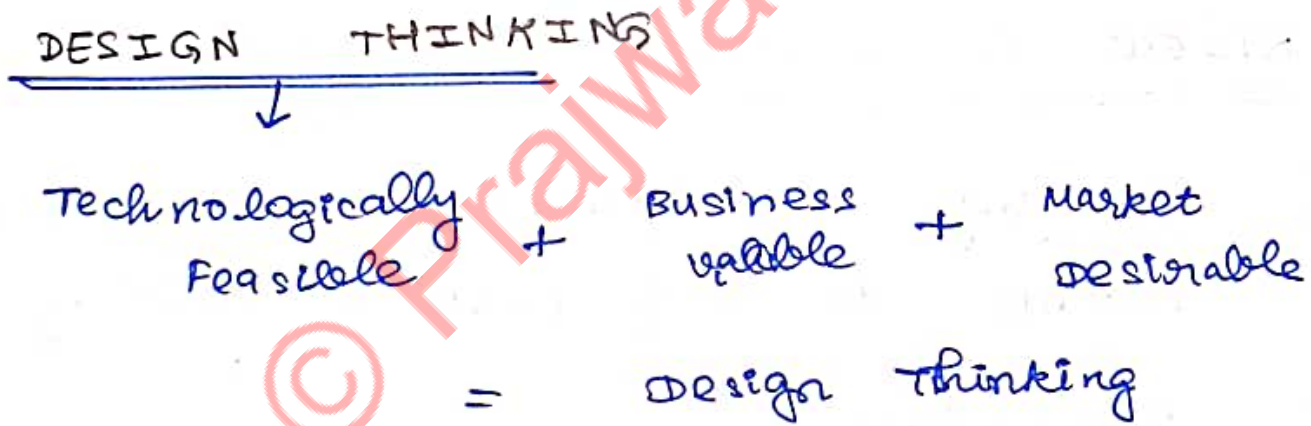


# DESIGN THINKING

## INTRODUCTION

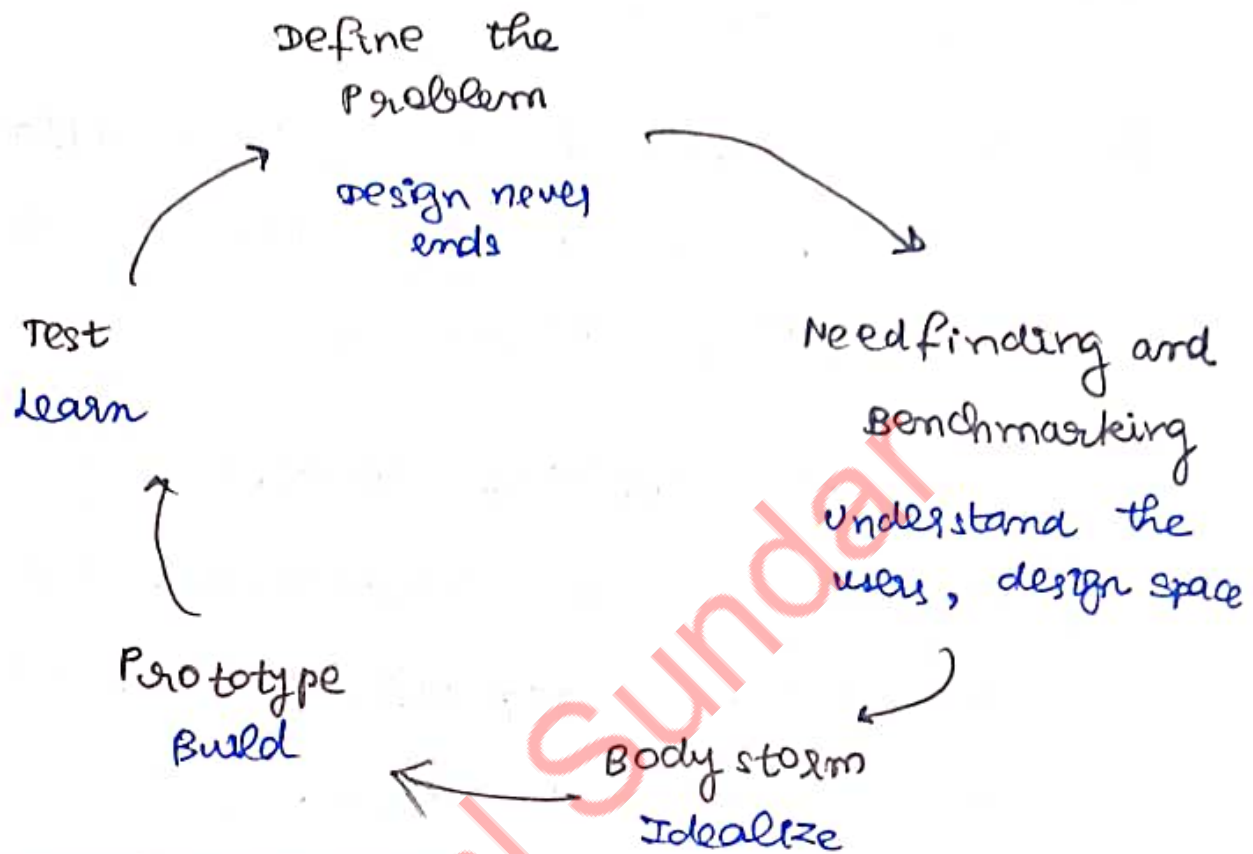
- ① Follows a systematic innovation process that serves as a toolbox for simulating problems.
- ② Involves applying concepts of design thinking and hypothesis-driven innovation (popularized by lean startup) to design and test.



- \* problem solving methodology
- \* deep human centric understanding
- \* complex problem reframing.

Examples: Netflix, Apple, Google, HBO, Samsung, World Bank, General Electric.

# PHILOSOPHY OF DESIGN THINKING



## OVERVIEW OF DESIGN THINKING

① Applying a Designer's sensibility & methods to any problem solving.

② Emphasizes :

- observation
  - collaboration
  - fast learning
  - visualization of ideas
  - rapid concept prototyping
  - concurrent business analysis
- influences innovation and business strategy

## RULES OF DESIGN THINKING

### ① Human Rule

All design activity is ultimately social in nature.

### ② Ambiguity Rule

Design thinkers must preserve ambiguity.

### ③ Re-design Rule

All design is Re design  
understand the past, and apply  
foresight tools and methods to better  
estimate the future.

### ④ Tangibility Rule

Making Ideas tangible facilitates  
communication.

## KEY TENANTS OF DESIGN THINKING

①

Developing a deep understanding of  
the consumer based on fieldwork  
research  
observational research & ethnographic methods  
by watching, listening, discussing and



seeking to understand

- ② collaboration with users and through forming multidisciplinary teams

this helps to move toward radical innovation, rather than incremental improvement, and of course seeks added value.

- ③ Accelerating, <sup>learning</sup> through visualisation and hands on experimentalism.

Goal is to fail quickly and frequently so that learning can occur

- ④ visualization of concepts to make the intangible become tangible

visualization provides context, helps consumer when, <sup>he/she is</sup> a partner in concept development

- ⑤ Integrating concurrent business analysis during the process.

constraints can be removed and great ideas (diverse) can emerge.

## AN ANALOGY: DIGITAL PHOTOGRAPHY

① Big picture + details

thinking & observation → zoom mode →

both macro and telephoto views

② Process Information

Quick previews + sort + trash +  
zoom + rethink + share

③ Demonstrate Results by producing  
final, visualized concepts.

Business technology, eg image-  
enhancing software.

## WHAT IS DESIGN ABILITY?



Design ability is a collective (or)  
shared ability, not individualistic.

Some application areas:

★ brand value areas

★ service design

★ customer experiences

## SOME RELATED TERMS

### ① Design Thinking :

Design thinking is an innovation process to discover unmet needs and opportunities and to create new solutions.

### ② Design Management :

Design Management is the ongoing management and leadership of design organizations, processes, and designed outputs.

### ③ Design Leadership and Design Strategy :

Design leadership and Design Strategy are outputs of effective design thinking and management.



## DESIGN ABILITY



Design Ability is a collective or shared ability.

### METHODS OF DESIGN ABILITY

How to develop insights into the designerly ways of thinking

- \* Interviews with designers
- \* Synthesize Information
- \* Modelling
- \* Experimental studies
- \* Communicate Deliberately

### THE 4 KEY ELEMENTS

- ① Multidisciplinary team
- ② the creative process
- ③ Focus on user outcomes
- ④ workspace



Environment plays a significant role in development of the process.

## MULTIDISCIPLINARY TERM

- ★ Experience (or) knowledge of a single person is not enough.
- ★ Effectiveness of a team rather than the capabilities of each individual is used.

## THE CREATIVE PROCESS

### ① observation

observe the behaviour of people, their relationships and environment to draw conclusions about their explicit and implicit needs.

### ② definition

Make problem formulation concise, unique and closer to the needs of people and the brand.

### ③ Ideation / Prototyping

Expose ideas that haven't been tried before → create a perspective shared by team.



④

Test

learn from real users, observation and iterate.

## IDEATION TECHNIQUES

① Reverse thinking

② Brain storming

③ Role playing

④ story boarding

⑤ Brain writing

⑥ 5 ws and H

⑦ SCAMPER

substitute

combine

Adapt

modify

Put to  
Another use

Eliminate

Reverse

## CHARACTERISTICS OF SUCCESSFUL PRODUCT

① An active product owner

② Product owner is actually responsible for new product development team

③ He/she is responsible for managing the product backlog and to achieve the desired outcome.

④ determines whether a product backlog item was delivered satisfactorily.

- ① Ensure transparency into the upcoming work of the product development team.
- 

## ② Reliable Teams

- ① A team needs to be able to rely on all members of the team to do their part.
- ② can achieve more than an individual would on their own.
- ③ Teammates must trust each other.
- 

show commitment

↳ group projects + contribute to conversations + individual assignments

Meet deadlines

↳ individual tasks / assignments → meet deadlines

Be on time

↳ calendar + Daily review

Be consistent

↳ showing up + doing your best everyday

Follow through  
↳ team members do what they say



## clear objectives



Ensure that the new or enhanced product satisfies a real customer need and helps the company reach business goals.

### ① Action verb

use verbs which describe an action that can be observed and that are measurable within the product development time frame.

### ② conclusion

conclude with the specifics of what the team member will be doing when demonstrating achievement of the objectives.

### ④ Avoiding Novelty

↳ Resist the temptation to implement the latest and greatest.

Project itself is not the place to start experimenting with new ways of doing things.



## ⑤ A Product Road Map

- ① The new product development has a road map set on attainable objectives.
- ② Projecting at least two iterations down the road is desirable, with longer-term objectives described and understood the actionable work.
- ③
  - testing ideas
  - identifying target market
  - finding price
  - defining product

} lot of moving parts

## ⑥ solid Research

- ①
  - target market
  - market need
  - unique value proposition
  - competition
  - pricing options

} successful NPD project requirements

② Existing market research → go deeper.

③ Existing market less than impressive → invest in that.

## ⑦ Thorough Testing

- ① Testing puts the user needs front and respond to changing user demands.
- ② Testing the product proposal with customers will give valuable feedback used to improve the product.

## ⑧ Focussed Approach

- ① Good NPD projects tend to stay focussed on specific, clear objectives.
- ② Adding new features to widen project scope can slow it down & throw unnecessary complications into the mix.

## ⑨ Timeline

- ① Good NPD projects have commitment to a hard timeline.
- ② Each phase should have a deadline attached to it.
- ③ A pretty stubborn commitment is needed to achieve the targets on time.

## ⑩ Adaptable and Flexible

- ⑤ → Markets change
  - demands for products might suddenly dry up.
  - Economic growth can change.
  - New opportunities can even change.
- ⑤ There should always be expecting unpredictability when developing a new product.
- ⑤ But the flexibility into your process will help you absorb it.
-

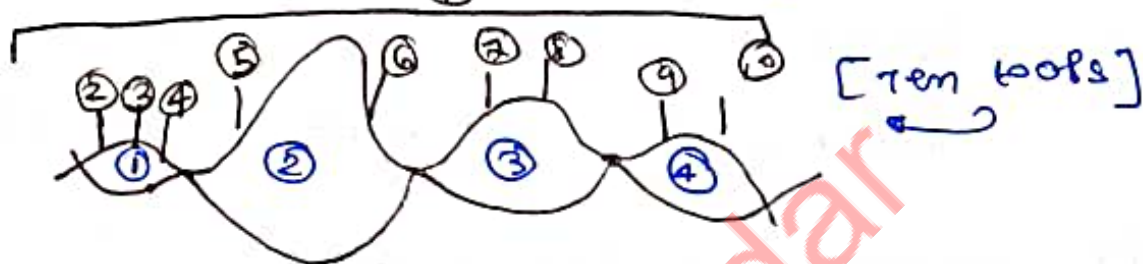


# FOUR QUESTIONS, TEN TOOLS

## DESIGN PROCESS

① what is ? ② what if ?

③ what wows ? ④ what works ?



widening → divergent thinking

Narrowing → convergent thinking

of bands around each question.

## THE TEN TOOLS

① visualization

using imagery to envision possibilities  
and bring them to life.

② Journey mapping

Assessing the existing experience through  
the customer's eyes

③ value chain Analysis

Assessing the current value chain that  
supports customer's journey.

- ④ Mind Mapping  
Generating insights from exploration activities and using those to create design criteria.
- ⑤ Brainstorming  
Generating new possibilities and new alternative business models.
- ⑥ concept development  
Assembling innovative elements into a coherent alternative solution that can be explored and evaluated.
- ⑦ Assumption testing  
Isolating and testing the key assumptions that will drive the success or failure of a concept.
- ⑧ Rapid prototyping  
Expressing a new concept in a tangible form for exploration, testing and refinement.
- ⑨ customer co-creation  
Enrolling customers to participate in

creating the solution that best meets their needs.

⑩ Learning Launch

creating an affordable experiment that lets customers experience the new solution over an extended period of time, to test key assumptions with market data.

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## IDENTIFY & SCOPE OPPORTUNITY

### IDENTIFY AND SCOPE OPPORTUNITIES

- \* opportunity: opportunity implies a chance or a favourable situation to do something offered by our circumstances.
- \* Business opportunity: A good or favourable change available to run a specific business in a given environment at a given point of time.

### WAYS TO IDENTIFY OPPORTUNITIES

- ① Listen to potential clients and past Leads

→ similar products & services before	}	helps to find opportunities to develop better products
→ likes & dislikes		
→ why they came here		
→ objections		

- ② Listen to customers

→ Frequently asked Questions	}	helps to identify key
→ Experiences		

→ Frustrations  
→ Feedback } business opportunities  
to expand and develop.

### ③ Look at competitors

- what they are doing
- what they are not doing
- where they are falling
- what they are doing right
- why customers choose them over us

this analysis helps identify key business opportunities to expand market reach & develop our products

### ④ Look at industry trends and insights

- subscribe to industry publications
- join relevant associations
- set Google alerts for key industrial terms and news
- follow other industry experts on social media.

## IDENTIFICATION OF BUSINESS OPPORTUNITIES

### BEFORE STARTING THE BUSINESS

- ① Motivation → is it enough for 1/2 years?



- ⑤ Is it a viable business proposition in our area.
- ⑥ does it match the needs of the client, local or otherwise?
- ⑦ Basic market research
- ⑧ Test it out in market.
- ⑨ consult with experts.
- ⑩ Look out for competition in the field
- ⑪ Is it sunrise industry?
- ⑫ Evaluate the business opportunity
- ⑬ Project conceptualization.

## FIVE FILTERING LAYERS OF BUSINESS OPPORTUNITIES

- ① Researching the industry  
How to learn more about the industry and resources available to help?..
- ② Market assessment  
Is there a market for the product/service? If yes, how much income can be expected?



### ③ Profitability assessment

How much will starting a new business cost? can we afford a lengthy "red link" period following start-up, as well as periodic breaks in cash flow? can we afford to fail?

### ④ Financing assessment

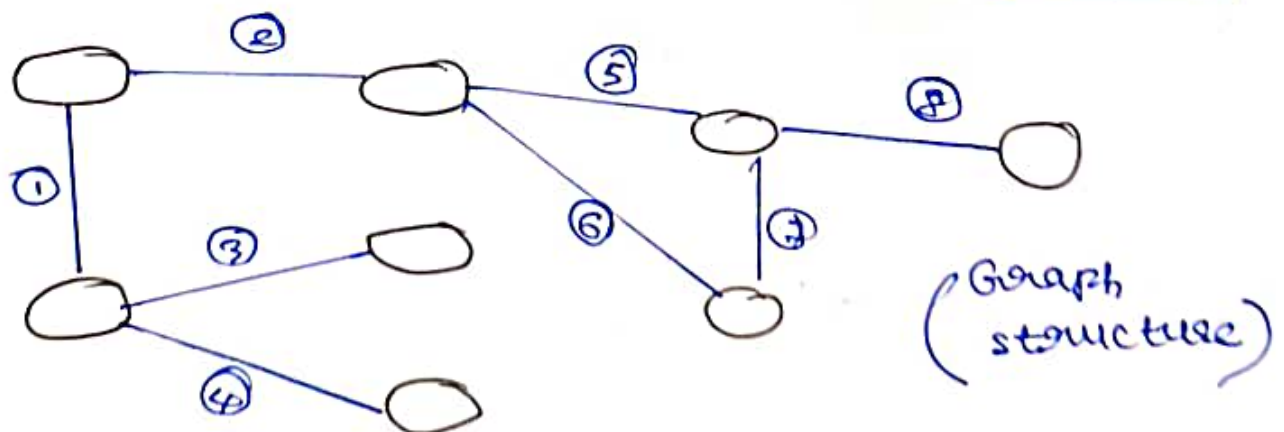
can we obtain the necessary financing for our business? If so, from where?

### ⑤ Legal Assessment

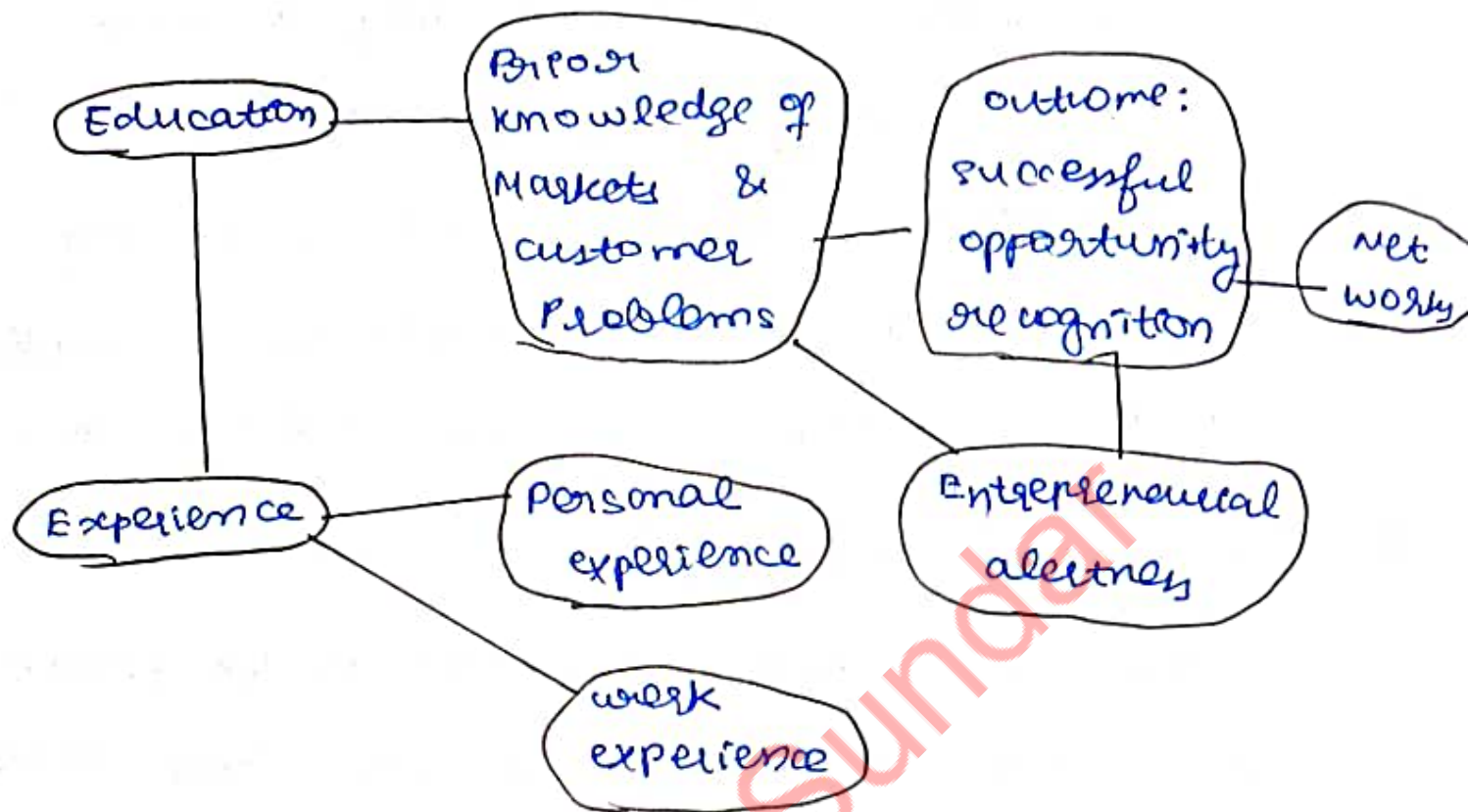
what potential legal liabilities are we exposing ourselves to starting a new business? Are the costs of protecting ourselves worth the trouble?

## MODEL FOR OPPORTUNITY RECOGNITION

### PROCESS



MODEL :



# INSPIRATIONAL DESIGN BRIEFING

## DESIGN BRIEF

- ① A design brief is a short document, usually 2 to 20 pages in length, that relays issues of "who, what, when, how, and why" to the design team.
- ② It represents the desired outcome by relaying requests from management to design teams.

wikipedia : 6 elements of design briefs

- company history
- company profile
- Problem statement
- Goals
- solution Analysis
- synopsis

Designers consult wikipedia.



Unfortunately, they provide no insight into how to write a high quality design brief.

## NINE CRITERIA OF AN INSPIRATIONAL

### DESIGN BRIEF

Nine common criteria are categorized into 3 groups - strategy - context & performance.



## A STRATEGY

- ① Philosophy : History, value, belief, vision, mission and strategy of a company.
- ② structure : Domain, business model, and competitive advantage of a company.
- ③ Innovation : Area and type of innovation of a company.

## B CONTEXT

- ④ Social / Human : Needs and activities about individual and/or group of customers.
- ⑤ Environment : Requirements of and expectations for environmental concerns.
- ⑥ Viability : Expectations about economic performance.

## C PERFORMANCE

- ⑦ Process : Budget and schedule of a project.
- ⑧ Function : Nature of deliverables including unique selling point.
- ⑨ Expression : sensory styling and aesthetics of products.

## WRITING THE INSPIRATIONAL DESIGN BRIEF

- ① the optimal approach to writing an inspirational design brief is through co-creation.
- ② Advantages :
  - improves quality of concepts
  - changes [ positively ] research behaviour

## CO-CREATING AN INSPIRATIONAL DESIGN BRIEF

- ① creating a template and developing content
- ② Team members have little or no systematic documented information about previous projects.
- ③ they are provided with the DQC to <sup>previous</sup> organize information under the same criteria.
- ④ Benefits :
  - consideration of whole aspects of project
  - increase emotional investment
  - mentally prepare to address each issue



## ② writing Briefs Independently

- ⑤ Each member writes a 500 to 1000 word brief, independently, using the structure of the inspirational design brief template.
- ⑤ This facilitates building cohesive and comprehensive design requirements while assisting the individual members in seeing the project broadly, as well as understanding the interdependencies between the criteria.
- ③ Integrating Parallel Briefs into the Final Document
  - ⑤ Team members collaboratively review multiple briefs by considering the final performance of each design brief.
  - ⑤ They consolidate multiple design briefs into a well-balanced and more effective design brief.
  - ⑤ As the team gains experience, performance evaluations can be updated accordingly.



# RESEARCH FINDINGS ABOUT INSPIRATIONAL

## DESIGN BRIEFS

- ⑤ The amount of the content for process is negatively co-related with the amount of the content for expression.



- ⑥ Less information a brief contains regarding the outcome of the project (expression), the more information it requires to describe how the project runs (process).

### THREE PITFALLS TO AVOID

- ① content distribution
- ② Brief writers often undervalue the importance of communicating strategy (philosophy, structure and innovation)
- ③ Brief writers sometimes intentionally hide the complete information about the expected specifications -
- ④ suggestion :
- content function → 5%
  - content about expression → 25%

## ② Balancing between process and expression

Ⓐ when brief writers include too much content about process, they may neglect other criteria.

Ⓑ when they include too little content about expression, they may ask team members to explore extensively, which results in a high risk of going over budget.

## ③ Length

Ⓐ Brief writers should benchmark the number of words used for their design briefs.

Ⓑ Most effective briefs are usually 500 to 1500 words in length.

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## CONCLUSION: KEYS TO SUCCESS

Main purpose of writing a design brief is covered successfully.