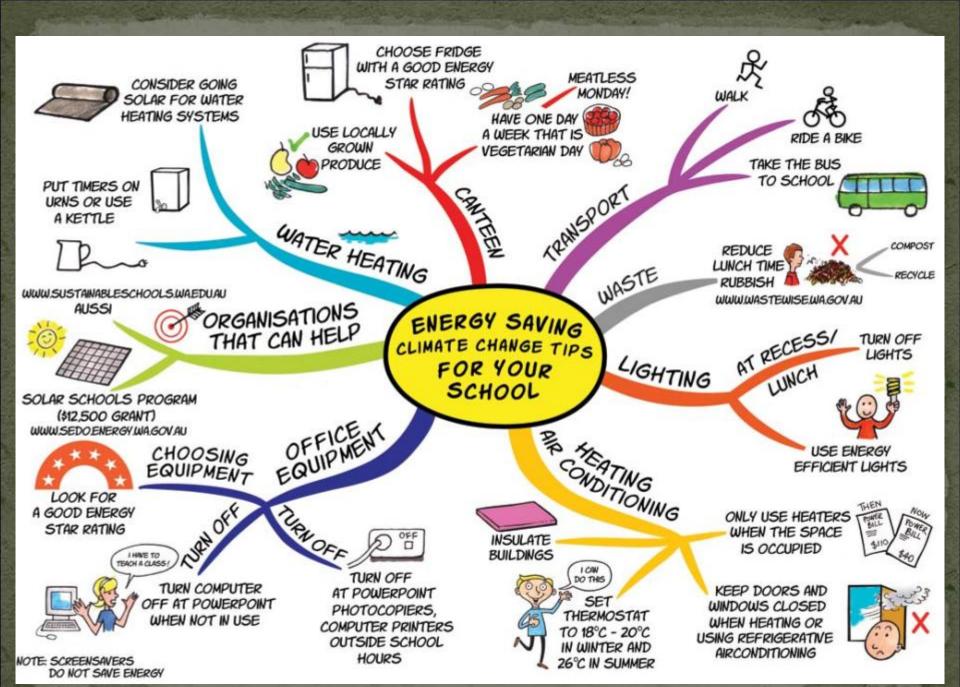
Redraw newly organized Mind Map in clockwise sequence.



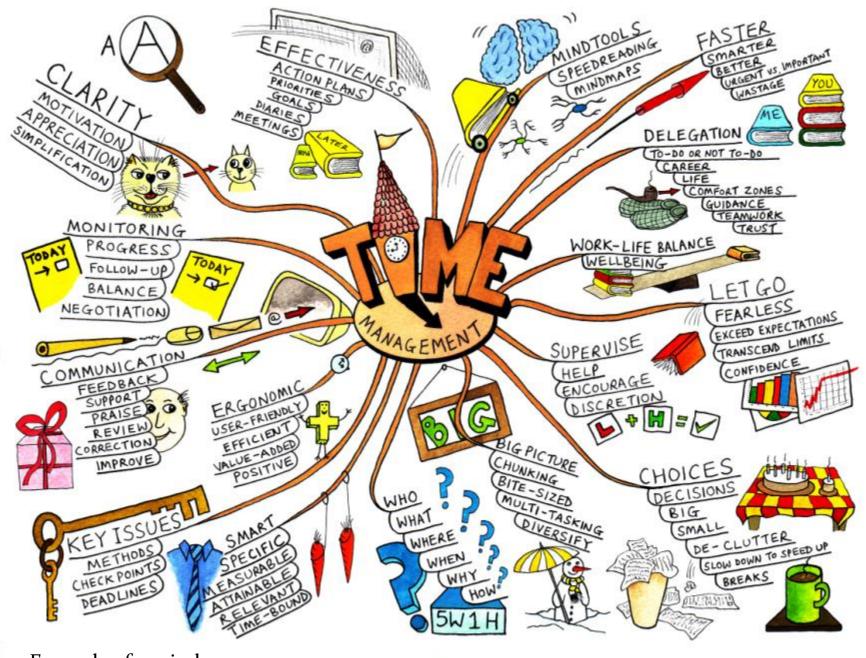
How To Read A Mind Map

- Start in the centre that is the FOCUS of the Mind Map.
- Words/Images closest to the central image show the MAIN THEMES of the Mind Map. This is the start of the radiant hierarchical structure.
- Select one main theme and read out from the centre along the branch. This provides greater levels of associated detail. Proceed around the Mind Map, either in the order of your choice or as suggested by the author.
- Notice links between the branches.

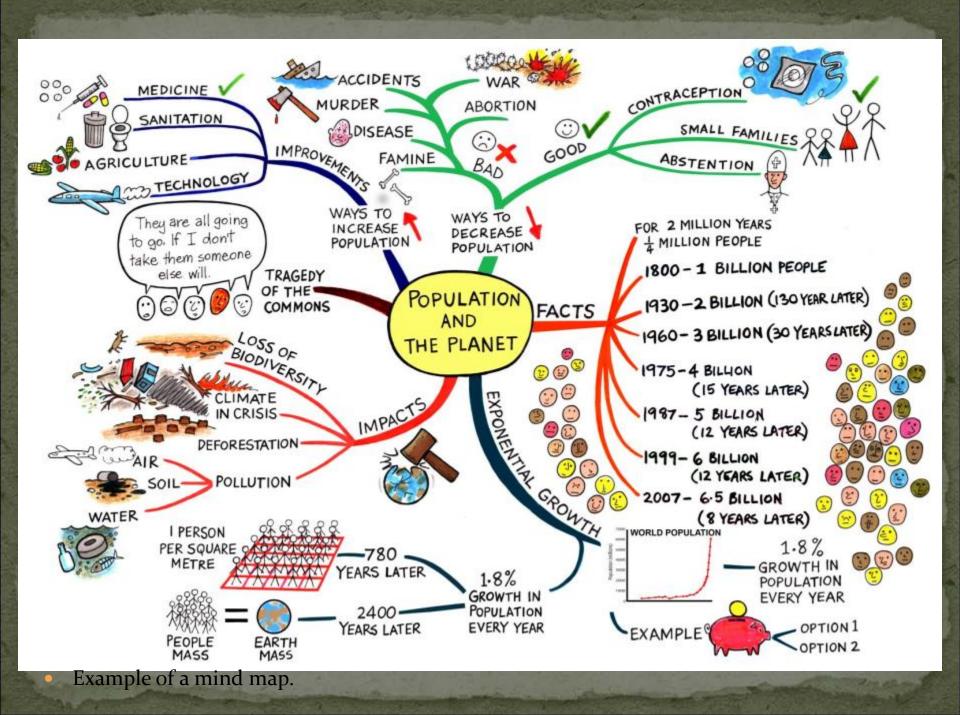


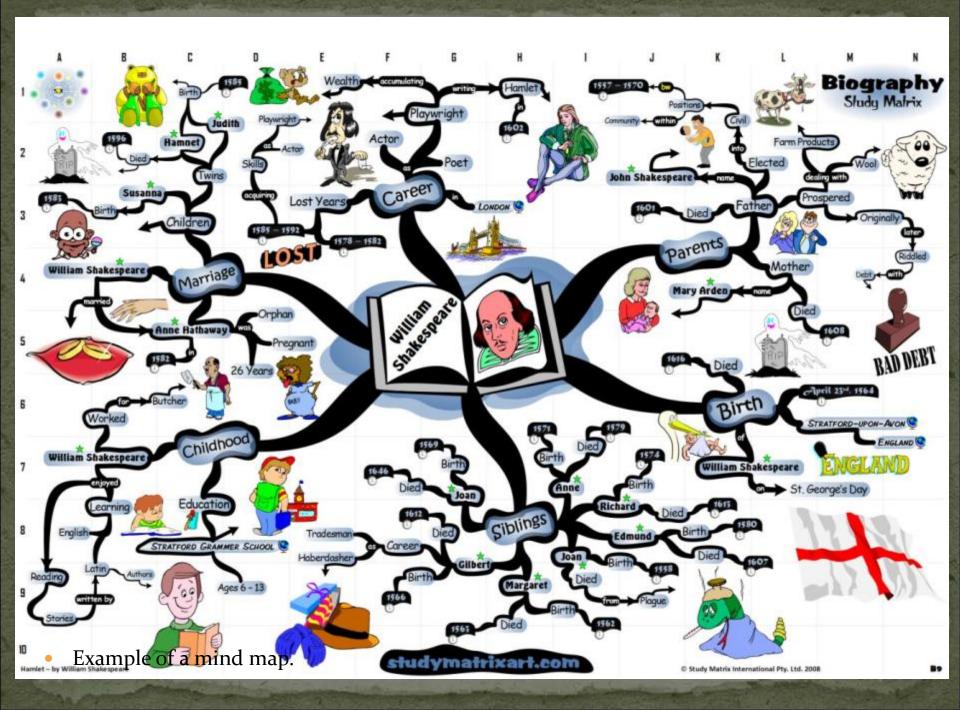


Example of a mind map.



Example of a mind map.





- **Brainstorming** is a group creativity technique by which a group tries to find a solution for a specific problem by gathering a list of ideas spontaneously contributed by its members.
- Organizations commonly employ teams of members to use creative techniques such as brainstorming in a variety of different project types and at different stages of the process to generate ideas and new solutions.

spirit.

• Rule 1 - Focus on quantity: Generate as many solutions as possible. Quantity counts! Don't give long explanations along with your ideas, just toss them out using key words only.

The more ideas you generate individually or collectively, the better the chance that you come up with an innovative solution.

• Rule 2 - Welcome unusual ideas: Wild ideas are welcome. This point cannot be overemphasized; the more odd, weird, impossible, or crazy ideas are generated, the better are the chances of coming up with a truly original solution in the end. The only limit here is to avoid words and ideas that could be hurtful or offensive to your team members because the stress that is caused will

inhibit creative thinking in addition to undermining the team

Rule 3 - Withhold criticism: Do not judge ideas; do not put down ideas or the people who express them (including yourself!) Humour, favourable comments, laughter, and applause are O.K. There is no such thing as a dumb idea.
 There is also no such thing as a right or wrong answer in brainstorming.

Brainstorming is a deferred-judgment activity—idea evaluation and critical judgment come later in the creative problem-solving process.

End: Combine and improve ideas: Good ideas may be combined to form a single better good idea, as suggested by the slogan "1+1=3". It is believed to stimulate the building of ideas by a process of association.

• As short sentences, during a Brainstorming session:

Do not allow criticism or debate.

- Be comfortable, happy and confident.
- Suspend judgement. Neither positive nor negative allowed.
- Great ideas can sound foolish at first.
- The recorder writes down every idea.
- Let your imagination soar.
- The wilder the idea the better.
- Wear funny hats. Assume different personalities.
- If nobody is laughing, it's not a good session.
- Shoot for quantity.
- More ideas are better.
- Pressure "not to waste time" is a form of censorship.
- Set goals for ridiculously high number of ideas.
- Be patient when there are silences.
- Mutate and combine ideas.
- Suggest variations on ideas.
- Have ideas visible at all times on large sheets of paper.

Voting with a threshold.

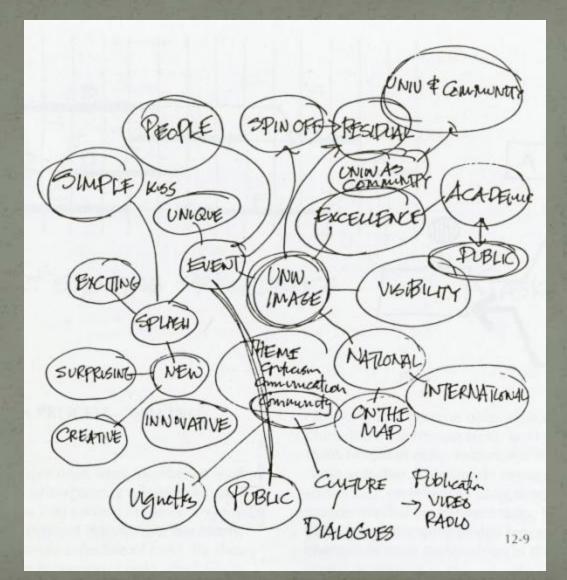
- All participants have a quota of votes to give to their favorite ideas.
- Can give more than one vote to an idea.
- Minimum number of votes for an idea to be considered.
- Have more rounds to narrow ideas again and maintain everyone's participation.

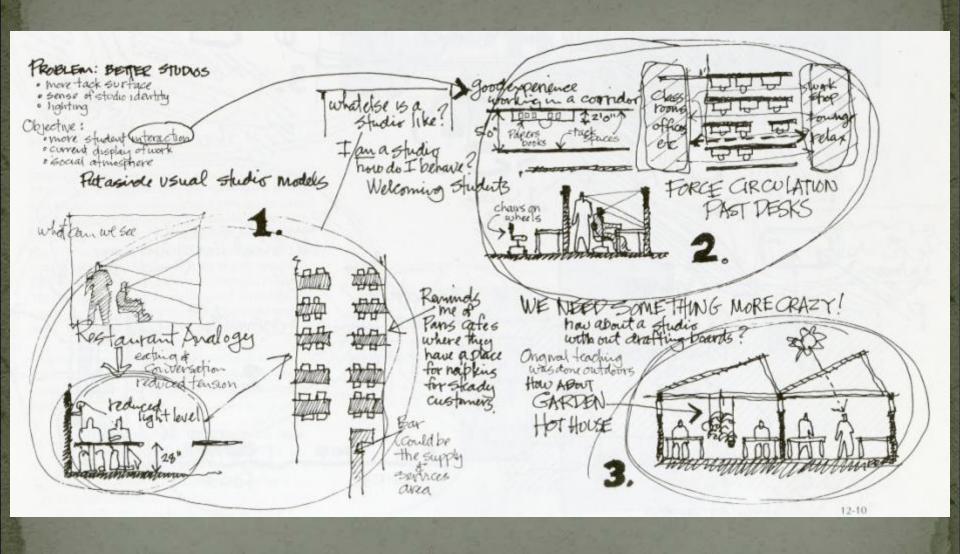
Voting with campaign speeches

- Voting, (e.g. 3 votes per person).
- Person who didn't vote for it should argue in favour of an idea.

- Narrowing
- Repeat to narrow the ideas down even more.
- Blending ideas into a single one
- After narrowing, try to combine ideas into a bigger one.
- All participants can own the new one.
- Applying criteria to reduce the ideas
- If a list of criteria exists, apply them to remove ideas that don't fit.







Notes from a brainstorming session

Uncharacteristically, I had accepted an invitation to a brainstorming session with the people from Together Creative. was nervous when I arrived, my sweaty palms made none the less slippery by having to tell everyone my name & all about how I got it.

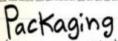


Pepsi meeting Thurs 630 eagetheric realine in wh



Afterwards, we were all given

a can of Pepsi. What is it? l asked, feighing a lack of Knowledge that fied in with a feetnote to the epic tragedy that was the made up story of how I'd come to be known as Terence.



OK, we're gonna start with packaging' Said the meeting leader 'Any ideas? Keep them positive now (this with a look straight in yours truly's direction).



To behonest I'd like it it there was an amplifier that made the Schillh really loud when you opened the can's said Larry, who was sitting to my left. I rolled my eyes at the to be honest bit.



How about if the can did a little celebration When you opened it?

> Warbled Jemima. Crazy but I liked it.



THE PACKS SHOULD BE TEMPERATURE SENSITIVE

exclaimed Ralph, doing one of those involuntary saliva sprays.

Crisp packets should have original instructions

Said Sally in what sounded like Helvetica. Et, Sally, we're talking about Papsi over here. Try and concentrate I chuckled. The meeting leader explained that Reguico also made crisps. I apologised to Sally in Times New Roman. but the irony was last on her.

Retail

was relieved when we moved Onto retail ideas (I was running out of space in my notepad).

The barcode reader should !!! make a schihhh noise

said Larry. 'Meh. Enough with the Schih' I said. I heard a door slam from behind the large Smoked glass micror that constituted the back Wall of the room



My debut idea was met with a silence such as I have never witnessed.

The remainder of this segment passed as a blur, with most ideas focusing on the theatre of buying.

Someone said Tropicina Should be said next to the oranges in a supremarket and everyone wooped and cheered.



Why don't they just accept they're second to Coke and play with it? They should doit so that there's just this one can an the shelf landing all sad &



New product ideas

Lacking confidence and increasingly parancia that everybody hated mes ter I remember little from the last quarter of an hour. I found these ideas scrawled in my pad in a hand I did not recognise.



pill that cleans your teeth







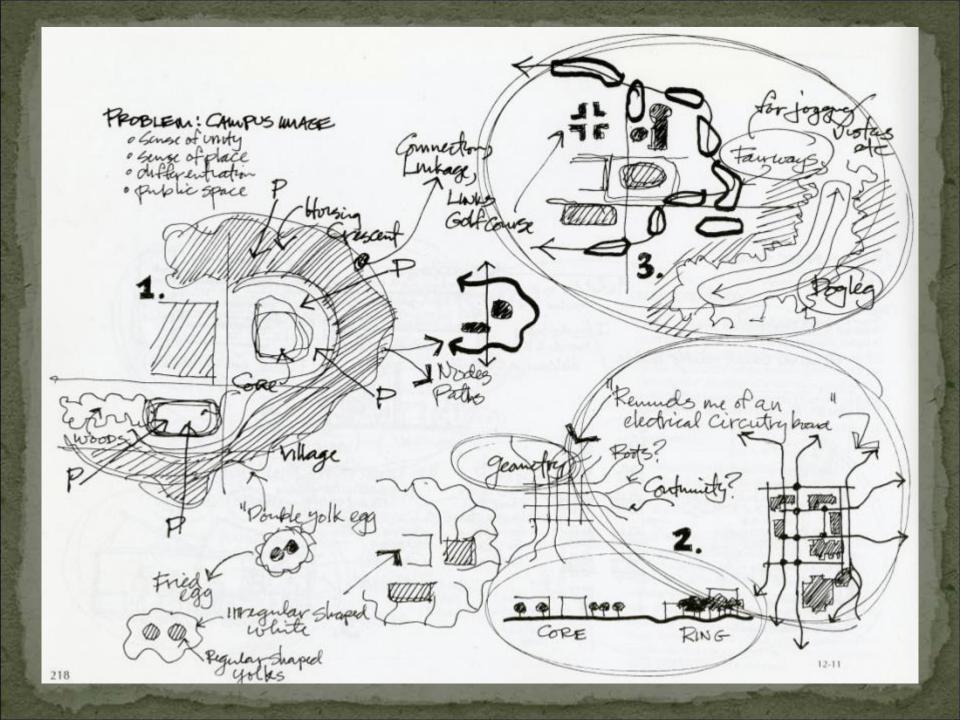


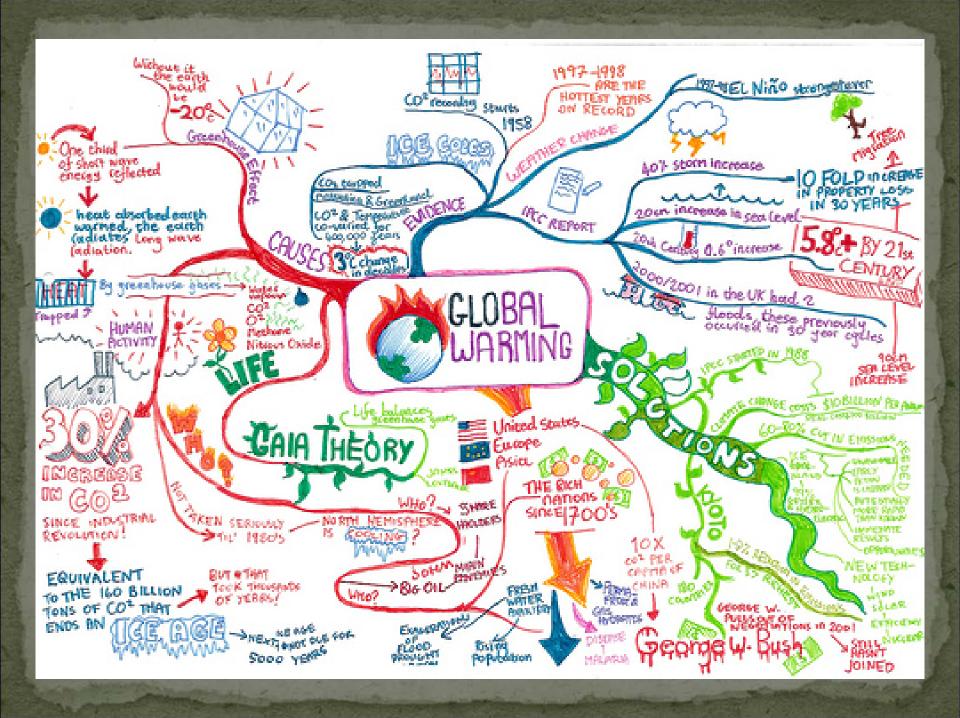
The following morning awoke in my bed. My wallet was missing and my hairlooked fuller & less frizzy. I went to my fridge and grabbed a Coke. How good the new simplified design looked in my shaking hand.

The last segment had been brand-Pepsi needs to be wittier Ralph was spitting. Behind him, Jemima was going on about Customers putting messages on bottles for other customers to read. It could all be done on the internet

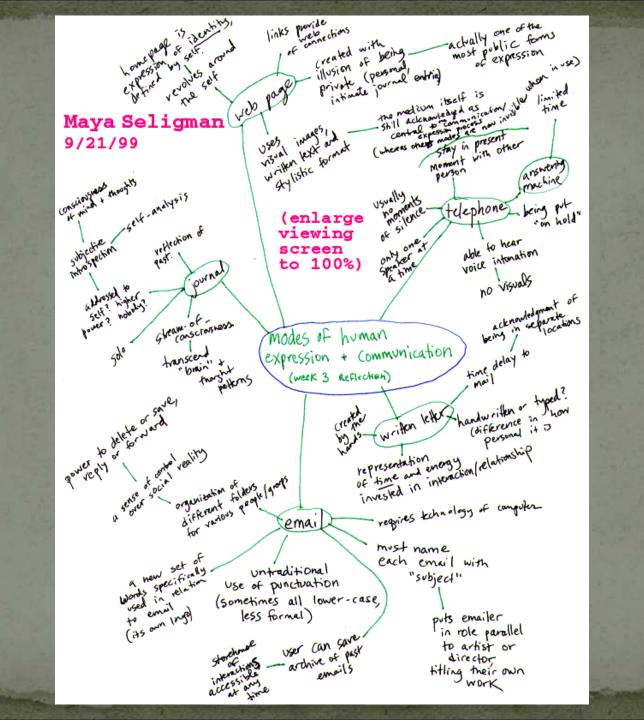
I was silent; my nose looked wonky and my ears too big as I sipped at the empty blue can on the other side of the smoked glass mirror.







up systems Business owner V. self-employed selling your m erketing agreements SWOT business planning Saving for your retirement Setting up your business brokers INSUrance using a stock broker investments directors' liabilities



Concept development

- A design concept is an idea for a design.
- For instance a design concept for a website might sounds like "It will be mostly dark muted colors with some orange highlights, and use the theme of circles that will be repeated throughout the site".
- It is usually accompanied with a design mockup, which is a representation of the idea that isn't fully finished or implemented the way the final product will be.

The objectives of concept design

design for product development

- specification for the following design phases
- · decision to go ahead with implementation

Concept design for innovation

- · spin-offs for immediate improvements
- · idea bank for future use
- · concept directions for technology development investments
- alliances with key partners
- patenting

Concept design for shared vision

- · specific shared meanings
- · vocabulary for communication

Concept design for competence

- · improving creative problem solving
- · improving cross-disciplinary -cooperation
- · learning about technology and market opportunities
- · improving team spirit

Concept design for expectation management

- · improving brand image
- · influencing consumers' acceptance level
- · influencing stakeholders' interest

Concept development

The activity layers of product concepting

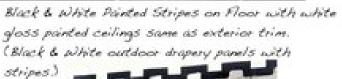
BACKGROUND Customer Business Technology RESEARCH intelligence knowledge CONCEPT Creation and expansion GENERATION of product idea strategic guidelines CONCEPT Selection criteria based Comparison of concepts **EVALUATION** on current strategy Concept selection Product development objective













Sunbrella Outdoor Fabric www.Sunbrellacom

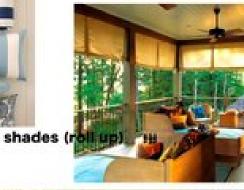


West Elm Solid White Outdoor Drapery Panels

Modern Furniture

www.westelm.com







Outdoor Floor Cushions from Arthur Lauer www.ArthurLauer.com



Floors

Concept Board Ferguson Residence Martha's Vineyard Backyard Porch Jill Seidner Interior Design







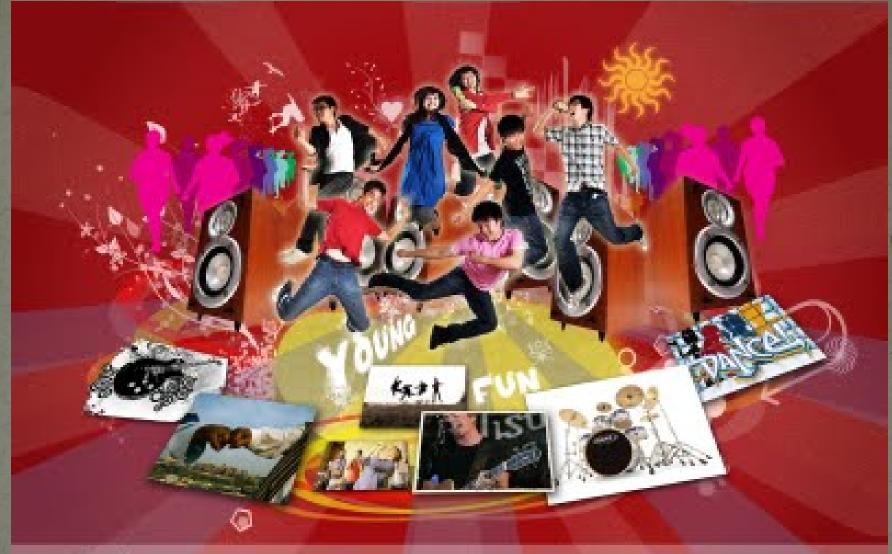


CONCEPT BOARD









Jacker

Concept Board



After wars, there are many war veterans who become homeless because of their psycologic problems.



Because of the big fires, people are losing their houses and become homeless.



Many people who leave their family become a homeless.



There are also many runner people, who couldnt find neither a house nor a job.



He is a homeless man living in New York City. But he has mental problems. He left his family, because he can not socialize with other people.



One day, some social groups wanted to find all the homeless people in the city. They provide people, places to live like sport halls and provide foods.



He is living his own world and he looks like a crazy. His behaviors are not normal.



But he has mental problems and he couldn't adapt hisself that kind of places, which there are many people. So he go back to his street life.



ANY TIME



DIFFERENTS CULTURE



ANY WEATHER



RESTRICT BAGGAGE



EXHAUSTED



RESPONSIBILITY



GLEAR CLOTHES



ANY PLACE



FARAWAY TO HOME



MILLIONS PASSENGER



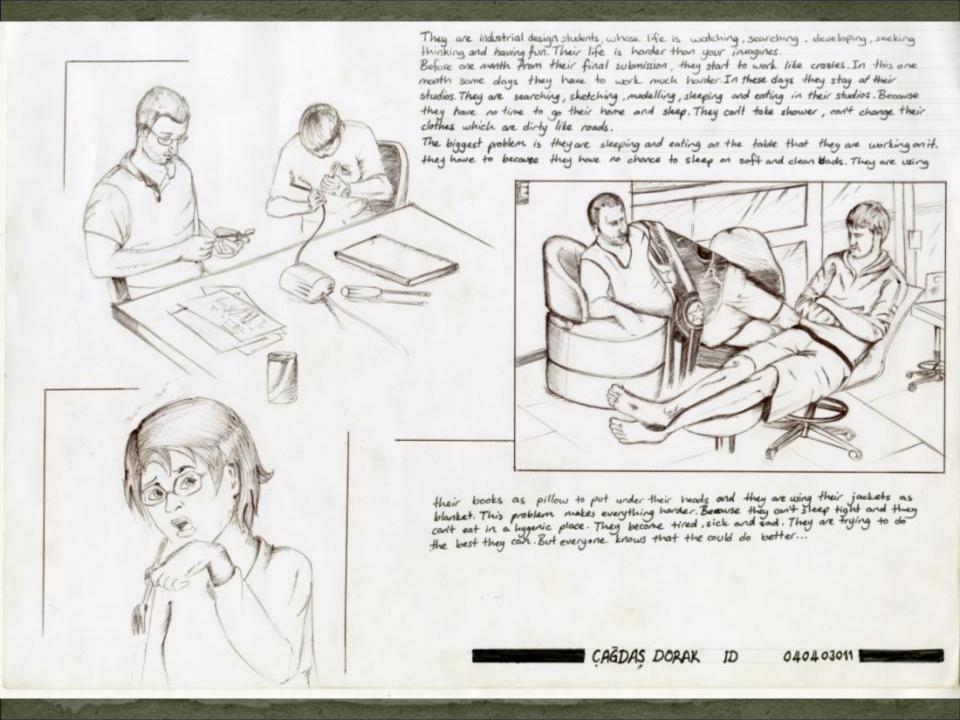
DIFFERENT FOODS



ACCIDENT

THEY HAVE TO FALL IN STEP ALL THESE CONDITIONS

CAN GÖKDUMAN





UZZIMO Ning JIM SPENDS MOST OF HIS TIME ON CONCERT TOURS
ACCROSS THE WORLD. HE AND HIS BAND USES A HIVER
TRUCK TO SUPPLY THEIR HEEDS WHEN THEY ARE TRA
VELLING. BECAUSE HIS LIFE IS FULL OF ACTION HE NEEDS
SOME TIME TO REST OR SYPPLY HIS NOEDS EASILY.

ALTHG TOPPLAK

...but not like this!

NOMAD - Basanti bir is adami -

ly ve bosorili bir şirkete sahip olan Murat bey şirketin Sond Enemberdeli kötű gidisatini dikkate almamisti Bir Enbah tetrar ise gitnek iain erkan kalèmisti yavasaa kalkip yüzünöyıkadı mutfağa yöridü konvelti yagmak igin buzdalabing yöneldi masanin yanından gear ken kumandayı farketti ve her sabahki gibi sabah haberleri isin Televisyani asti vo gardūji haberle dengasi basna yikildi Ilkede ekmanik kira vordi ve be derunden sirketide nasibini almıştı. Iflas eden sirketin son borglarini odeme & i gin bankadaki tim parasini ve bumi istine evini Satarak boronu kapata bilmisti. Artik hia bir geliri yaktur ve babasından kalan eski karavanı temisleyip oraya yerlesmistir. Rahat lüks ve ferah bir prtandan sonra kutu aibi bir alana belkide hayatının smuna kodar hapsolacaktir. Alisilagelmis ihtiyaqları içir karavarında yeribir disene intigra duymattadir.



...but not like this!

Nomad:

Disticaret isiyle uğrasan Mustafa'nın gok gözel bir yasanı varder bisel bir esi, sergin bir hayets ve sekiz yasında gizeller gizeli birkesı varder. Bøyke dizenti Ubir hayate varken bir telefanla hayate altistolur. Telefondaki eski bir dost Eneversite yellarında yaptığı bir yaz kaçamağı sonu İrlanda'lı bir kızdan gocuğu oktiğu nu sóyler. Klamn suanda 21 yazenda oldugunu uz suan çok pordurumda olduguru, polisterden kacturin başunda binsin derdi oldupunu yasan sekintise gektigini ögrenir Henen harebele geger Mustafa sider kizm bulur. Izmire getirip Altingu nustaki Marinaga bulunan yatana yerlestirir kusum belli bir sire saklanmase gerel. Bu sarundardan dolaye ailesine yallarlar søyleneye başlar. Kendine yer bir hobs bulor ve islerden selvles haftason lave Gerne de dalmara gittigini ailesire soyler. Burazanenla is tattlabilité de toplantisiques la la la lesire de hafterin 2-3 genene serpriz Erzeyla aparete bir hayata the adas.

A storyboard is a sketch of how to organize a story and a list of its contents.

A storyboard helps you:

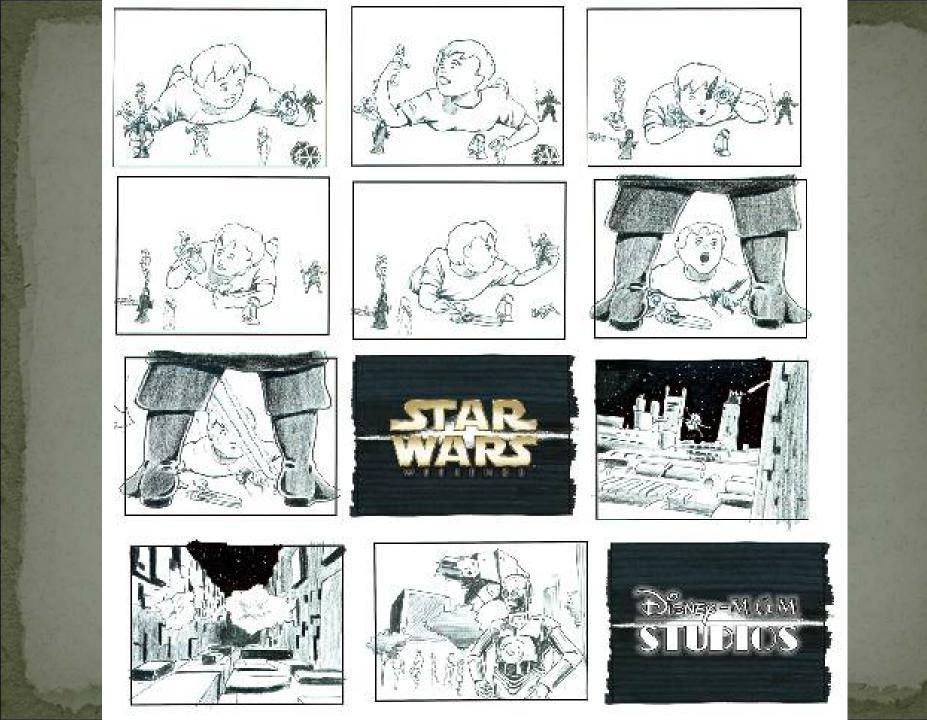
- Define the parameters of a story within available resources and time
- Organize and focus a story
- Figure out what medium to use for each part of the story

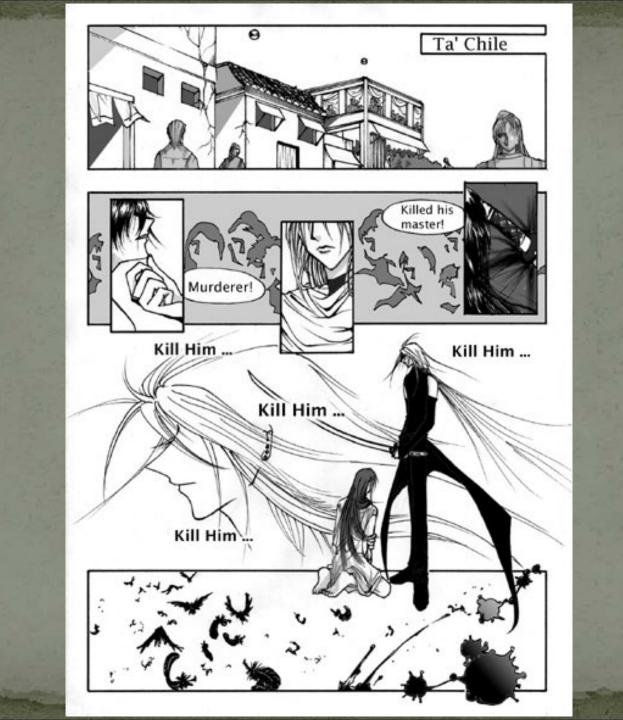
- Stories and Storyboards are valuable tools in the sale, specification, design, implementation, and introduction of Knowledge Management solutions.
- They focus attention on the people who will use the solution and the value it will bring.
- The process of creating a storyboard helps designers put themselves in the shoes and setting of the people for whom they are designing.
- It often prompts invention and ingenuity as problems end-users encounter are recognized and opportunities to solve them are devised.

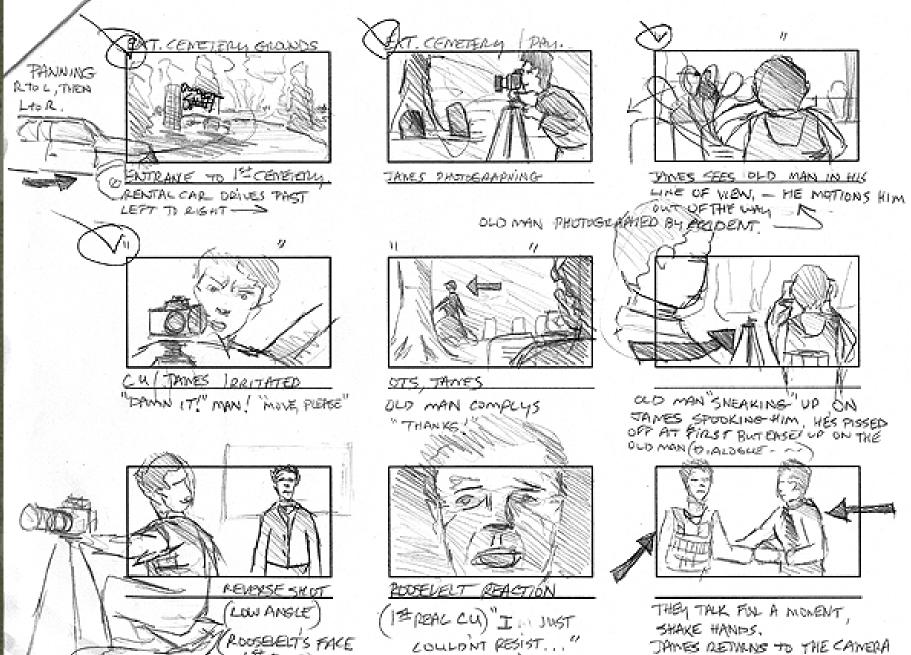
- The story can serve as a "user experience testbed" as prototypes are developed and critiqued.
- Take a proposed design for the system, and run through the story imagining the protagonist using it.
- Does the system solve the problems the protagonist encounters?
- Does it "fit in" with the story and the protagonist's environment?
- Does the solution provide the intended value to the people in the story?
- What changes to the system should be made so it does?















During lunch Nya gets a text message from e-Me telling her that tomorrow class is cancelled. Apparently, the teacher had traffic problems this morning.



In four seconds a message arrives from Pia asking if it would be allright to move up the group session to the vacated time. She confirms but suggests they meet at 9.30 instead of 9. After a little while her e-Me gets back to her with a confirmation that everyone has accepted the new time for the group session and that it will now be placed in the schedule.



Nice with a slow morning she thinks to herself. Oh, by the way! She picks up her cell phone and changes her morning message alarm to "Morning has broken". "Highway to hell" gets to be her new pub-reminder tone instead. Nya thinks she is pretty clever after all.





Since our university is unable to provide us storage, I once found out that a falling A3 folder can produce a sound similar to a bomb



After I settle down in studio, I usually don't have any space left, thanks to the inefficient clesk design.

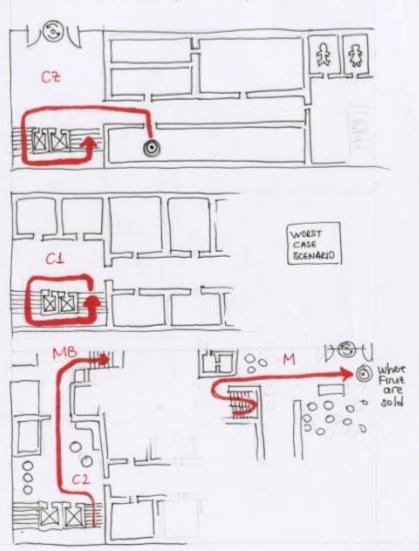


I'm a tea-addictive. That's why before the class begins, I go to cantine to fetch a cup of tea. But the time between my departure and return depends on whether I have Fine with me or not.



DASAK OKSEL

Because if I doubt have any First with me, and if I am in Ct, this might be a problem.



unfortunately this mhuman effort would change the fact that there are people faster than me, who are both hungry and have no first.



Because of this, although I manage to come to studio on time, I always end up being late to the first lessons.

Sometimes we need to go to other blocks to see our other lectures. Thanks to elevators we generally can't catch any of them.



Sometimes a foreign lecturer appears in the room we should meet with our course lecturer.

is rumpred to be a 3rd year Industrial Design lecturer Did you come to open mito Are about to become 3rd year Students Linesity and " department?

> ONCE I REALISED THAT BEING IN THE SAME DEPARTMENT DOESN'T NECESSARILY MEAN THAT WE ALL SHOULD KNOW EACHOTHER

Other than that, my studio life goes on well

EXCEPT THAT

sometimes I fell off from the chair because it's leg was broken

or get my skeches ripped apart because there was glue on the table when I was sketching



my sketching.

BASAK OKSEL

Eventhough AI feel like this university is against me I still like it, studios, student affairs and conteen.

But not when people bump into me when I'm corrying boiling tea.

And when security tries to throw me out of the studios when I stayed for right

But the thing that pritates me the most is the times when I realise that I have no idea where my ID cord is, when I stand infront of the toll gate.



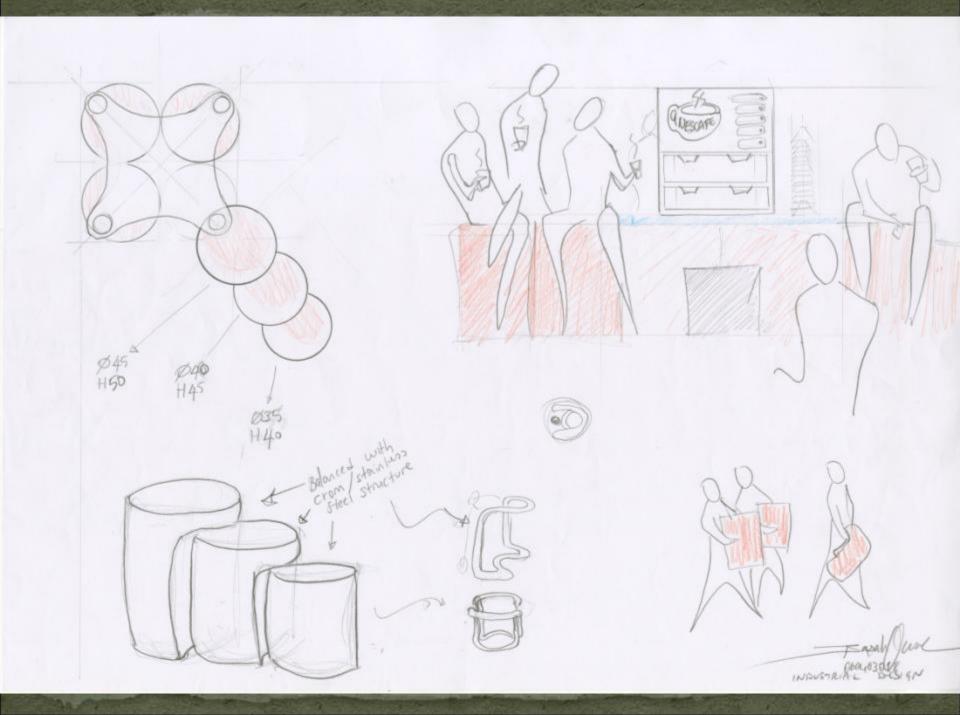


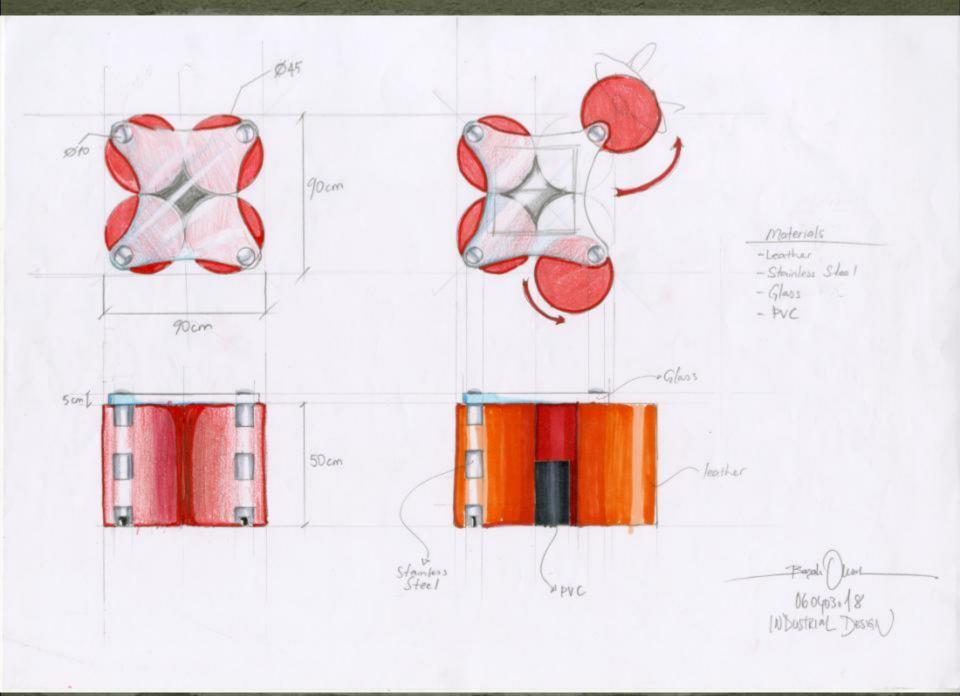




and tried to manage my project in a hurry

BASAK OKSEL 060403018 · ID







Early in the marning, she onloved to classroom.



She listened the lesson with everyone, and learned about project's subject.



She put her equipment and belonging to her cupboard.



She made research about project's subject



She made her sketchshimore comfortable envolvent which she can relax; have tea or coffee.



She made good quality sketchs anderender of her design.



She discussed her diesign with teachers

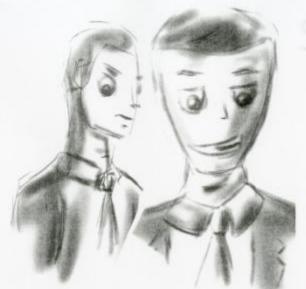


Ste made a model.





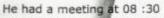
CREAL.



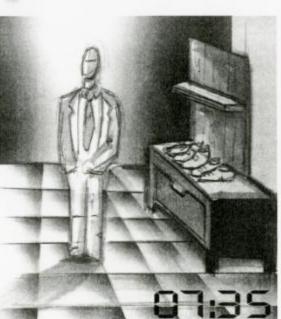
SCENARIO FOR NOMAD

Busynomad is a young bussiness man and he is living alone. He is always busy and tired because he has to rush between home and work and at the same time he has to be tidy and smart and take care of his healt. His shoes are very important for him. At work they should be nice, shinny and healty. For businessmans shoes are symbolizing their working diciplines.



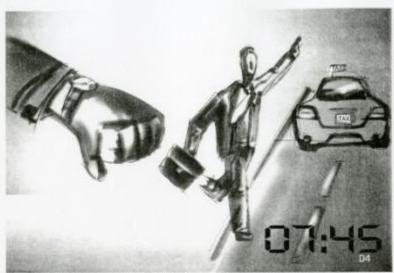


Before he leave his home he looked at the miror But he can not find the suitable shoes





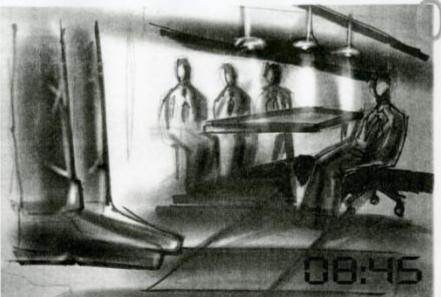
Finally he found the suitable shoes but Nooo! they



After he lost ten minutes for finding his shoes, he missed bus and he had to get into a taxi.



When he get off from the bus, he was so tired and sad ,



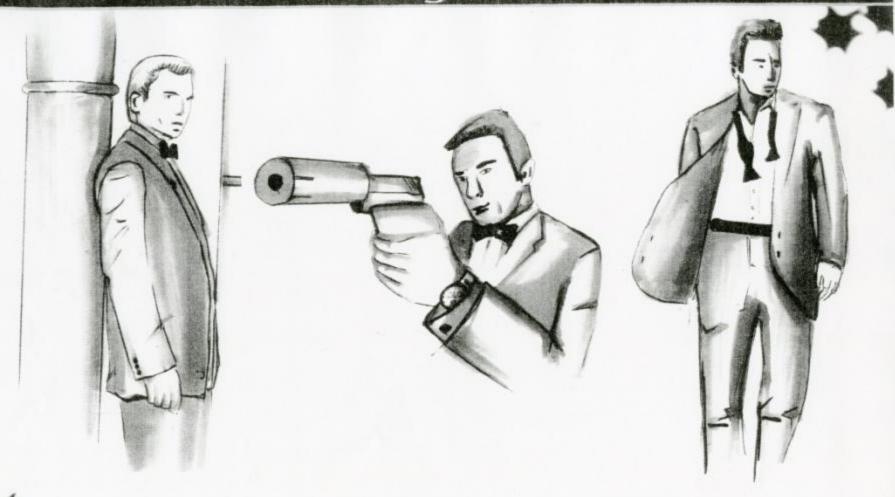
Finally he arrive the company but he was 15 minustes late and everbody was looking his teribble shoes and ashamed face.



After he came back home , he thrown his shoes to shoe cubboard. his foots were hurting and he was so tired.





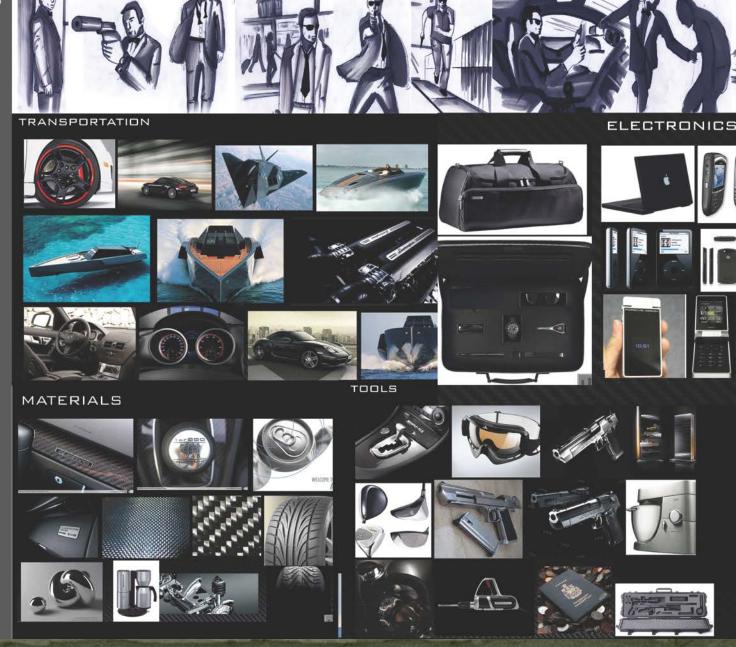


Contemporary Nomads

Contemporary nomad could be a business man, pilot or any person who is always travelling.

Travel is their lifestyle and their work or mission so the way of travelling is really important, high technology and durable materials are important to success in mission.

Apperence is also important as much as functionality



Story

Business travelling time is same for many of the users like two or three days. In that time period they haveto be very organized and practical.

Their suit are really important and they should not forget any thing in a hotel while trying to catchnext flight.



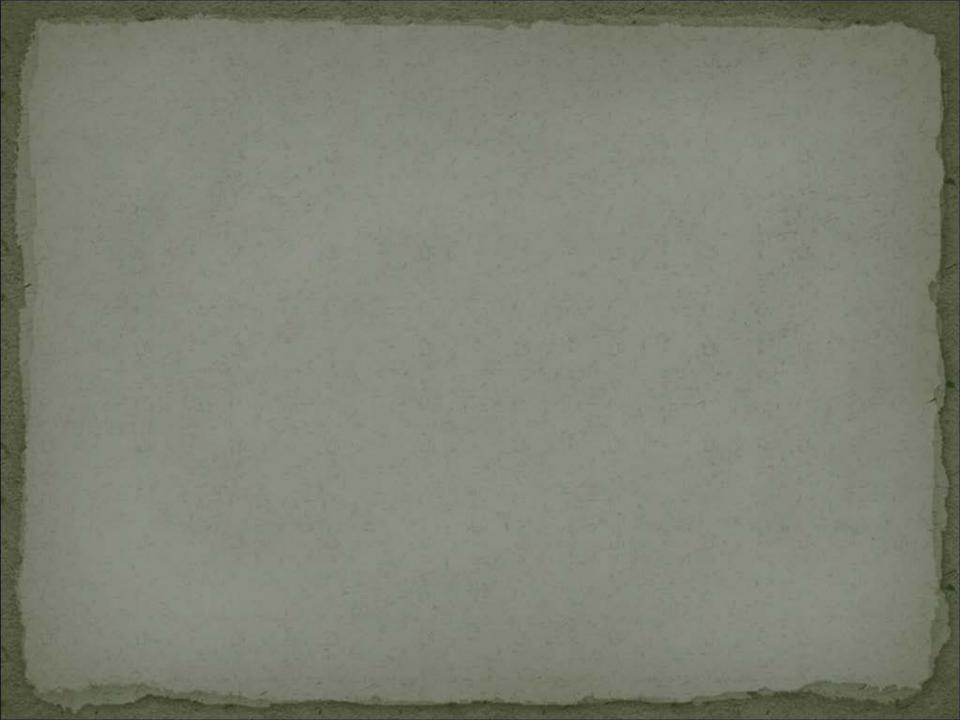
Third year project

Exhibited in Salone Satellite Milan Furniture Fair

Main design concept for our salone satellite project was contemporary nomads so nomagent is desigend for nomad people around the world.



Nomagent[©]



Resources

- Product Design Studio, Lecture notes, by Alex Velasco, IEU, Dept. of ID,2007-2009,
- http://www.mind-mapping.co.uk/_images/_Images/ADVICE-AND-INFORMATION/How-to-MindMap-imindmap.jpg
- Tony Buzan, Barry Buzan, The Mind Map Book (Mind Set) [Paperback], BBC Active; 1 edition (21 Dec 2006)
- Margulies, Nancy and Nusa Maal. Mapping Inner Space, Second Edition. Chicago: Zephyr
- press, 2002.
- http://www.mindmap.com/population_and_pollution_mindmap.jpg
- http://www.mindtools.com/media/Diagrams/mindmap.jpg
- http://live-the-solution.com/wp-content/uploads/energy-audit-mindmap.jpg
- http://www.mindmappictures.com/images/art-and-design-mind-map.jpg
- http://img.mappio.com/miwisdom/william-shakespeare-short-biography-mind-map-Large.jpg
- Osborn, A.F. (1963) Applied imagination: Principles and procedures of creative problem solving (Third Revised Edition). New York, NY: Charles Scribner's Sons.
- http://en.wikipedia.org/wiki/Brainstorming
- Gause, Donald C. and Gerald M. Weinberg. 1989. Exploring
- requirements: quality before design. New York: House Publishing Co., Inc.
- http://www.graphic.org/images/fish.GIF
- http://www.sccs.swarthmore.edu/users/99/maya/tech/pic/brainstorm.gif
- http://garybuckley.files.wordpress.com/2010/02/95724014_fc03fa8f20.jpg
- http://www.flickr.com/photos/waldopancake/2496022197/sizes/o/in/photostream/
- http://speakingaboutpresenting.com/wp-content/uploads/2008/08/brainstorm-medium.jpg
- http://www.cartoonstock.com/directory/b/brainstorming.asp
- http://brainzooming.com/wp-content/uploads/2010/05/100527-Brainstorm.jpg
- http://wiki.answers.com/Q/What_is_a_design_concept
- http://s3images.coroflot.com/user_files/individual_files/167074_1rsgPkNxVtnTykoxCKNKtwocg.jpg
- http://www.flickr.com/photos/jackturton_pde/4484540977/sizes/z/in/photostream/
- Storyboarding for Design:An Overview of the Process, Dan Gruen, Lotus Research, Tech rpeort, 2000,03

• The End