Kandula Srinivasa Reddy Memorial College of Engineering (Autonomous)

Kadapa-516003. AP

(Approved by AICTE, Affiliated to JNTUA, Ananthapuramu, Accredited by NAAC)

(An ISO 9001-2008 Certified Institution)

Department of Mechanical Engineering

Certification Course

on

"DESIGN THINKING AND PRODUCT INNOVATION"

Resource Person : 1.Sri J.Suresh babu,Assistant Professor, Dept.of ME,KSRMCE

Course Coordinator : 1. Sri D.Merwin Rajesh Assistant Professor, Dept.of ME, KSRMCE

Date: **20/09/21 to 7/10/21**

K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa, Andhra Pradesh, India– 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution

Lr./KSRMCE/ME/2021-22/ Date: 15-09-2021

To
The Principal,
KSRMCE,
Kadapa.

Sub: Permission to Conduct Certificate Course on **"DESIGN THINKING AND PRODUCT INNOVATION"** from 20/09/21 to 07/10/21 Reg.

Respected Sir,

The Department of Mechanical Engineering is planning to offer a certification course on "DESIGN THINKING AND PRODUCT INNOVATION" to B. Tech. students. The course will be conducted from 20/09/21 to 07/10/21 s. In this regard, we are requesting you to grant permission to conduct certificate course.

Thanking you

Forwarded to principal S/W.

Yours faithfully

(Sri D.Merwin rajesh,Assistant Professor)

Permitted

V. S. S. Murthy

K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa, Andhra Pradesh, India– 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution

Cr./KSRMCE/ME/2021-22/ Date: 15/09/2021

Circular

The Department of Mechanical Engineering is offering a certification course on "**DESIGN THINKING AND PRODUCT INNOVATION**" From 20/09/21 to 07/10/21 to B.Tech students. In this regard, interested students are required to register for the Certification Course. The registration link is given below.

https://forms.gle/5Xc2Y8Jjr9faug-5kK6YCg&oq

The Course Coordinators and Resource Persons
Sri J.Suresh babu,Asso.Professor
Sri D.Merwin Rajesh,Asst.professor
Dept. of Mechanical Engg.-KSRMCE.

HOD

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

Cc to:

IQAC-KSRMCE

Registration for Certificate Course on "Design Thinking and Product Innovation" from 20-09-2021 to 07-10-2021

1. Full Name

_____

2. College Name

_____

3. Branch & Year

_____

4. Roll. Number

_____

Registration list of Certification Course on"DESIGN THINKING AND PRODUCT INNOVATION" from 20/09/21 to 11/10/21					
S.No	Timestamp	Full Name	College Name	Branch&Year	Roll.Number
1	16/09/21 6:45:01 PM	ALAMURI IMAMBASHA	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0302
2	16/09/21 10:46:08 AM	MACHIREDDY MAHESH REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0329
3	16/09/2021 10:48:01 AM	MANGALI SRINIVASULU	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0330
4	18/09/2021 8:57:48 PM	MANTHA GOVARDHAN GOPI	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0331
5	18/09/2021 9:04:09 PM	CHANDRAGIRI NARENDRA REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0310
6	18/09/2021 9:08:50 PM	TALARI ABHISHEK	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0362
7	18/09/2021 9:19:38 PM	VULLITHULA HARI PRASAD	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0370
8	18/09/2021 9:23:03 PM	YERRABALLI SHAIK SARFARAAZ	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0371
9	18/09/2021 9:26:59 PM	EPPARLA SARATH CHANDRA	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0314
10	16/09/21 9:27:11 PM	GANESHAM HANUMANTHA REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0316
11	17/09/2021 10:13:33 PM	GANGIREDDY VEERASIVA REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0317
12	16/09/21 10:29:38 PM	KOTAPATI DINESH KUMAR	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0326
13	17/09/202111:28:48 AM	KUMMITHI MADDILETI REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0327
14	17/09/2021 1:09:13 PM	LOMATI VEERA LOKESH REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0328
15	17/09/2021 8:20:23 AM	BASIREDDY RAVI JYOTHI KUMAR REDD	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0303
16	17/09/2021 11:10:10 AM	BAYANA BOINA SURENDRA YADAV	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0305
17	17/09/2021 11:10:45 AM	BELLAM MAHESH	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0306
18	17/09/2021 11:12:33 AM	MEKALA NEELESH RAHUL	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0333
19	17/09/2021 11:13:03 AM	MUDDI SIVA SAI	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0334
20	17/09/2021 11:13:09 AM	MUDE SURYAPRAKASH NAIK	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0335
21	17/09/2021 11:13:41 AM	MUMMADI SUMANTHREDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0336
22	17/09/2021 11:14:48 AM	ODETI SHARIEF	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0338
23	17/09/2021 11:15:20 AM	PALAMPALLI VENKATA RAVINDRA REDI	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0339
24	17/09/2021 11:18:48 AM	PALLAPOTHULA VINOD KUMAR REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0340
25	17/09/2021 11:26:07 AM	PALLE MAHENDRA REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0341
26	17/09/2021 11:26:58 AM	SHAIK MOHAMMED FAYAZ	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0354
27	17/09/2021 11:27:39 AM	SHAIK MOHISIN AHMED	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0355
28	17/09/2021 11:28:23 AM	SHAIK NAZAR HUSSAIN	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0356
29	17/09/2021 11:28:42 AM	SHAIK SAMEER AHAMMAD	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0357
30	17/09/2021 11:29:32 AM	SHAIK SUHAIL UR REHAMAN	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0358
31	17/09/2021 11:29:49 AM	SHAIK ZAHEER AHAMMAD	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0359
32	17/09/2021 11:30:31 AM	SOMISETTY VENKATA SAI JASWANTH	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0361

33	17/09/2021 11:30:36 AM	CHIMMANI PAVAN KUMAR	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0311
34	17/09/2021 11:30:42 AM	DOLA PURNA VISESH SAGAR	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0312
35	17/09/2021 11:31:04 AM	DUDEKULA RIYAZ	K.S.R.M COLLEGE OF EN	Mechanical 4th year	179Y1A0313
36	17/09/2021 11:31:24 AM	BALAVENKATAGARI SIVA REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0301
37	17/09/2021 11:32:01 AM	BARIKA EERANNA	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0302
38	17/09/2021 11:32:48 AM	BEDADHALA AMARNATH REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0303
39	17/09/2021 11:37:57 AM	BELLALA CHAITANYA KUMAR	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0304
40	17/09/2021 11:40:38 AM	BODI PRADEEP	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0305
41	17/09/2021 11:41:53 AM	M PRANAVA ADITHYA	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0327
42	17/09/2021 12:00:45 PM	M SHANMUKHASUNDAR	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0328
43	17/09/2021 12:12:58 PM	MANGALI KRISHNAMOHAN	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0329
44	17/09/2021 12:13:06 PM	MIRAPAKAYALA RAKESH	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0330
45	17/09/2021 12:15:35 PM	MUDE SRIKANTH NAIK	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0331
46	17/09/2021 12:38:19 PM	NAGA MAHESWAR REDDY ETURI	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0332
47	17/09/2021 1:58:53 PM	NAGELLA THARUN KUMAR REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0333
48	17/09/2021 3:14:20 PM	NAIB MOHAMMED ABID	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0334
49	17/09/2021 5:19:54 PM	NANDYALA MAHESWARA REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0335
50	17/09/2021 5:20:12 PM	POGAKU BALA NARASIMHUDU	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0340
51	18/09/2021 5:00:18 PM	PUJARI HARSHA VARDHAN	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0341
52	18/09/2021 4:02:19 PM	RODDAM SHARATH	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0342
53	18/09/2021 4:12:04 PM	S IBRAHIM KHAN	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0343
54	18/09/2021 10:54:12 pm	SALE MADAN KUMAR	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0344
55	18/09/2021 10:56:53 PM	SAMPURI SUDHEER	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0345
56	18/09/2021 10:59:58 PM	NAIB MOHAMMED ABID	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0334
57	18/09/2021 11:07:30 PM	MAHESWARA REDDY	K.S.R.M COLLEGE OF EN	Mechanical 4th year	189Y5A0335

Syllabus of Certification Course

Course Name: DESIGN THINKING AND PRODUCT INNOVATION

Duration: 30 Hours

Shared model in team-based design Theory and practice in Design thinking Explore presentation signers across globe MVP or Prototyping, Real-Time design interaction capture and analysis Enabling efficient collaboration in digital space Empathy for design Collaboration in distributed Design

Design Thinking to Business Process modeling Agile in Virtual collaboration environment Scenario based Prototyping Growth Story telling representation Strategic Foresight Change Sense Making Maintenance Relevance Value redefinition Extreme Competition experience design Standardization Humanization Creative Culture Rapid prototyping, Strategy and Organization Business Model design.

Design thinking workshop Design Thinking Work shop Empathize, Design, Ideate, Prototype and Test

Text Books :

1. John.R.Karsnitz, Stephen O'Brien and John P. Hutchinson, "Engineering Design", Cengage learning (International edition) Second Edition, 2013.

2. Roger Martin, "The Design of Business: Why Design Thinking is the Next Competitive Advantage", Harvard Business Press , 2009

K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa, Andhra Pradesh, India– 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution

SCHEDULE

Department of Mechanical Engineering

Certification course

on

"DESIGN THINKING AND PRODUCT INNOVATION"

Date	Timing	Course Instructor	Topic to be covered
20/09/2021	4 PM to 6 PM	J.Suresh babu,	Introduction to Design Thinking Creative Confidence, Car Maintenance Introductory Challeng, Complete Design Research plan , client presentation and Plan Design Researc
21/09/2021	4 PM to 6 PM	D.Merwin Rajesh	Introduction to Design Research Strategie Leap , Synthesis (Identifying insights and opportunities) of Product Challenge finding
22/09/2021	4 PM to 6 PM	J.Suresh babu,	Introduction to Ideation and Prototyping Strategies Assignment: Target Audience Testing – Tim Chi Video on rapid iteration ,Ideation and prototype for Product Challenge
23/09/2021	4 PM to 6 PM	D.Merwin Rajesh	User Testing The Hard Science of Teamwork + self and peer assessment of team participation . Test Final ideas with product clien
24/09/2021	4 PM to 6 PM	J.Suresh babu,	Team work discussion + Launch of Service challenge Mapping the lives of users by Jan Chipchase , Peer feedback and group discussion on teamwork reading Exercise: Presentation from new challenge client
25/09/20221	4 AM to 6 Noon	D.Merwin Rajesh	Design Research - tools for observation + immersion Assignment: Complete Design research for service clien Exercise: Plan and begin to implement research phas
27/09/2021	4 PM to 6 PM	J.Suresh babu,	Journey mapping and ideation Assignment: Rapid iteration cycle Exercise: Journey mapping and idea generation Storytelling: clear communication of top concepts.

28/09/2021	4 PM to 6 PM	D.Merwin Rajesh	Develop Final Presentations Prepare Final presentations Develop Presentations in small groups
29/09/2021	4 PM to 6 PM	J.Suresh babu,	Final Presentations and Leadership Styles discussi Read: Leadership that Gets Results, Daniel Goleman + Complete Peer .
30/09/2021	4 PM to 6 PM	D.Merwin Rajesh	Launch final challenge – system or student challenge
01/10/2021	4 PM to 6 PM	. D.Merwin Rajesh	self evaluation and leadership styles workshee. Final Presentations to Clients Leadership styles activit
04/10/2021	4 PM to 6 PM	J.Suresh babu,	Final Presentations to Clients Leadership styles activit
05/10/2021	4 PM to 6 PM	D.Merwin Rajesh	Assignment: Read Business Model Canvas CH 1 and complete draft of Business Model Canvas for project..
6/10/2021	4PM to 6 pm	J.Suresh babu,	Business Model Canvas and Design Research Assignment: Complete Design Research
07/10/2021	4PM to 6 pm	D.Merwin Rajesh	Final Presentations and class celebratios

Coordinator:

HOD
Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa, Andhra Pradesh, India– 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution

Department of Mechanical Engineering

Attendance sheet of Certification course on "DESIGN THINKING AND PRODUCT INNOVATION"

from 20/09/21 to 07/10/21s

Sl. No.	Roll No.	Name	20/9	21/9	22/9	23/9	24/6	25/9	27/9	28/9	29/9	30/9	1/10	4/10	5/10	6/10	7/10
1	179Y1A0305	BAYANA BOINA SURENDRA YADAV	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P
2	179Y1A0306	BELLAM MAHESH	P	A	P	A	A	P	P	A	P	P	P	P	P	A	P
3	179Y1A0307	BODIGARI RAMA KRISHNA REDDY	P	P	P	A	P	P	A	A	A	P	A	P	P	P	P
4	179Y1A0308	BOLLINENI HARIKRISHNA	P	A	P	P	A	P	P	P	P	P	P	P	P	A	P
5	179Y1A0309	BOYA NAVEEN	P	P	P	P	P	P	A	P	P		P	A	A	P	P
6	179Y1A0310	CHANDRAGIRI NARENDRA REDDY	A	P	P	P	P	P	P	A	P	P	P	P	P	A	P
7	179Y1A0311	CHIMMANI PAVAN KUMAR	P	P	P	P	A	P	P	A	P	P	P	P	P	A	P
8	179Y1A0312	DOLA PURNA VISESH SAGAR	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
9	179Y1A0313	DUDEKULA RIYAZ	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P
10	179Y1A0314	EPPARLA SARATH CHANDRA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

11	179Y1A0316	GANESHAM HANUMANTHA REDDY															
12	179Y1A0317	GANGIREDDY VEERASIVA REDDY															
13	179Y1A0318	GAVIREDDYGARI YASWANTHREDDY															
14	179Y1A0319	GURAJALA VENKATA DILIP KUMAR REDDY															
15	179Y1A0320	GURRAMPATI NITHIN															
16	179Y1A0321	INDLA VENKATA HARI PRASAD REDDY															
17	179Y1A0322	J PAVAN KUMAR															
18	179Y1A0323	KALLA VASU															
19	179Y1A0336	MUMMADI SUMANTHREDDY															
20	179Y1A0338	ODETI SHARIEF															
21	179Y1A0339	PALAMPALLI VENKATA RAVINDRA REDDY															
22	179Y1A0340	PALLAPOTHULA VINOD KUMAR REDDY															

23	179Y1A0341	PALLE MAHENDRA REDDY																
24	179Y1A0343	PERAM SRI MOHAN REDDY																
25	179Y1A0344	PICHIPATI RAM KISHORE REDDY																
26	179Y1A0347	SAGILI VISHNUBHARA DWAJA REDDY																
27	179Y1A0348	SAKIRAJU SUNILKUMAR RAJU																
28	179Y1A0349	SHAIK ABDUR REHAMAN HUSSAIN																
29	179Y1A0355	SHAIK MOHISIN AHMED																
30	189Y5A0305	BODI PRADEEP																
31	189Y5A0306	BOYA MADHU																
32	189Y5A0307	CHENNURU MOULA																
33	189Y5A0308	CHINNABOINA MAHESH																
34	189Y5A0310	DERA ASHOK KUMAR																
35	189Y5A0311	EADIGA PAPAYA GOUD																
36	189Y5A0312	GANDLURU GURRAPPA																

37	189Y5A0313	GANDRA BIRAVA VENKATA SURENDRA															
38	189Y5A0314	GANGAVARAM PAVAN KUMAR REDDY															
39	189Y5A0315	GUJJULA SISINDRIREDDY															
40	189Y5A0316	GURRAM CHINNA GIDDAIAH															
41	189Y5A0317	GUVVALA SUDHEERKUMAR REDDY															
42	189Y5A0318	JAGGILI MAHENDRA															
43	189Y5A0319	KAKANURU UDAY KUMAR REDDY															
44	189Y5A0320	KARDHAM NARASIMHA PRASAD															
45	189Y5A0321	KARUMANCHI HARSHAVARDHAN BABU															
46	189Y5A0322	KATARU VEERA HEMANTH KUMAR															
47	189Y5A0323	KONETI NAGARJUNA															
48	189Y5A0324	KONIREDDY SANDEEP KUMAR REDDY															

49	189Y5A0325	KOTTAPALLI VAMSHIDHAR REDDY																
50	189Y5A0339	PENTAM HARSHAVARDHAN																
51	189Y5A0340	POGAKU BALA NARASIMHUDU																
52	189Y5A0341	PUJARI HARSHA VARDHAN																
53	189Y5A0342	RODDAM SHARATH																
54	189Y5A0343	S IBRAHIM KHAN																
55	189Y5A0344	SALE MADAN KUMAR																
56	189Y5A0345	SAMPURI SUDHEER																
57	179Y1A0302	BOINA SURENDRA																

Coordinators

HoD-Mechanical Engg.

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

K.S.R.M. COLLEGE OF ENGINEERING

(UGC - Autonomous)

Kadapa, Andhra Pradesh, India– 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

KSNR

DEPARTMENT OF MECHANICAL ENGINEERING

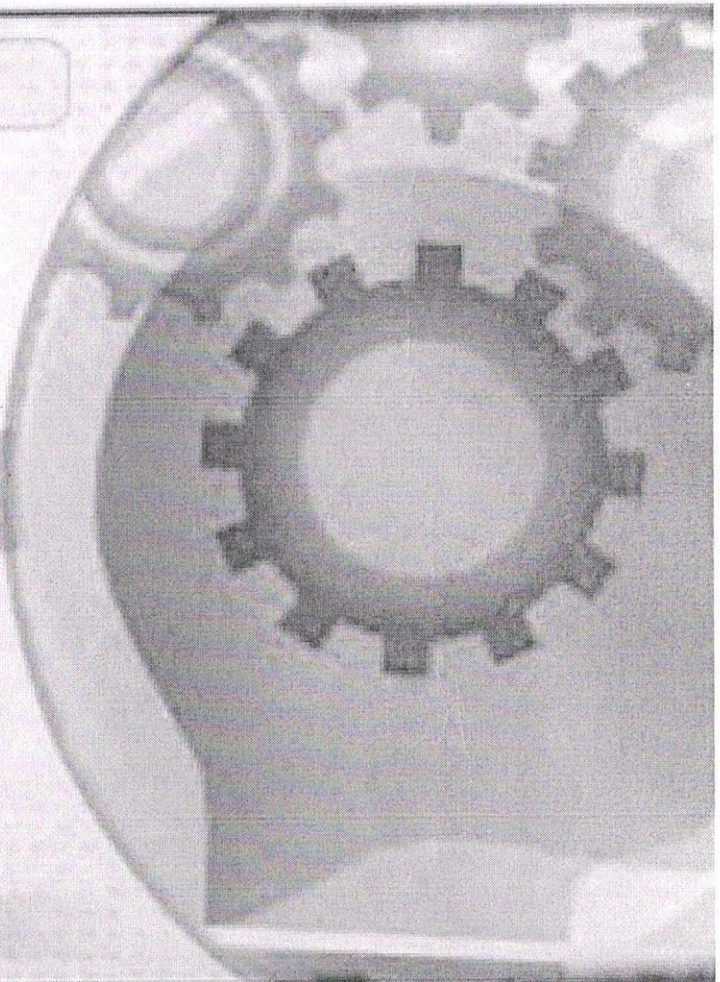
CERTIFICATE COURSE ON

"DESIGN THINKING AND PRODUCT INNOVATION"

Department of ME

20 - 09 - 21 to
7 - 10 - 21

Seminar Hall



Coordinators

Sri D.Merwin Rajesh,
Assistant Professor,
Dept.of ME, KSRMCE

Resource Persons

Sri J.Suresh babu,
Assistant Professor,
Dept.of ME,KSRMCE.

Registration Link: https://forms.gle/EU3uxhQGw2Mmisr6A

Dr. D. Ravikanth (HOD) | Dr. V.S.K. Murthy (Principal) | Dr. Kandula Chandra Obul Reddy (Managing Director) | Smt. K.Rajeswari (Correspondent, Secretary, Treasurer) | Sri K. Madan Mohan Reddy (Vice - Chairman) | Sri K. Raja Mohan Reddy (Chairman)

ksrmceofficial | www.ksrmce.ac.in | 8143731980, 8575697569

K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa, Andhra Pradesh, India– 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution

Report of

Certification Course on "DESIGN THINKING AND PRODUCT INNOVATION"

From 20/09/21 to 7/10/21

Target Group	:	**Students**
Details of Participants	:	**57**
Co-coordinator(s)	:	**.Sri J.Suresh babu, Assistant Professor, Dept.of ME,KSRMCE**
Resource Persons	:	**Sri D.Merwin Rajesh Assistant Professor, Dept.of ME, KSRMCE**
Organizing Department	:	**Mechanical Engineering**
Venue	:	**Seminar Hall, Mechanical Department**

Description:

The Department of Mechanical Engineering conducted a certification course on "**DESIGN THINKING AND PRODUCT INNOVATION**" from 20th SEP 2021 to 7th

OCT 2021. The course duration was 30 hours .The course Resource Persons are Sri J.Suresh babu,Assistant Professor and Sri D.Merwin Rajesh Assistant Professor Department Mechanical Engineering, KSRMCE.

Course Description:

Students start in the field, where they discover the needs of the target audience. They then iterate ideas on teams to develop a range of promising possible solutions, create rough prototypes to take back out into the field, and test with real people in the target audience. Throughout the course students will work on three different challenges; one focused on product design, one focused on service design and one focused on systems or business design. By starting with a very tangible challenge around product design, students will be able to hone their skills in the process before moving into more complex challenges around business and systems level design. All challenges will be addressed in partnership with a local business that poses a problem they are currently facing. In pilot programs for this class, businesses have implemented a number of ideas developed by students. The course will be teamwork-oriented, but students will also complete readings and independent activities that support the group work and ensure individual depth of knowledge.

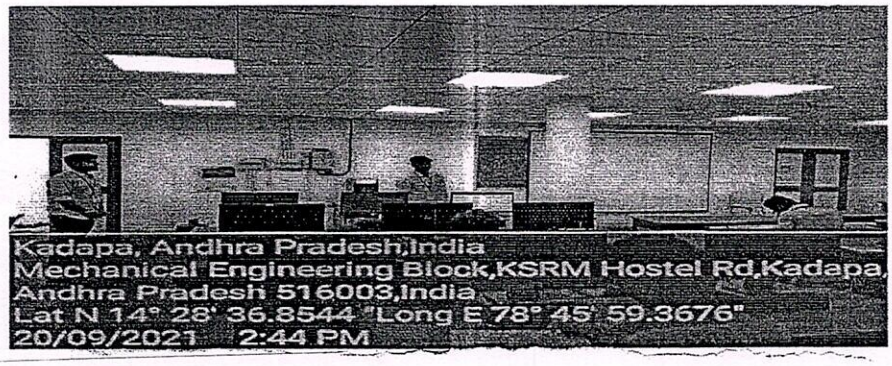
Course Objectives

- Develop students' professional skills in client management and communication.
- Demonstrate the value of developing a local network and assist students in making lasting connections with the business community.
- Students develop a portfolio of work to set them apart in the job market.
- Provide an authentic opportunity for students to develop teamwork and leadership skills.

Photos

The pictures taken during the course are given below:

CERTIFICATION COURSE ON DESIGN THINKING AND PRODUCT INNOVATION



Coordinator

HOD-Mechanical Engg,
Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

K.S.R.M. COLLEGE OF ENGINEERING

(UGC - Autonomous)

Kadapa, Andhra Pradesh, India– 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

KSNR
lives on..

Certificate of Completion

This to certify that Mr/Mrs. R. NAVEEN Bearing the Roll Number 179Y1A0309 has Successfully Completed Certification Course on " DESIGN THINKING & PRODUCT INNOVATION " from 20/9/2021 to 7/10/2021, Organized by Department of Mechanical Engineering, KSRMCE, Kadapa.

Coordinator

HOD ME

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

V. S. S. Murty
Principal
PRINCIPAL
K.S.R.M. COLLEGE OF ENGINEERING
KADAPA - 516 003. (A.P.)

K.S.R.M. COLLEGE OF ENGINEERING

(UGC - Autonomous)
Kadapa, Andhra Pradesh, India– 516 003
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

KSNR
lives on..

Certificate of Completion

This to certify that Mr/Mrs. G. PAVAN KUMAR REDDY Bearing the Roll Number 189Y5A0314 has Successfully Completed Certification Course on " DESIGN THINKING & PRODUCT INNOVATION " from 20/9/2021 to 7/10/2021, Organized by Department of Mechanical Engineering, KSRMCE, Kadapa.

Coordinator

HOD ME

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

V. S. S. Murthy
Principal

PRINCIPAL
K.S.R.M. COLLEGE OF ENGINEERING
KADAPA - 516 003. (A.P.)

K.S.R.M. COLLEGE OF ENGINEERING

(UGC - Autonomous)
Kadapa, Andhra Pradesh, India– 516 003
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

KSNR
lives on..

Certificate of Completion

This to certify that Mr/Mrs. K. NAGARJUNA Bearing the Roll Number 189Y5A0323 has Successfully Completed Certification Course on " DESIGN THINKING & PRODUCT INNOVATION " from 20/9/2021 to 7/10/2021, Organized by Department of Mechanical Engineering, KSRMCE, Kadapa.

Coordinator

HOD ME

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

V. S. S. Murty
Principal
PRINCIPAL
K.S.R.M. COLLEGE OF ENGINEERING
KADAPA - 516 003. (A.P.)

K.S.R.M. COLLEGE OF ENGINEERING

(UGC - Autonomous)
Kadapa, Andhra Pradesh, India– 516 003
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

KSNR
lives on..

Certificate of Completion

This to certify that Mr/Mrs. K. VASU Bearing the Roll Number 179Y1A0323 has Successfully Completed Certification Course on "DESIGN THINKING & PRODUCT INNOVATION" from 20/9/2021 to 7/10/2021, Organized by Department of Mechanical Engineering, KSRMCE, Kadapa.

Coordinator

HOD ME

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

V. S. S. Murty
Principal
PRINCIPAL
K.S.R.M. COLLEGE OF ENGINEERING
KADAPA - 516 003. (A.P.)

Feedback on Certificate Course on "Design Thinking and Product Innovation" from 20/09/2021 to 07/10/2021

*Required

1. Student Name (Optional)

_____

2. Roll Number (Optional)

_____

3. The objectives of the course were met (Objective) *

Mark only one oval.

- ◯ Excellent
- ◯ Good
- ◯ Satisfactory
- ◯ Poor

4. The pace of the course was appropriate to the content and attendees(Content) *

Mark only one oval.

- ◯ Excellent
- ◯ Good
- ◯ Satisfactory
- ◯ Poor

5. The content of the course was organized and easy to follow (Delivery) *

Mark only one oval.

- Excellent
- Good
- Satisfactory
- Poor

6. The Resource Persons were well prepared and able to answer any questions (Interaction) *

Mark only one oval.

- Excellent
- Good
- Satisfactory
- Poor

7. The exercises / role play were helpful and relevant (Syllabus Coverage) *

Mark only one oval.

- Excellent
- Good
- Satisfactory
- Poor

8. The venue was appropriate for the course (About Venue)*

Mark only one oval.

- Excellent
- Good
- Satisfactory
- Poor

9. The Course satisfy my expectation as a value added Programme (Course Satisfaction) *

Mark only one oval.

- ◯ Excellent
- ◯ Good
- ◯ Satisfactory
- ◯ Poor

10. Any Other comments

S.No feedback

S.No	Timestamp	The objec	The pa	The conten	The Reso	The exercis	The venu	The Cour	Student Nam	Roll Number(O	Any Other comments
1	7/10/2021 16:40	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent			
2	7/10/2021 16:40	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent	HARIKRISHNA	179Y1A0308	
3	7/10/2021 16:40	Excellent	Good	Excellent	Excellent	Good	Excellent	Good			
4	7/10/2021 15:41	Good	Good	Good	Good	Good	Good	Good	Lokeshwar	209y1a0351	--
5	7/10/2021 15:41	Excellent	Excelle	Excellent	Good	Excellent	Excellent	Excellent			
6	7/10/2021 15:41	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent			
7	7/10/2021 15:41	Excellent	Excelle	Excellent	Excellent	Excellent	Good	Good			We need some more c
8	7/10/2021 15:41	Excellent	Excelle	Excellent	Good	Excellent	Good	Good			
9	7/10/2021 15:41	Satisfacto	Satisfa	Satisfactory	Satisfacto	Satisfactor	Satisfacto	Satisfacto	SIDDHAMSE	209y1a0335	No
10	7/10/2021 15:41	Good	Excelle	Good	Excellent	Good	Excellent	Excellent			
11	7/10/2021 15:41	Excellent	Excelle	Excellent	Excellent	Excellent	Good	Good			
12	7/10/2021 15:41	Excellent	Good	Good	Excellent	Good	Good	Excellent			
13	7/10/2021 15:41	Good	Good	Good	Good	Good	Satisfacto	Satisfacto	Sagabala Bh	209y1a0351	
14	7/10/2021 15:41	Good	Good	Good	Good	Good	Good	Good	Shaik Moula	355	It is useful for us
15	7/10/2021 16:41	Good	Good	Good	Good	Good	Good	Good			--
16	7/10/2021 15:41	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent			
17	7/10/2021 16:41	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent			
18	7/10/2021 15:41	Excellent	Good	Excellent	Good	Excellent	Excellent	Good			i Learned something n
19	7/10/2021 15:41	Excellent	Excelle	Excellent	Excellent	Good	Good	Good			
20	7/10/2021 15:41	Good	Good	Good	Excellent	Good	Good	Excellent	Shaik jubair	PAVAN	
21	7/10/2021 15:42	Excellent	Excelle	Good	Excellent	Good	Excellent	Good			
22	7/10/2021 15:42	Good	Good	Good	Good	Good	Good	Good			--
23	7/10/2021 15:42	Excellent	Good	Good	Satisfacto	Excellent	Excellent	Excellent			
24	7/10/2021 15:42	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent			-
25	7/10/2021 15:42	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent	VELLATUR A	209Y1A0364	Nothing to say
26	7/10/2021 15:42	Good	Satisfa	Excellent	Excellent	Excellent	Satisfacto	Satisfacto	Sagabala Bh	209y1a0351	
27	7/10/2021 15:42	Good	Excelle	Excellent	Good	Excellent	Good	Excellent			
28	7/10/2021 15:42	Good	Good	Good	Good	Good	Good	Good			--
29	7/10/2021 15:42	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent			
30	7/10/2021 15:42	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent			
31	7/10/2021 15:42	Excellent	Excelle	Good	Good	Good	Excellent	Good			
32	7/10/2021 15:42	Good	Good	Excellent	Good	Good	Good	Good	GALLA MUK	219y5A0311	
33	7/10/2021 15:42	Excellent	Excelle	Good	Good	Good	Good	Good			
34	7/10/2021 15:42	Excellent	Excelle	Excellent	Excellent	Excellent	Excellent	Excellent			-
35	7/10/2021 15:42	Good	Good	Good	Good	Good	Good	Good	SIDDHAMSE	209y1a0358	No
36	7/10/2021 15:43	Excellent	Good	Good	Good	Satisfactor	Excellent	Excellent			
37	7/10/2021 15:43	Good	Good	Good	Good	Good	Good	Good			No

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF MECHANICAL ENGINEERING
VALUE ADDED COURSE ON
DESIGN THINKING AND PRODUCT INNOVATION
FROM 20/09/2021 TO 07/10/2021
AWARD LIST

S.No	Roll Number	Name of the Student	Marks Obtained
1	179Y1A0305	Bayana Boina Surendra Yadav	12
2.	179Y1A0306	Bellam Mahesh	13
3.	179Y1A0307	Bodigari Rama Krishna Reddy	14
4.	179Y1A0308	Bollineni Harikrishna	12
5.	179Y1A0309	Boya Naveen	13
6.	179Y1A0310	Chandragiri Narendra Reddy	14
7.	179Y1A0311	Chimmani Pavan Kumar	12
8.	179Y1A0312	Dola Purna Visesh Sagar	12
9.	179Y1A0313	Dudekula Riyaz	13
10	179Y1A0314	Epparla Sarath Chandra	14
11	179Y1A0316	Ganesham Hanumantha Reddy	12
12	179Y1A0317	Gangireddy Veerasiva Reddy	14
13	179Y1A0318	Gavireddygar I Yaswanth Reddy	13
14	179Y1A0319	Gurajala Venkata Dilip Kumar Reddy	12
15	179Y1A0320	Gurrampati Nithin	13
16	179Y1A3021	Indla Venkata Hari Prasad Reddy	12
17	179Y1A3022	J Pavan Kumar	14
18	179Y1A3023	Kalla Vasu	12
19	179Y1A3036	Mummadi Sumanth Reddy	14
20	179Y1A3038	Odeti Sharief	12
21	179Y1A3039	Palampalli Venkata Ravindra Reddy	12
22	179Y1A3040	Pallapothula Vinod Kumar Reddy	13
23	179Y1A3041	Palle Mahendra Reddy	14
24	179Y1A3043	Peram Sri Mohan Reddy	12
25	179Y1A3044	Pichipati Ram Kishore Reddy	14
26	179Y1A3047	Sagili Vishnubhara Dwaja Reddy	14
27	179Y1A3048	Sakiraju Sunilkumar Raju	12
28	179Y1A3049	Shaik Abdur Rehaman Hussain	12
29	179Y1A3055	Shaik Mohisin Ahmed	13
30	189Y5A0305	Bodi Pradeep	14
31	189Y5A0306	Boya Madhu	12
32	189Y5A0307	Chennuru Moula	13
33	189Y5A0308	Chinna Boina Mahesh	12
34	189Y5A0310	Dera Ashok Kumar	13
35	189Y5A0311	Eadiga Papaya Goud	14

36	189Y5A0312	Gandluru Gurrappa	12
37	189Y5A0313	Gandra Birava Venkata Surendra	13
38	189Y5A0314	Gangavaram Pavan Kumar Reddy	14
39	189Y5A0315	Gujjula Sisindri Reddy	12
40	189Y5A0316	Gurram Chinna Giddaiah	12
41	189Y5A0317	Guvvala Sudheerkuma R Reddy	13
42	189Y5A0318	Jaggili Mahendra	14
43	189Y5A0319	Kakanuru Uday Kumar Reddy	12
44	189Y5A0320	Kardham Narasimha Prasad	14
45	189Y5A0321	Karumanchi Harshavardhan Babu	13
46	189Y5A0322	Kataru Veera Hemanth Kumar	12
47	189Y5A0323	Koneti Nagarjuna	14
48	189Y5A0324	Konireddy Sandeep Kumar Reddy	12
49	189Y5A0325	Kottapalli Vamshidhar Reddy	12
50	189Y5A0339	Pentam Harshavardhan	13
51	189Y5A0340	Pogaku Bala Narasimhudu	14
52	189Y5A0341	Pujari Harsha Vardhan	12
53	189Y5A0342	Roddam Sharath	14
54	189Y5A0343	S Ibrahim Khan	13
55	189Y5A0344	Sale Madan Kumar	12
56	189Y5A0345	Sampuri Sudheer	14
57	179Y1A0302	Boina Surendra	12

Coordinator

HoD

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF MECHANICAL ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
DESIGN THINKING AND PRODUCT INNOVATION
FROM 20/09/2021 TO 07/10/2021
ASSESSMENT TEST

13

Roll Number: 179Y1A0313 **Name of the Student:** D. Riyaz

Time: 20 Min **(Objective Questions)** **Max.Marks: 20**

Note: Answer the following Questions and each question carries **one** mark.

1. What does a shared model in team-based design refer to? [b ✓
a) A model shared publicly
b) A collaborative design approach
c) A proprietary design framework
d) A model shared within a single team

2. What is the key benefit of using a shared model in team-based design? [c ✗
a) Faster individual design process
b) Improved communication and understanding
c) Reduced need for collaboration
d) Increased competition among team members

3. In team-based design, what is the purpose of creating a shared model? [c ✓
a) To showcase individual skills
b) To establish hierarchy within the team
c) To foster collaboration and alignment
d) To keep design ideas secret from teammates

4. Which phase of the Design Thinking process involves understanding the user's needs and challenges? [a ✗
a) Ideate b) Prototype
c) Empathize d) Test

5. What is the primary goal of collaboration in design thinking? [d ✓
a) To reduce the number of team members
b) To generate as many ideas as possible
c) To eliminate the need for prototypes
d) To enhance the quality of design solutions

6. Which aspect of collaboration is most important in distributed design teams? [a ✗
a) Face-to-face meetings
b) Efficient communication tools
c) Individual competition
d) Strict deadlines

7. What does MVP stand for in design and development? [b]
a) Most Valuable Prototype
b) Minimum Viable Product
c) Master Visual Presentation
d) Maximum Value Proposition

8. Why is prototyping an important step in the design process? [c]
a) It helps save costs by skipping testing phases
b) It provides a complete final version of the design
c) It helps identify flaws and improvements early
d) It replaces the need for collaboration in design

9. Real-time design interaction capture and analysis aims to: [b]
a) Record team members' personal conversations
b) Analyze design interactions to improve efficiency
c) Create a competitive environment among team members
d) Limit collaboration to scheduled meetings

10. What is a key challenge of collaborating in a digital space? [a]
a) Limited access to information
b) Difficulty in sharing files
c) Lack of non-verbal communication cues
d) Over-reliance on physical meetings

11. Which technology or tool can facilitate efficient collaboration in a digital space? [b]
a) Fax machines
b) Video conferencing software
c) In-person workshops
d) Postal mail

12. What role does empathy play in the design process? [c]
a) It helps in creating complex designs
b) It ensures all team members are experts
c) It helps understand user needs and emotions
d) It speeds up the design process

13. How does empathy contribute to collaboration in design? [c]
a) It fosters a sense of competition among team members
b) It encourages an understanding of teammates' strengths
c) It helps build trust and respect among team members
d) It reduces the need for communication within the team

14. How can design thinking be applied to business process modeling? [d]
a) By ignoring user needs and focusing on efficiency
b) By creating complex models without testing
c) By understanding user needs and designing processes accordingly
d) By hiring a separate team for business processes

15. In an agile virtual collaboration environment, what is the main principle? [b]
a) Following a rigid and detailed plan
b) Adapting to change and iterating quickly
c) Completing all work before collaborating
d) Avoiding interaction with team members

16. What is scenario-based prototyping? [a]
a) Creating prototypes only in specific weather conditions
b) Designing prototypes based on potential user scenarios
c) Prototyping without considering user needs
d) Creating prototypes with random features

17. How does growth storytelling contribute to design collaboration? [b]
a) It helps teams compete against each other
b) It creates a shared vision and direction
c) It leads to secrecy and individual work
d) It slows down the design process

18. What is strategic foresight in the context of design? [c]
a) Focusing only on immediate design needs
b) Planning for long-term design trends and possibilities
c) Ignoring changes in the design industry
d) Reacting to design changes as they occur

19. How does change sense-making benefit collaborative design teams? [b]
a) It prevents any changes from occurring
b) It helps teams understand and adapt to changes
c) It enforces strict design guidelines
d) It discourages communication about changes

20. Why is value redefinition important in collaborative design? [c]
a) It prevents teams from changing their approach
b) It ensures designs remain the same over time
c) It helps teams adapt to changing user needs
d) It eliminates the need for user feedback

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF MECHANICAL ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
DESIGN THINKING AND PRODUCT INNOVATION
FROM 20/09/2021 TO 07/10/2021
ASSESSMENT TEST

12

Roll Number: 189Y5A0306 **Name of the Student:** B. Madhu

Time: 20 Min **(Objective Questions)** **Max.Marks: 20**

Note: Answer the following Questions and each question carries **one** mark.

1. What does a shared model in team-based design refer to? [b ✓
a) A model shared publicly
b) A collaborative design approach
c) A proprietary design framework
d) A model shared within a single team

2. What is the key benefit of using a shared model in team-based design? [b ✓
a) Faster individual design process
b) Improved communication and understanding
c) Reduced need for collaboration
d) Increased competition among team members

3. In team-based design, what is the purpose of creating a shared model? [c ✓
a) To showcase individual skills
b) To establish hierarchy within the team
c) To foster collaboration and alignment
d) To keep design ideas secret from teammates

4. Which phase of the Design Thinking process involves understanding the user's needs and challenges? [a ✗
a) Ideate
b) Prototype
c) Empathize
d) Test

5. What is the primary goal of collaboration in design thinking? [d ✓
a) To reduce the number of team members
b) To generate as many ideas as possible
c) To eliminate the need for prototypes
d) To enhance the quality of design solutions

6. Which aspect of collaboration is most important in distributed design teams? [a ✗
a) Face-to-face meetings
b) Efficient communication tools
c) Individual competition
d) Strict deadlines

7. What does MVP stand for in design and development? [b]
a) Most Valuable Prototype
b) Minimum Viable Product
c) Master Visual Presentation
d) Maximum Value Proposition

8. Why is prototyping an important step in the design process? [c]
a) It helps save costs by skipping testing phases
b) It provides a complete final version of the design
c) It helps identify flaws and improvements early
d) It replaces the need for collaboration in design

9. Real-time design interaction capture and analysis aims to: [a]
a) Record team members' personal conversations
b) Analyze design interactions to improve efficiency
c) Create a competitive environment among team members
d) Limit collaboration to scheduled meetings

10. What is a key challenge of collaborating in a digital space? [b]
a) Limited access to information
b) Difficulty in sharing files
c) Lack of non-verbal communication cues
d) Over-reliance on physical meetings

11. Which technology or tool can facilitate efficient collaboration in a digital space? [b]
a) Fax machines
b) Video conferencing software
c) In-person workshops
d) Postal mail

12. What role does empathy play in the design process? [a]
a) It helps in creating complex designs
b) It ensures all team members are experts
c) It helps understand user needs and emotions
d) It speeds up the design process

13. How does empathy contribute to collaboration in design? [c]
a) It fosters a sense of competition among team members
b) It encourages an understanding of teammates' strengths
c) It helps build trust and respect among team members
d) It reduces the need for communication within the team

14. How can design thinking be applied to business process modeling? [c]
a) By ignoring user needs and focusing on efficiency
b) By creating complex models without testing
c) By understanding user needs and designing processes accordingly
d) By hiring a separate team for business processes

15. In an agile virtual collaboration environment, what is the main principle? [b]
a) Following a rigid and detailed plan
b) Adapting to change and iterating quickly
c) Completing all work before collaborating
d) Avoiding interaction with team members

16. What is scenario-based prototyping? [a]
a) Creating prototypes only in specific weather conditions
b) Designing prototypes based on potential user scenarios
c) Prototyping without considering user needs
d) Creating prototypes with random features

17. How does growth storytelling contribute to design collaboration? [b]
a) It helps teams compete against each other
b) It creates a shared vision and direction
c) It leads to secrecy and individual work
d) It slows down the design process

18. What is strategic foresight in the context of design? [a]
a) Focusing only on immediate design needs
b) Planning for long-term design trends and possibilities
c) Ignoring changes in the design industry
d) Reacting to design changes as they occur

19. How does change sense-making benefit collaborative design teams? [b]
a) It prevents any changes from occurring
b) It helps teams understand and adapt to changes
c) It enforces strict design guidelines
d) It discourages communication about changes

20. Why is value redefinition important in collaborative design? [d]
a) It prevents teams from changing their approach
b) It ensures designs remain the same over time
c) It helps teams adapt to changing user needs
d) It eliminates the need for user feedback

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF MECHANICAL ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
DESIGN THINKING AND PRODUCT INNOVATION
FROM 20/09/2021 TO 07/10/2021
ASSESSMENT TEST

Roll Number: 18945A0345 **Name of the Student:** S. Sudheer

Time: 20 Min **(Objective Questions)** **Max.Marks: 20**

Note: Answer the following Questions and each question carries **one** mark.

1. What does a shared model in team-based design refer to? [C]
a) A model shared publicly
b) A collaborative design approach
c) A proprietary design framework
d) A model shared within a single team

2. What is the key benefit of using a shared model in team-based design? [C]
a) Faster individual design process
b) Improved communication and understanding
c) Reduced need for collaboration
d) Increased competition among team members

3. In team-based design, what is the purpose of creating a shared model? [C]
a) To showcase individual skills
b) To establish hierarchy within the team
c) To foster collaboration and alignment
d) To keep design ideas secret from teammates

4. Which phase of the Design Thinking process involves understanding the user's needs and challenges? [C]
a) Ideate b) Prototype
c) Empathize d) Test

5. What is the primary goal of collaboration in design thinking? [d]
a) To reduce the number of team members
b) To generate as many ideas as possible
c) To eliminate the need for prototypes
d) To enhance the quality of design solutions

6. Which aspect of collaboration is most important in distributed design teams? [a]
a) Face-to-face meetings
b) Efficient communication tools
c) Individual competition
d) Strict deadlines

7. What does MVP stand for in design and development? [b]
a) Most Valuable Prototype
b) Minimum Viable Product
c) Master Visual Presentation
d) Maximum Value Proposition

8. Why is prototyping an important step in the design process? [c]
a) It helps save costs by skipping testing phases
b) It provides a complete final version of the design
c) It helps identify flaws and improvements early
d) It replaces the need for collaboration in design

9. Real-time design interaction capture and analysis aims to: [b]
a) Record team members' personal conversations
b) Analyze design interactions to improve efficiency
c) Create a competitive environment among team members
d) Limit collaboration to scheduled meetings

10. What is a key challenge of collaborating in a digital space? [c]
a) Limited access to information
b) Difficulty in sharing files
c) Lack of non-verbal communication cues
d) Over-reliance on physical meetings

11. Which technology or tool can facilitate efficient collaboration in a digital space? [a]
a) Fax machines
b) Video conferencing software
c) In-person workshops
d) Postal mail

12. What role does empathy play in the design process? [d]
a) It helps in creating complex designs
b) It ensures all team members are experts
c) It helps understand user needs and emotions
d) It speeds up the design process

13. How does empathy contribute to collaboration in design? [c]
a) It fosters a sense of competition among team members
b) It encourages an understanding of teammates' strengths
c) It helps build trust and respect among team members
d) It reduces the need for communication within the team

14. How can design thinking be applied to business process modeling? [C]
a) By ignoring user needs and focusing on efficiency
b) By creating complex models without testing
c) By understanding user needs and designing processes accordingly
d) By hiring a separate team for business processes

15. In an agile virtual collaboration environment, what is the main principle? [b]
a) Following a rigid and detailed plan
b) Adapting to change and iterating quickly
c) Completing all work before collaborating
d) Avoiding interaction with team members

16. What is scenario-based prototyping? [b]
a) Creating prototypes only in specific weather conditions
b) Designing prototypes based on potential user scenarios
c) Prototyping without considering user needs
d) Creating prototypes with random features

17. How does growth storytelling contribute to design collaboration? [b]
a) It helps teams compete against each other
b) It creates a shared vision and direction
c) It leads to secrecy and individual work
d) It slows down the design process

18. What is strategic foresight in the context of design? [b]
a) Focusing only on immediate design needs
b) Planning for long-term design trends and possibilities
c) Ignoring changes in the design industry
d) Reacting to design changes as they occur

19. How does change sense-making benefit collaborative design teams? [a]
a) It prevents any changes from occurring
b) It helps teams understand and adapt to changes
c) It enforces strict design guidelines
d) It discourages communication about changes

20. Why is value redefinition important in collaborative design? [c]
a) It prevents teams from changing their approach
b) It ensures designs remain the same over time
c) It helps teams adapt to changing user needs
d) It eliminates the need for user feedback

Design Thinking & product Innovation


"Design is too important
to be left to designers."
– Raymond Loewy

design thinking & innovation journey..pedigree

Xplora has 147+ campuses across India China & Canada. Having trained and placed over 100000+ students & professionals in Digital Media Design over last 17+ years.

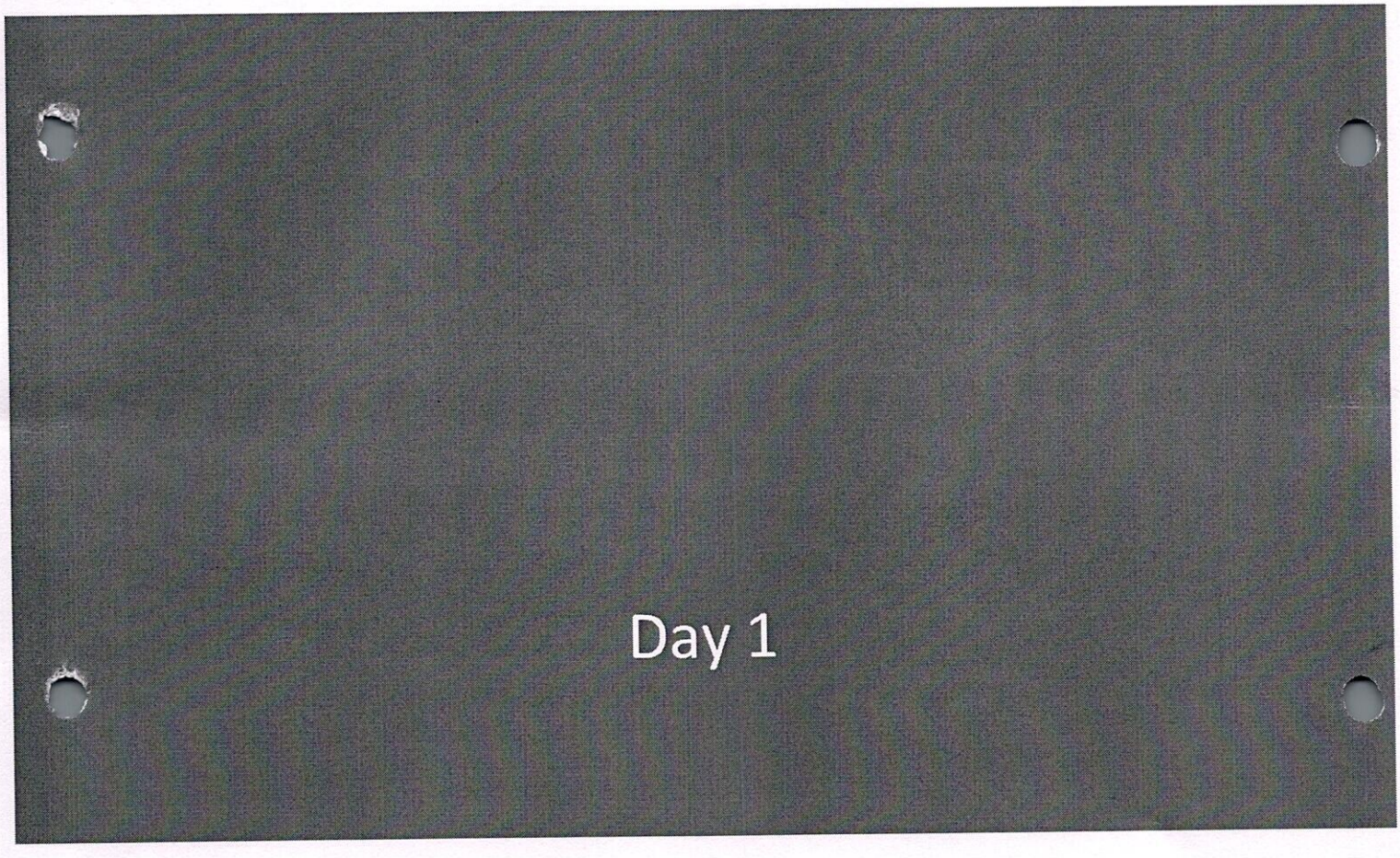
Establishing Institutions of National repute & significance. Developing Programmes & Curriculum . Trained 15000+ faculty and 55000+ students, professionals on Design & Innovation Subject. Consulting assignments in India, Australia, China, Dubai.

FX : 2000+ schools in India, USA, Canada running New Age Education Curriculum. Over 1 lakh students benefiting from it annually.

Learning Outcome

1. Learn design thinking as an approach for human- centred innovation.
2. Practice interviewing and observation skills to develop an empathetic worldview.
3. Framing actionable problem statements.
4. Ideate & create a storyboard.
5. Understanding of prototyping as a strategy to develop & test ideas.
6. Develop problem solving approach.

Specific Assessment Method	Weight
Class participation & attendance	20%
Individual Quiz & Reflective Note	30%
Project Presentations (Day 1 & 2)	50%


Day 1

Need for Design Thinking for Managers

design thinking

Is being used extensively by IBM, Apple, Google, Samsung, Starbucks, SAP, GE, Airbnb, Pepsi, Toyota, Virgin, Space X...in short all the fortune 500 companies have started using design thinking.

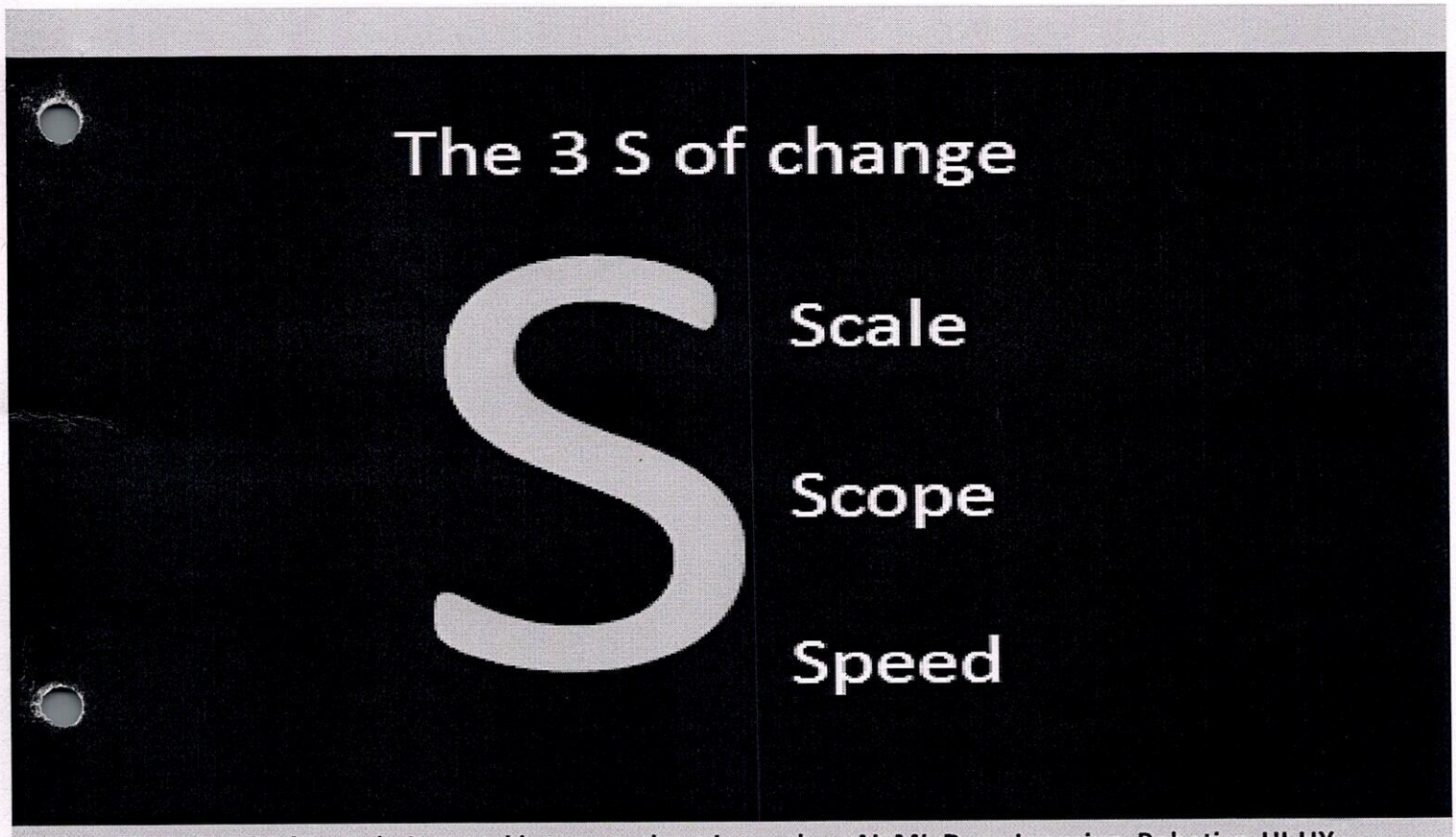
Design thinking comes to India,

'Infosys trained its 1,00,000 employees on Design Thinking'

Wipro, Godrej, Mahendra, Hero, Marico, TCS follow suit..

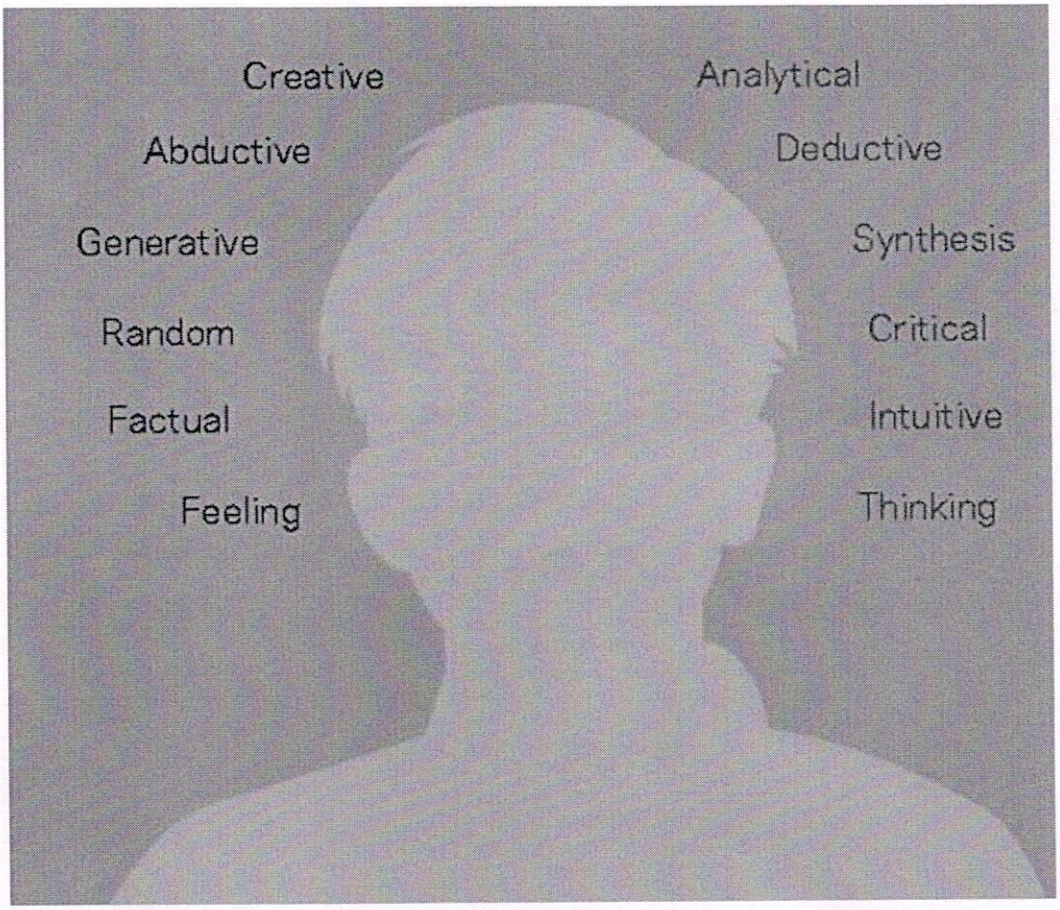
10 Problems Faced by Business

1. Uncertainty
2. Globalization
3. Innovation
4. Government Policy & Regulation
5. Technology
6. Diversity
7. Complexity
8. Information Overload
9. Supply Chains
10. Strategic Thinking & Problem Solving



Design thinking is being used by newer domains such as AI, MI, Deep Learning, Robotics, UI-UX

Manager a Bilateral Thinker with a new set of Skill Thinking Attitude



Two more reason to focus on it..

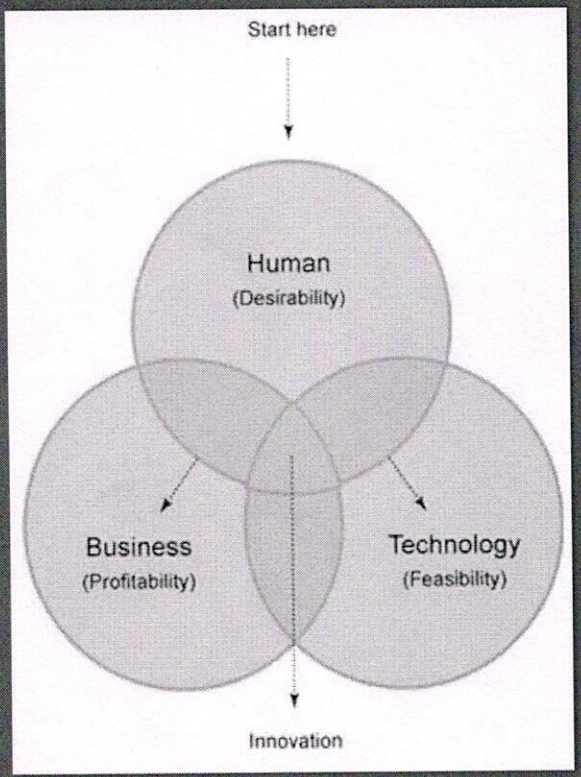
Companies are increasingly looking to hire people with Design Thinking Skills.

Glassdoor estimates salaries above US $100,000 for design thinking roles in the United States.

* Glassdoor is a website where employees and former employees anonymously review companies and their management.

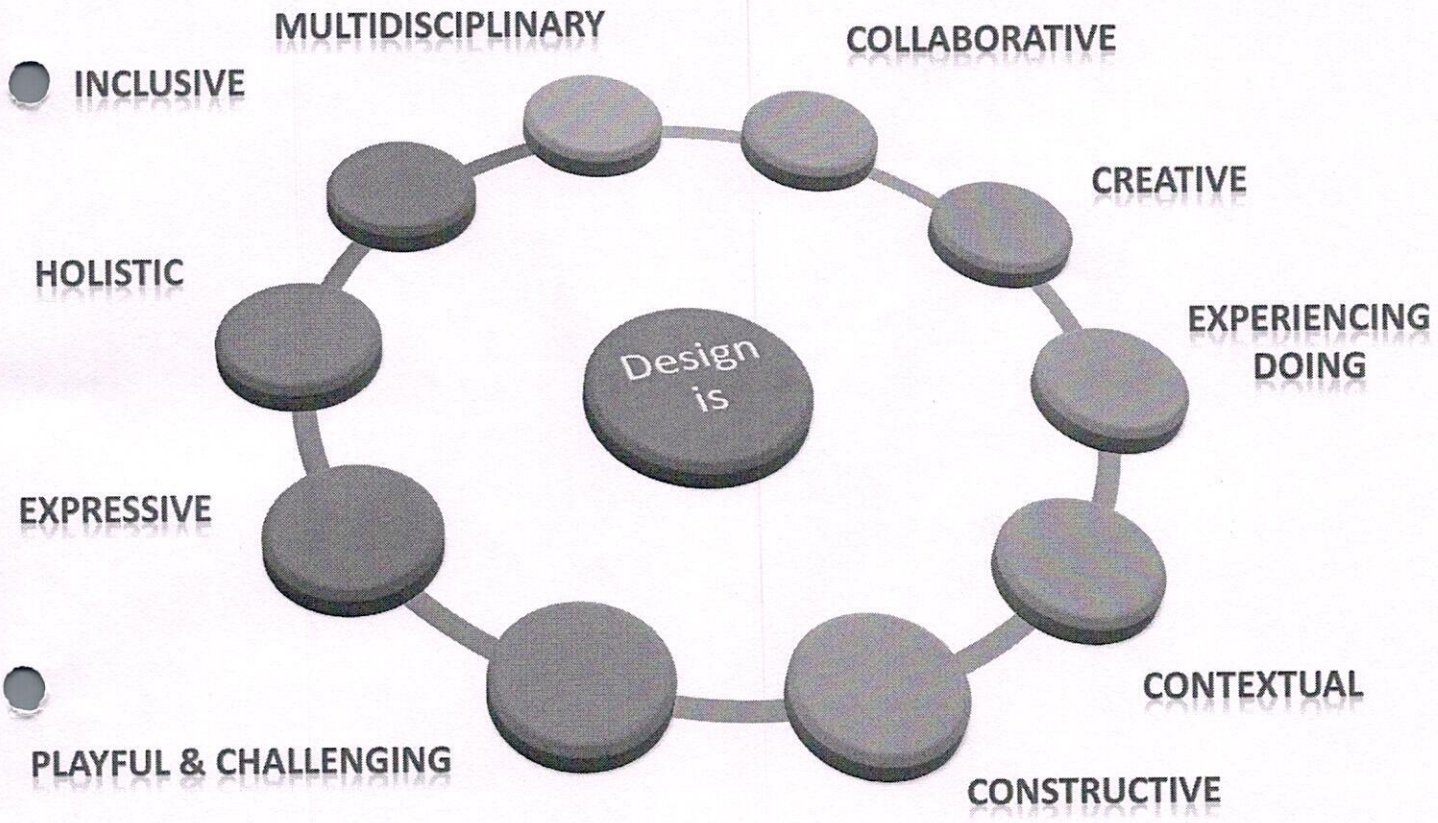
"(…)design thinking is a discipline that uses the designer´s sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity."

Brown, T. (2008). Design Thinking. Harvard Business Review, p.

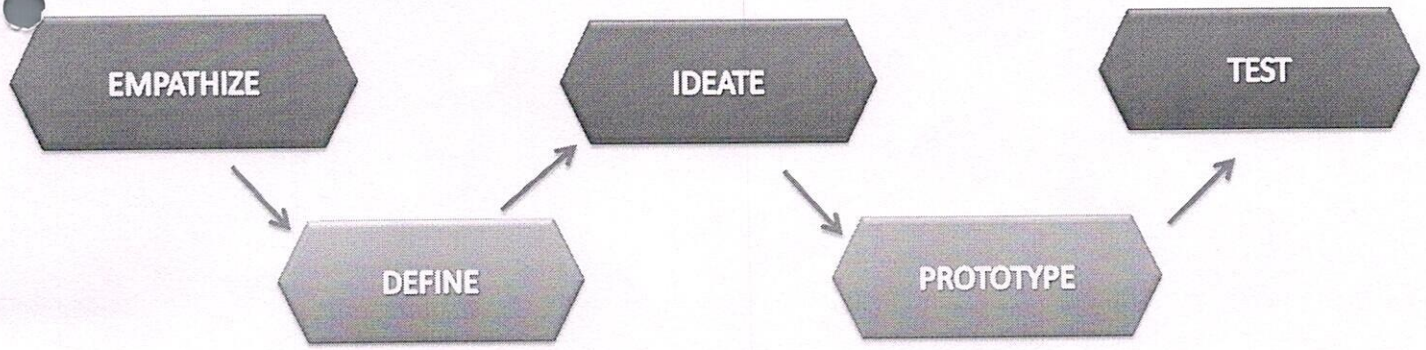


The popular Nintendo Wii is a good example of what happens when someone uses design thinking.

For many years a veritable arms race of more sophisticated graphics and more expensive consoles has been driving the gaming industry. Nintendo realized that it would be possible to break out of this vicious circle and create a more immersive experience by singing the new technology of gestural control. This meant less focus on the resolution of the screen graphics which in turn led to a less expensive console and better margins on the product. The Wii strikes a perfect balance of desirability, feasibility and viability. It has created a more engaging user experience and generated huge profits for Nintendo.


MULTIDISCIPLINARY
COLLABORATIVE
INCLUSIVE
CREATIVE
HOLISTIC
EXPERIENCING
DOING
Design
is
EXPRESSIVE
CONTEXTUAL
PLAYFUL & CHALLENGING
CONSTRUCTIVE

Design & Innovation Thinking Project



Stage	Empathize	Define	Ideate	Prototype	Test
cription	Knowing the users and caring about their lives: effort to understand the way people do things and why, their physical and emotional needs, how they think about world, and what is meaningful to them	Framing the right problem: making sense of the widespread information you have gathered	Generating the broadest range of possibilities: providing both the fuel and the source material for building prototypes and getting innovative solutions into the hands of the users	Building to think and testing to learn: generating artifacts intended to answer questions that get you closer to the final solution	Learning about the solution and the user: soliciting feedback about the prototypes you have created, from the users, and having another opportunity to gain empathy for the people you are designing for

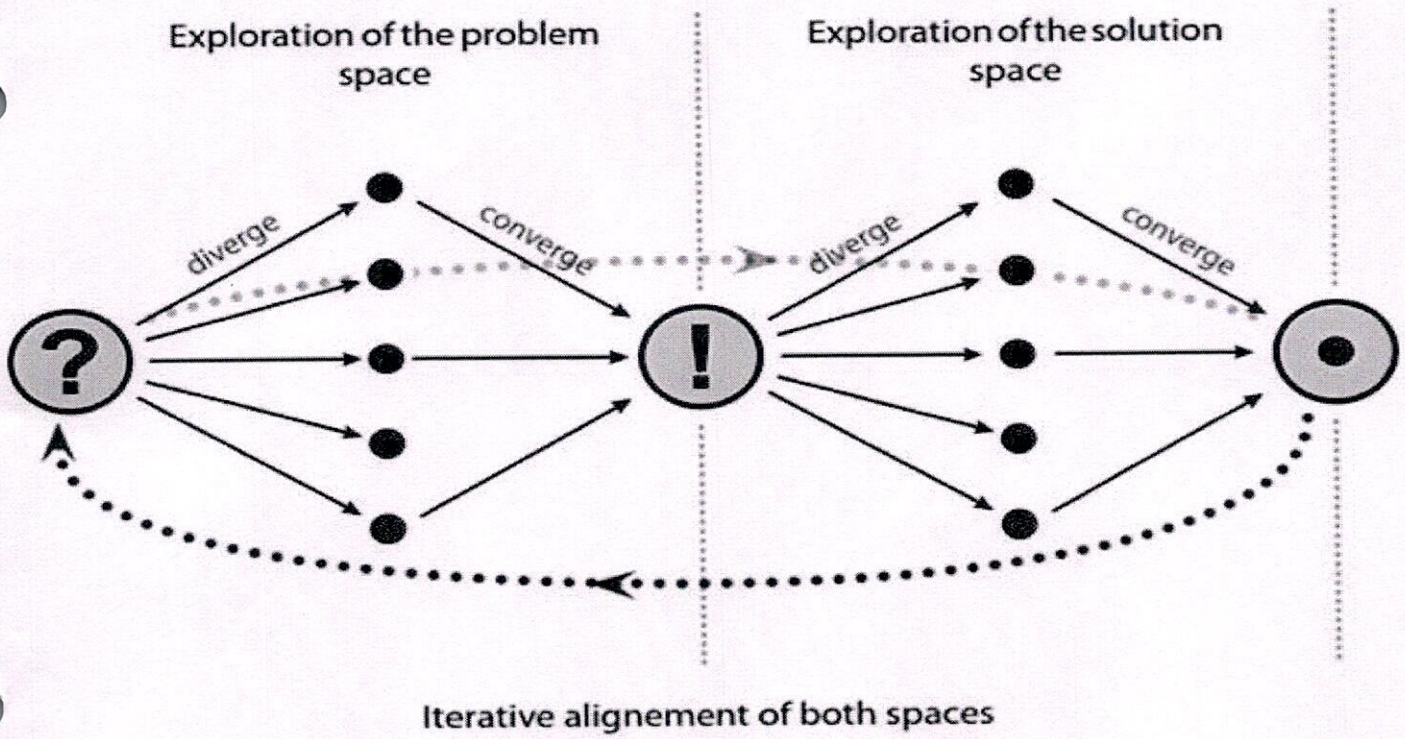


Figure 1. Basic Principles of Design Thinking Workflows [4]

Lessons from the Video Case

- Follow a step by step process based approach
- Being on time is critical
- Team work
- Get wild ideas – no idea is a bad one!!
- Stay focused on the project
- Optimistic hardworking culture
- Deep 'insights'
- Interviews with many stakeholders
- Variety and quantity of observations
- Asking the right questions, thus a good questionnaire
- 'Lots of Doing' than 'Saying'

Finding problems

Session outline for Problem Finding & Articulating

- Tools & Techniques – Observation & Empathy : 30 min.
- Field Work – 60 minutes
- Canvases – 15 min. x 2
- Problem Articulation : 45 min.
- Grace : 15 min.

Observation

Observation is useful for generating in-depth descriptions of organizations or events, for obtaining information that is otherwise inaccessible, and for conducting research when other methods are inadequate.

What problem were they trying to solve by making PepsiCo more design-driven?

As CEO, she **visited a market every week** to see what we look like on the shelves.

She always asked herself—not as a **CEO but as a mom**—"What products really speak to me?"

Had to Rethink innovation process and design experiences for consumers—from conception to what's on the shelf, 'As the products on the shelves were just products they were not experiences.'

Basically, they paid a lot more attention to user experience

How did they begin to drive that change? – 'OBSERVATION'

She gave each of her direct reports an **empty photo album and a camera and asked them to take pictures** of anything they thought represented good design.

- Observations made with respect to men and women to snacks,

When men finish a snack bag, they pour what's left into their mouths. **Women don't do that.**

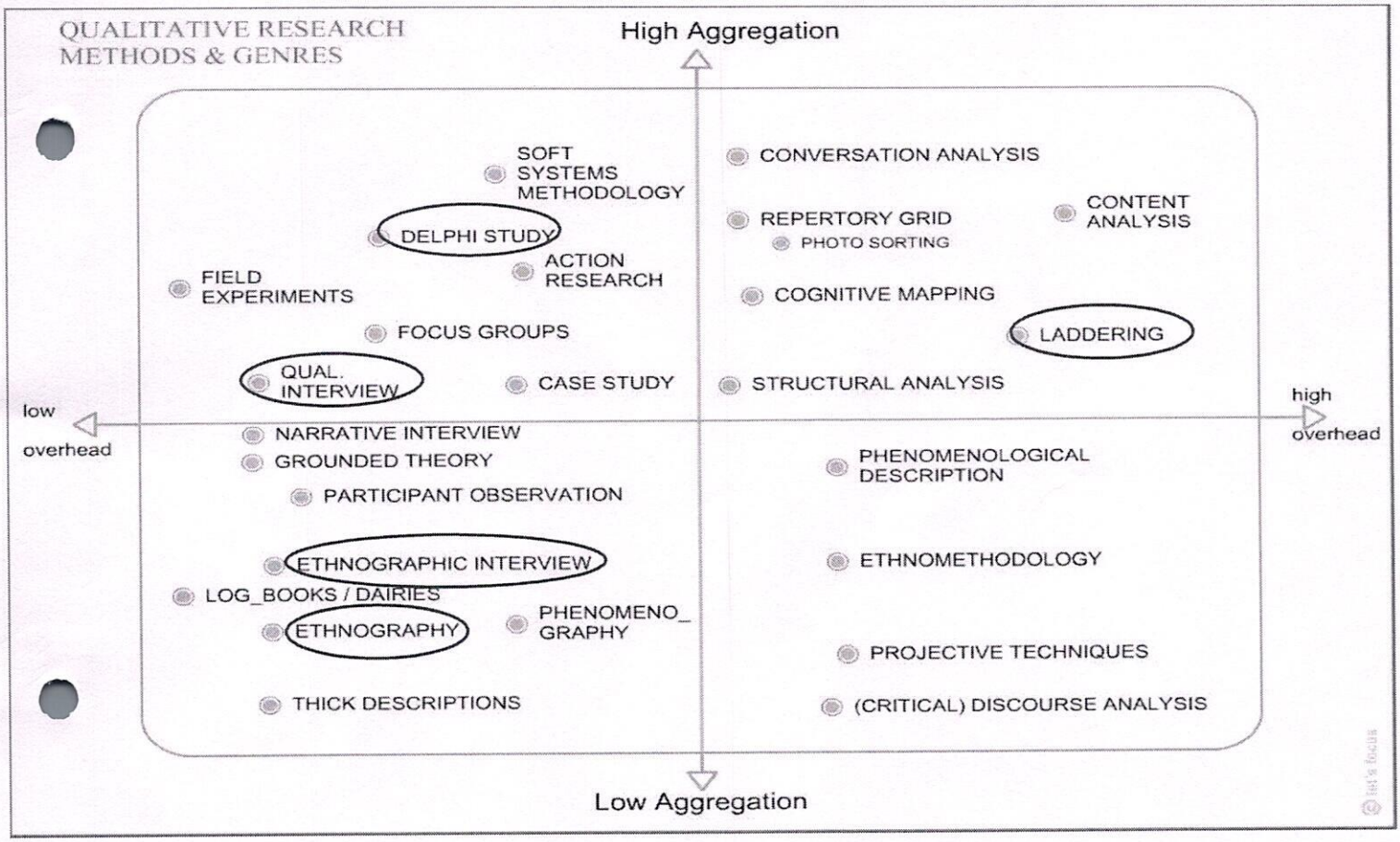
Women **worry about how much the product may stain a cloth—**

- **they** won't rub it on a chair, which a lot of guys do.

- Thus Pepsi Co introduced a **stacked chip that comes in a plastic tray inside a canister**. Why so that, w**hen a woman wants to snack, she can open her drawer and eat from the tray. When she's done, she can push it back in.**

- **The chip is also less noisy to eat: Women don't want people to hear them crunching away.**

Tools & Techniques


QUALITATIVE RESEARCH METHODS & GENRES
High Aggregation
SOFT SYSTEMS METHODOLOGY
CONVERSATION ANALYSIS
DELPHI STUDY
REPERTORY GRID
CONTENT ANALYSIS
PHOTO SORTING
ACTION RESEARCH
FIELD EXPERIMENTS
COGNITIVE MAPPING
FOCUS GROUPS
LADDERING
QUAL. INTERVIEW
CASE STUDY
STRUCTURAL ANALYSIS
low overhead
high overhead
NARRATIVE INTERVIEW
GROUNDED THEORY
PHENOMENOLOGICAL DESCRIPTION
PARTICIPANT OBSERVATION
ETHNOGRAPHIC INTERVIEW
ETHNOMETHODOLOGY
LOG_BOOKS / DAIRIES
ETHNOGRAPHY
PHENOMENO_ GRAPHY
PROJECTIVE TECHNIQUES
THICK DESCRIPTIONS
(CRITICAL) DISCOURSE ANALYSIS
Low Aggregation

Few ways

Set benchmarks :

- **Quantity of Observations : Min. 25 each,**
- **Variety of Observations : Min. 6 clusters,**
- **Quality of Observations : 3 unique insights**

–Observation : 15 photographs

Few ways

AEIOU

Activities	Environment	Interactions	Objects	Users
What do people do? What are the specific activities they go through?	What is the characteristics and functions of the space?	What is the nature of interactions between people and surroundings?	What are the objects people have in their environments ?	Who is there? What is their roles and behaviors?

Airbnb

In 2009, Airbnb was about to be closed - to going be ruined.

The company's revenue was flat-lined at $200 per week.

Split between three young founders living in San Francisco,

that lead to indefinite losses on zero growth.

- One afternoon, the team was poring over their search results for New York City listings with Paul Graham, trying to figure out what wasn't working, why they weren't growing.

- After spending time on the site using the product, Gebbia co-founder had a realization – 'insight'

- **"We noticed a pattern. There's some similarity between all these 40 listings. The similarity is that the photos sucked. The photos were not great photos. People were using their camera phones or using their images from classified sites. It actually wasn't a surprise that people weren't booking rooms because you couldn't even really see what it is that you were paying for."**

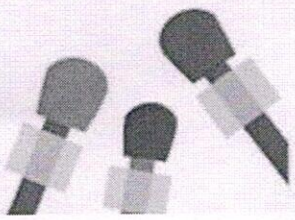
- Graham traveled to New York,
- rented a camera,
- spend some time with customers listing properties, and
- replaced the amateur photography with beautiful high-resolution pictures.
- The three-man team grabbed the next flight to New York and upgraded all the amateur photos to beautiful images.

- A week later, the results were in: improving the pictures **doubled the weekly revenue to $400 per week**.

Individual Interview

Telephonic (Short), In-depth Interview

Group Interview



You can come to a quick understanding of a community's life, dynamics, and needs by conducting a Group Interview.

Expert Interview

Experts can fill you in quickly on a topic, and give you key insights into relevant history, context, and innovations.

Creating the Questionnaire using..

5W & H :

- Lets Create questionnaires in teams of 4 + 4 (team splits into two) for each of these,
- Clue : Create questionnaire for,
    - Users, Experts, Other Stakeholders (please list)
- Now compare your questionnaire with other team members and choose the best questions

Creating the Questionnaire using..

- Laddering (7 Why) create interview questions, for indepth answers, usually after 3 whys one needs to stop as the answers now coming are personalized

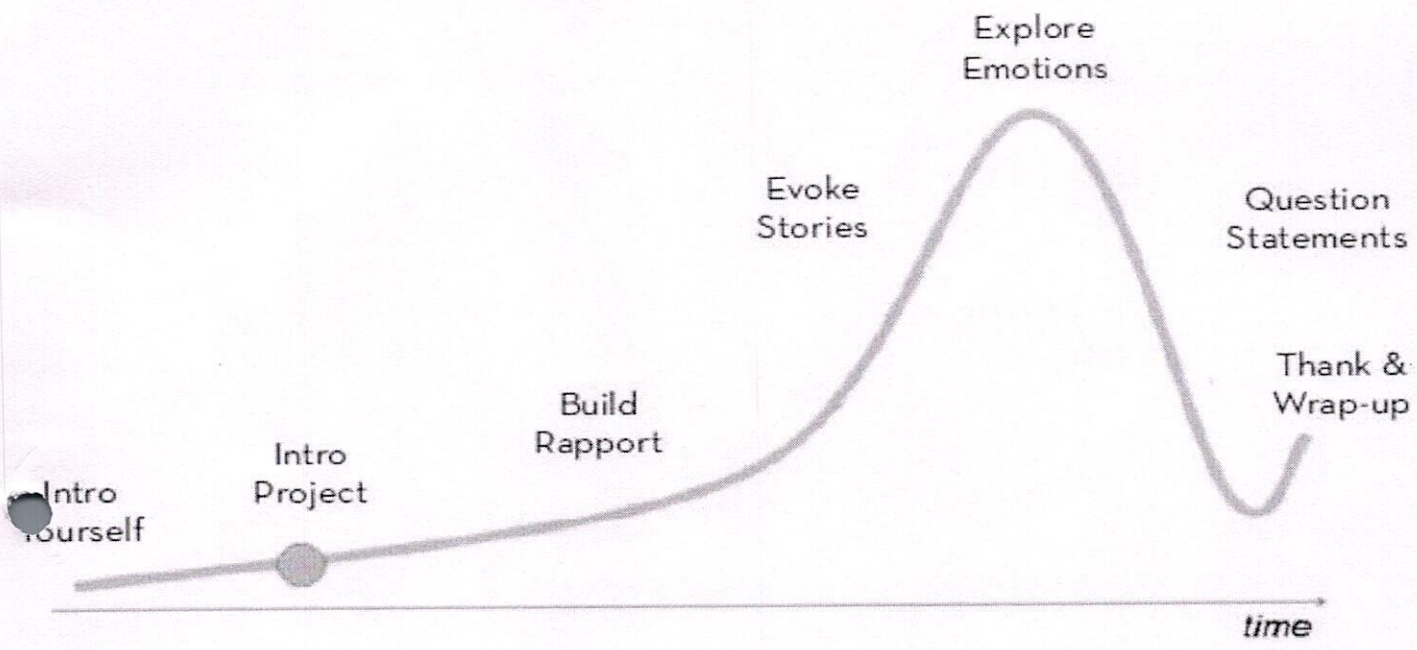
FINALIZE THE QUESTIONNAIRES

Remember to collect as many stories

You can also break the entire experience into specific

METHOD

INTERVIEW FOR EMPATHY



Set benchmarks :

» **Quantity of Interviews: Min. 25 each,**

» **Variety of Interviews : Min. 6 clusters,**

» **Quality of Interviews : 3 unique insights)**

» **Empathy : 5 videos**

» **Empathy Interviews**

- **User : Min. 4**
- **Expert : Min. 2**
- **Laddering : Min. 2**

Say, do, think, feel

AY section.

1. Write down here all the quotes from the interview that catch your attention as you review your notes.
2. Be as literal (honest) as possible (avoid changing the data)

DO section (optional).

1. If you observed the person in action, describe here behaviors you saw.
2. You can also combine interview and observation, by asking the person to walk you through what they are doing.

THINK and FEEL sections.

1. Here is where you will make inferences (educated guesses) about the meaning of what the person said.
2. What if you are wrong?
3. You may very well be, but if you don't take a leap and make inferences, you won't get at deep unexpected needs.
4. At later stages in the process you will get more data that will allow you to refine your understanding and definition of the problem.

Quick Presentation /group, show us…

Observation Canvas

- Min. 25 observations
- Min. 6 clusters
- Final 3 deep insights

Empathy Canvas

- Min. 25 observations
- Min. 6 clusters
- Final 3 deep insights

Share : "From the 6 deep insights

<u>select the top 1</u> or

<u>combine</u> the deep insights into top 1 insight"

Problem Articulation

"If I were given one hour to save the planet,

I would spend 59 minutes defining the problem and one

minute resolving it" - Albert Einstein

How do we create the HMW statement..

1. Cluster Related Information (5 min.)

- To start searching for meaning in all that you've discovered during your field research, your team will group your **learning into categories or buckets**.
- You can start by having every team member choose three Post-its they find most interesting. Place each of them on a large sheet of paper or spread them on the table in front of the team.
- Begin to look for more evidence of how these relate to one another. **Have any patterns emerged? Is there a compelling insight you heard again and again? A consistent problem the people you're designing for face? What feels significant? What surprised you? Start rearranging the Post-its into these new buckets.**
- Clustering will take some time. **Arrange and rearrange the Post-its, discuss, debate, and talk through what's emerging**. Don't stop until everyone is satisfied that the clusters represent rich opportunities for design.

2. Find Themes (5 min.)

- Effectively identifying themes and naming these clusters will help guide your insights and "How Might We" statements down the line. **Name the clusters you have defined**, e.g., "access to capital" or "problems with distribution." Continue to sort and rearrange the information until you feel your themes accurately represent your design research—**make sure no major themes are missing.**

3. Turn Themes into Insight Statements (10 min.)

- Your team will take a closer look at the themes you created for each of your clusters, as well as the stories that support these themes. Next, you'll transform each theme into a sentence, eg: "There is no financial incentive for distributors to deliver fruit in the community." **Write in full sentences. Each theme may result in multiple insight statements.**

4. Revisit Your Challenge

- Revisit the design challenge that you started out with: **How do your new insight statements relate to your challenge? Narrow down your insights to those that are most relevant to the original design challenge. Be prepared to let go of details that are less important. Try to limit your insights to the three to five most important ones.**

5. Refine Your Insight Statements (5 min.)

- Experiment with the wording and structure to best communicate your insights. **Create short and memorable sentences that get to the point**. Make sure your insights convey the sense of a new perspective or possibility. Consider inviting someone who is not part of your team to read your insights statements and check whether they resonate with an outside audience.

6. Create "How Might We" Questions (10 min.)

- Insights are most valuable when they can be used to generate inspiring new ideas. The trick is to transform your insight statements into **generative questions** which will become the springboard that your design team uses to brainstorm innovative new solutions. We call these questions "**How Might We" (HMW) questions**.

6 A . Frame Your Insights as Questions

During this step, you'll create generative questions that build off of the insight sentences that your team just created. **Start each statement with "How Might We...?" as an invitation for input, suggestions, and exploration. Generate multiple questions for every insight statement. Write them in plain, simple, and concise language**. Scoping a proper question can be difficult. Too narrow and you may hinder creativity, but too broad and it won't be actionable.

- Take a look at these examples:
  - How might we provide transportation options for distributors supplying fruit in low-income neighborhoods? This implies that the solution is related to logistics. By framing the HMW question so narrowly, we have limited the possible directions that the team can take during brainstorming. This statement is too narrow.
  - How might we sell more fruit in low income neighborhoods? This question doesn't give enough direction because it doesn't imply a starting point or immediately help people generate ideas around one category (such as distributors). This HMW statement is too broad.
  - How might we incentivize distributors to make fruit deliveries in low-income neighborhoods? This HMW question is better because it leaves open many possible directions that new solutions can take, including logistics, financial incentives, or even community pride. This HMW question is scoped properly.

7. Select the Top Three insights and merge them into ONE and create problem statement

- Your design team will select three of your best questions for your brainstorm session. Trust your gut feeling: Choose those questions that feel exciting and help you think of ideas right away. Also, select the questions that are most important to address and feel like they have the biggest opportunity for design solutions, even if they feel difficult to solve for.

- *Keep in Mind Not every insight is entirely new information. Often, you will find things that you knew about before, but your research may have given you a new perspective. Don't be shy about retelling these stories.*