

BIMTECH

Post Graduate Diploma in Management: 2022-24

Design Thinking

Sub. Code: DM-101

Trimester – I, END-TERM EXAMINATION: September 2022

Time: 2 Hrs.

Max Marks: 40

Instruction: Students are required to write Roll No on every page of the question paper. All instructions on the reverse of the admit card should be followed meticulously.

SECTION A (4X5=20 Marks)

1. We have come from a linear past and are moving into a non-linear exponential future. Apply the 6-D framework to explain the disruption of traditional film-based photography industry. (CO-1) 5 marks

OR

Which are the biases that come in the way of us being able to think in exponential terms for any aspect of business? (CO-1) 5 marks

2. Your company has decided to launch a new app for the mobility needs of individuals. How can Design Thinking be used to develop a product-market fit for this initiative? (CO-2) 5 marks

OR

You are an entrepreneur seeking to set-up a new business school. Which elements of value in the Bain Value Pyramid (attached at Annexure I and II) might help you in shaping the offering that you create for two of your key users/beneficiaries? (CO-2) 5 marks

3. In what way might you use role playing to enhance your empathy and for prototyping for improving the service experience for the users of the BIMTECH cafeteria? (CO-3) 5 marks

OR

“The customer does not know what she/he wants” – Steve Jobs. How is this statement relevant in the context of Design Thinking? (CO-3) 5 marks

4. Why and how does team diversity play a role in Design Thinking. Please illustrate with an example. (CO-4) 5 marks

OR

TURN OVER

“Innovation is the lone person’s genius”. Do you agree or disagree with this statement?
Why? (CO-4) 5 marks

SECTION B

**(Case Study) Note: Case Study is Compulsory
(20 Marks)**

Energy Solutions for the New Generation: Design Thinking at Innogy

In Innogy’s innovation hub, venture developers either cooperate with an existing start up – or pitch their own ideas for a viable business model. In 2015, Itai Ben-Jacob went for the latter and developed the idea for Innogy’s eCarSharing project in a design thinking workshop.

“I first came into contact with design thinking when I needed an idea”, Itai Ben-Jacob explains. In 2015, he intended to explore one of innogy’s innovation focus areas, ‘urban mobility. Together with fellow innovation hub members he organized a series of design thinking workshops to wade through the expansive topic of urban concepts – one of them focusing on mobility: “We wanted to understand urban mobility – what does it actually entail? What type of business should we start?”

Itai Ben-Jacob and a colleague, a trained design thinking coach, prepared and facilitated the workshops. Participants came from different backgrounds – the team consisted of Innogy employees as well as external experts from mobility businesses, researchers, representatives of the municipality, and external startups. Together, the participants attempted to work out the scope of “urban mobility”: *“We tried to understand which blocks this topic consists of, and which problems lie within these blocks. For example, public transport – which problems exist here? How big are they? Who suffers from these problems?”*

In this problem definition phase, they approached the potential customer base: *“We had experts who brought their experience in, and we spread surveys through our channels”, Itai Ben-Jacob explains. “We got good responses there”, he says, but his personal ‘Aha moment happened during the problem redefinition: When they “dissected problem areas into smaller ingredients and identified which internal resources we have. For me, something just clicked in that moment: On the one hand there’s a huge problem, on the other hand we have resources that are underutilized, and we can use them to solve this problem – and now we need to find a solution that connects all the dots.”* The problem? The ‘chicken and egg dilemma of eMobility. Energy providers don’t develop the charging stations network further because there are not enough e-cars. On the other side, car manufacturers don’t produce e-cars because there are not enough charging stations. By linking the existing – but underutilized – innogy charging stations network to the problem, Itai Ben-Jacob and his colleague Christian Uhlich developed the solution of eCar Sharing: A project in which innogy provides local communities, local businesses and citizens access to flexible, electric mobility solutions. Users can book eCars on the internet and pick them up at the innogy charging stations – an offer that’s especially attractive for municipalities or companies that wish to provide their employees with eco-friendly eCars but are unwilling or unable to maintain their own vehicle fleet.

In the next nine months, Itai Ben-Jacob went from pitching the idea to assembling a team to developing a minimal proof of concept (minimum viable product), which was „*the moment we got someone to pay for this*“, he explains. The team went back to the innovation hub management with this result: „*It exists, it works, somebody pays for it – now we need the resources to scale it up and integrate it into the company.*“ Being closely connected to existing resources in innogy, the eCarSharing project was established internally rather than being split up into a separate company. **In mid-2017, innogy’s eCarSharing operates in four German communities with more than 12 eCars and already saved more than 1,5 tons of CO2 emissions.** The team, now also including eMobility expert Pavel Tomicek, finished the proof of concept stage and prepares for scaling up.

Innogy’s Innovation Hub

Innogy established their innovation hub in the second half of 2015, with the mission to „*create a sustainable energy system for new generations to live in a world worth having*“. Believing that an organization cannot support the mainstream customers and push for disruptive technology at the same time, innogy launched the innovation hub as an independent body within the company. Thereby, the hub could be embedded among emerging customers in need of disruptive technology.

There are two ways to develop a business in the Innogy innovation hub: Venture developers either look for start-ups that work within their innovation focus areas, or come up with their own startup business model. Before long, on both of these paths the developers have to pitch in front of the innovation hub management – which either dismisses or approves the plan with proposals for improvements and milestone expectations. The goal of these developments is either to spin the startup off into a separate company or build it up internally.

Spreading Design Thinking Within Innogy

For Itai Ben-Jacob, design thinking is „*a creative way to find solution ideas for problems that are worth solving, in a very efficient way. Otherwise you wouldn’t probably get to this kind of idea.*“

While working with creative methods is the common mode in the innovation hub, employees in other parts of innogy are new to design thinking. They may explore the method through trainings, for example by booking workshops with LRN LAB (learn lab), a business unit within the in-house consultancy of innogy. Founded internally in the beginning of 2017, LRN LAB consults innogy employees as well as external customers in the context of digital transformation with the help of different methods and tools. „*Design thinking isn’t the only method we do trainings on, it is one of several*“, senior consultant Nadja Krombach explains. Agile, Scrum and Lean Startup are further topics that employees are eager to explore, for example in the innogy departments of IT, Human Resources, and Retail.

Example Design Thinking Project: Competence Model

Tackling their own challenge in a design thinking method training, the LRN LAB team focused on the question: How might we help managers handling insecurities or decision-making situations? Design thinking helped them to consider extreme user groups: Next to executives, the team interviewed pilots, air traffic controllers and extreme mountain climbers to learn about their decision-making strategies in stress situations. Based on these insights, the LRN LAB team developed a competence model prototype. The competence model demonstrates which competencies are crucial in decision-making situations and can be used as a basis for developing new training formats.

„*On the one hand, we do ‘train the trainer’ settings, where we train the innogy colleagues so they transport their knowledge into the company*“, Nadja Krombach says, „*and on the other hand we do*

workshops where we apply design thinking with a real case." The LRN LAB crew aims to solve concrete business challenges with DT in these workshops, but the setting also depends on the time frame of the customer.

"We want to initiate a cultural change in the company", project lead Jumana Marji explains, who understands design thinking more as an attitude than a method. *"With an attitude of design thinking we push towards enabling a cultural transformation, towards a company that is more agile and has less hierarchies."*

Questions:

1. Critique (critically assess) Innogy's approach towards extreme users?(CILO-2 & 3) 10 marks
2. Critique (critically assess) Innogy's problem framing approach? (CILO-2 & 3) 10 marks

The Elements of Value Pyramid

Products and services deliver fundamental elements of value that address four kinds of needs: functional, emotional, life changing, and social impact. In general, the more elements provided, the greater customers' loyalty and the higher the company's sustained revenue growth.

SOCIAL IMPACT



Self-transcendence

LIFE CHANGING



Provides hope



Self-actualization



Motivation



Heirloom



Affiliation/belonging

EMOTIONAL



Reduces anxiety



Rewards me



Nostalgia



Design/aesthetics



Badge value



Wellness



Therapeutic value



Fun/entertainment



Attractiveness



Provides access

FUNCTIONAL



Saves time



Simplifies



Makes money



Reduces risk



Organizes



Integrates



Connects



Reduces effort



Avoids hassles



Reduces cost



Quality



Variety



Sensory appeal



Inform

INSPIRATIONAL VALUE

PURPOSE



Vision



Hope



Social responsibility

INDIVIDUAL VALUE

CAREER



Network expansion



Marketability



Reputational assurance

PERSONAL



Design & aesthetics



Growth & development



Reduced anxiety



Fun & perks

EASE OF DOING BUSINESS VALUE

PRODUCTIVITY



Time savings



Reduced effort



Decreased hassles



Information



Transparency

ACCESS



Availability



Variety



Configurability

RELATIONSHIP



Responsiveness



Expertise



Commitment



Stability



Cultural fit



Organization



Simplification



Connection



Integration

OPERATIONAL



Risk reduction



Reach



Flexibility



Component Quality

STRATEGIC

FUNCTIONAL VALUE

ECONOMIC



Improved top line



Cost reduction

PERFORMANCE



Product quality



Scalability



Innovation

TABLE STAKES



Meeting specifications



Acceptable price



Regulatory compliance



Ethical standards