USER-CENTERED DESIGN WORKSHOP
5th & 6th March 2020
New Delhi, India

citiis.niua.org
User Centered Design Workshop

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GRAPHIC DESIGN
NIUA Design Team
USER-CENTERED DESIGN WORKSHOP

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INTRODUCTION

The CITIIS (City Investments to Innovate, Integrate and Sustain) program is conceptualised to assist Indian cities in implementing urban infrastructure projects that are integrated, innovation driven and sustainable. The 12 selected projects will improve sustainable mobility, increase the amount of public open spaces, implement technology to improve e-governance and drive social and organizational innovation in low income settlements.

The program combines financial assistance through loans and grants along with technical assistance through mentorship. This assistance focuses on strengthening institutions by committing resources to systematic planning (maturation phase) before implementation, by developing results-based monitoring frameworks and by adopting technology for program monitoring.

CITIIS is supported by the Ministry of Housing and Urban Affairs (MoHUA), Agence Française de Développement (AFD) and the European Union (EU). The aim of the project is to provide financial assistance by way of grants and technical assistance through international and domestic experts. The project is being
coordinated and managed by the Program Management Unit (PMU) at the National Institute of Urban Affairs (NIUA) in New Delhi.

The program is spread across five stages of ideation and conceptualisation, dissemination, rollout, maturation and implementation. The maturation phase is planned to strengthen and refine the selected projects through CIIIS expertise of technical assistance. User Centered Design is a critical element of this process. As the projects move forward with designing and prototyping their project scenarios it was important to understand the process and incorporate elements of the UCD approach.

The workshop was envisioned as a forum for the SPVs, domestic experts, partners, external experts and the PMU to exchange experiences, ideas and best practices. It was also an opportunity for all the stakeholders to interact with each other, understand the need and importance for a user-based design.

This report provides an overview of the workshop, background information, objectives and summary of the presentations and discussions.
OBJECTIVES

User-centered design (UCD) is an iterative design process in which designers focus on the users and their needs in each phase of the design process. In UCD, design teams involve users throughout the design process via a variety of research and design techniques, to create highly usable and accessible products, services and systems for them.

The objective of this two-day workshop was to introduce the User Centered Design process to the SPVs, Domestic Experts and the PMU through a range of presentations, hands-on exercises and physical prototyping methods. The intent is to make sure that the participants understand the core concept of keeping users at the center of their design and learn it well by understanding users, prototyping the solution and testing it with users.

The facilitators, provided tools to participants which can be used for user centered design through a range of presentations and exercise.
Workshop Design
The workshop was designed to encourage exchange of knowledge and ideas through:
- Sessions that gave an overview of the User Centered Design process and its role in the projects
- Interactive sessions on user centric design approaches
- Talks by external speakers on global best practices and the need for public engagement in project design and implementation
- Designing and prototyping of real-world approaches to better understand the different steps in the process.

Workshop Format
Preliminary work to design the workshop was undertaken in collaboration with Mr. Anant Tambade and Sarang Ganoo to ensure that the workshop meets the expectations of the participants. An outline for the workshop was prepared focusing on the structure of the program. Key speakers were identified to deliver presentations and case study materials that would illustrate the best approach, both in theory and practice. Time was built into the workshop for experts and SPVs to work together and reflect on different themes and issues, ask questions and clarify points of detail, as well as to exchange ideas and other information about good practice, encourage networking and collaboration.
SESSIONS
PRESENTATION ON
USER CENTRIC DESIGN

Objective of the Session

The introductory session aimed at developing a common understanding amongst the participants about User Centric Design (UCD) as a process that starts with the people you’re designing for and ends with new solutions that are purpose-built.

The concept of design thinking was explained in detail to the participants through a presentation and videos. The aim was to showcase the different ways in which concepts of user centric design can be assimilated in any project design and implementation process, to make them best suited to user needs.

In addition, the various stages in a design thinking process was explained to the audience. The design thinking process covers five steps:

Stage 1: Empathize—Research Your Users’ Needs
Stage 2: Define—State Your Users’ Needs and Problems
Stage 3: Ideate—Challenge Assumptions and Create Ideas
Stage 4: Prototype—Start to Create Solutions
Stage 5: Test—Try Your Solutions Out

The participants were encouraged to develop a nuanced understanding of this iterative process as one that consists of different modes which contribute to the entire design project, rather than the stages being sequential steps. Also, that the ultimate goal throughout the process is to derive as deep an understanding of the product being designed and its users as possible.
Discussions

While conducting the session, Anant and Sarang emphasised that the participants should use the learnings from the session and apply it in practice in further sessions as well as to their respective projects in the cities. The audience was shown a video of Donald Norman who is one of the leading thinkers on human-centred design, in which he talks about human-centred design (HCD) as not about following processes but about being mindful of HCD principles, that focus on people and the entire interconnected system to solve the ‘right’ problems.

The five stages were explained to the participants with the help of examples — of situations that development practitioners encounter in day-to-day operations. The first stage of empathising with the end user allows one to gain a deep understanding of the problem to be solved, without making any assumptions. By accumulating information gathered in stage 1, one can analyse observations and synthesise them to define the core problem. Ideation allows one to look for alternative ways to view the problem and identify innovative solutions to the problem statement generated in the first two stages. This is to be followed by prototyping a number of inexpensive, scaled-down versions of the product to investigate the problem solutions generated in the previous stage. The best solution identified in the prototyping stage is then tested as the final model in stage five.

Learnings

- The participants were made to critically think of the UCD process as one that is iterative, where the results generated are often used to redefine one or more further problems.
- It is advisable to return to previous stages in the process to make further iterations, alterations and refinements to rule out any alternative solutions.
CREATING A USER PROFILE AND PROBLEM STATEMENT

Objective of the Session

The idea behind this particular session was to introduce participants to stage 1 and 2 of the design thinking process. During this session participants built user profiles and created problem statements during a hands-on activity.

The facilitators, Anant and Sarang iterated that user-profiles are developed with an intent to understand users’ needs. It typically helps to answer:
- Who are the key users?
- What are their goals, interests and day-to-day activities?
- What are the current problems and how do they comprehend them?
- What are their perceived probable solutions to stated problems?

Training Activities

Participants were divided into seven randomly selected groups and each group was provided with one design-challenge. The intention was to allow them to learn the process of “User-Centric Design” through a hands-on project.

Design-Challenges

<table>
<thead>
<tr>
<th>Group-1</th>
<th>Design the dashboard view for healthcare application</th>
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<tbody>
<tr>
<td>Group-2</td>
<td>Design an e-rickshaw</td>
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<tr>
<td>Group-3</td>
<td>Design charging stations for e-vehicles</td>
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<td>Group-4</td>
<td>Design a signage system for a public open space</td>
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<td>Group-5</td>
<td>Design a bus-stand</td>
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<tr>
<td>Group-6</td>
<td>Design a park bench</td>
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<tr>
<td>Group-7</td>
<td>Design 300 sq. ft. house</td>
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</tbody>
</table>

As a first step each group was asked to form a hypothesis. Participants presented a general idea of various users who could relate with the presented design-challenge and then unanimously chose one user to develop a persona.
In the second step, the persona was developed to be as realistic and representative as possible. The teams used a template as a guide to create an engaging persona. The template allowed them to reflect on demographic details, interests, daily routine, likes/dislikes, motivation and power dynamics.

Each group was directed to prepare a scenario, featuring personas in the role of a user, in the third step. The scenario identified a context where users certain problems that need to be addressed.

Using the information from previous sessions and the current activities the participants defined a problem statement. The problem statement, provided a fixed goal to focus on and guide the entire design process. Therefore, it was imperative to understand exactly which problems one is trying to solve for the user.

Discussions

This sessions discussed in detail the four-step approach that could be taken while drafting a problem statement. The approach highlighted the importance of contextualising the problem and understanding constraints while designing possible solutions.

The discussions highlighted the significance of framing the challenge as a design question. The design question needed to answer the 4 W’s: Who, What, Where and Why?

The answers were sought to, WHO are the potential users? WHAT problems are being faced by these users?, WHERE are the said problems placed in the larger context? and WHY is it important to address these problems?

Learnings

- All the participants worked in their assigned groups and submitted their perceived ideas to each other. Multiple perspectives, brought forward by participants, sparked effective conversations.
- Participants became more thoughtful towards various approaches that were taken to address a particular design-challenge.
- Creating personas and user-profiles provided a realizationW that designers’ assumptions might not be an effective representative of the on-ground situation.
- Users and their needs should be kept at the centre while defining a problem statement.
CONCEPTUALIZING IDEAS THROUGH SKETCHES

Objective of the Session

Through this session the SPVs, Experts and the PMU married their user profile and problem statement with a preliminary design that would best serve their users.

The participants were working in teams and each team member introduced an element of design that they thought would be most beneficial to the final design. Teams had discussions within themselves to narrow down and refine all the design elements that were contributed. The final product was a cohesive plan for the space and the people who would ultimately be the beneficiaries of the project.

Discussions

Since the teams were assigned in no particular order each member came from a different background, project and focus. This exercise allowed them to bring all of their ideas together and understand each other’s projects.
The experts spearheaded the project, asking their participants questions and suggesting iterations to their designs. The process of conceptualising designs was very methodical and followed the process of UCD thinking. Together the teams relied on the pillars of empathy, definition and ideation to create a prototype. They focussed on their specific user profile and problem statement to come to a unanimous decision of what the prototype should include and whether each element is useful to their end user.

**Learnings**

- The session focussed on a key aspect of collaboration and teams were encouraged to listen to one another, consider their proposals and then add them to the prototype design.
- Another key learning was that through this process of conceptualising ideas the user must be at the centre of the process and one must continue to re-visit their needs as they develop the design.
- Each element that is conceptualised will be different but, together the teams found a way to bring them all together.
USER RESEARCH – TEST

Objective of the Session

After an intense day of Empathizing, Defining, Ideating and Prototyping, the challenge in front of participants was to go back to the users whom they designed for.

In the case of this workshop, each group presented their prototype to another group. This other group is the representative of the persona of the user group that was chosen for the prototype to begin with. This user group was encouraged to ask questions and the designers were encouraged to not only answer but also observe and take notes of this interaction which holds the insights that they take with this learning out of the controlled environment of the workshop.

Discussions

During the session a participant expressed that this process has helped in demystifying the design process that he was unaware of, even for the projects other than CITIIS. This step emphasises on one of the key values of CITIIS program i.e. participation. We encourage participation as a best practice throughout the project lifecycle, not just at the beginning and the end.
A key component of CITUSS is also a maturation framework which defines a 5-step project structuring methodology, based on design thinking process. The objective is not only to infuse innovation in the project but also imbibe values of stakeholder engagement, capacity building and environmental and social risk assessments as part of the project lifecycle.

All the participants presented their design models and answered questions from their peers which helped in rationalizing their design decisions and encouraged them to think of their end users.

**Learnings**

- The session focussed on a key aspect of collaboration and teams were encouraged to listen to one another, consider their proposals and then add them to the prototype design.
- Another key learning was that through this process of conceptualising ideas the user must be at the centre of the process and one must continue to re-visit their needs as they develop the design.
- Each element that is conceptualised will be different but, together the teams found a way to bring them all together.
COMMUNICATION AND OUTREACH

Objective of the Session

The session was based on the programmatic need for a communication and outreach plan as defined in the maturation framework. For this, it was emphasized that if a project is creating content for the project communication it should have perspectives from both the stakeholders and beneficiaries.

The session defined the 6 key steps necessary in creating a useful communication plan. It addressed the needs for creating an online presence and how that can be done. The session also outlined the branding guidelines the projects should follow so as to create communication that has a recall value and brand identity for their projects as well for the CITIIS program overall.

Discussions

For this session the SPVs worked with their experts through the 6 steps which included:
- Identifying the key objectives of their communication
Who their target audience is?  
What are their key messages?  
Identifying mediums of dissemination  
Establishing a timeframe  
Drafting a budget

Each of these steps were addressed in the session keeping specific projects at the center. The SPVs and experts worked together through each step, asking questions and clarifying doubts as they went along.

The second aspect of the session focused on branding guidelines which included visual guidelines for photographs on the field, portraits of beneficiaries, focus on the subject, focus on the issue, portraits of stakeholders and teams.

When working on projects that involve a number of users and stakeholders focusing on improving their everyday lives it is essential to build a rich library of photographs. Documenting such projects is important not only for the projects at hand but also to develop learnings and best practices for future projects that are similar.

Learnings

- A comprehensive well-defined communication and outreach plan is necessary to drive a project to its target groups.
- Creating the plan involves 6-steps which, when followed simplify the process and achieve the goal.
- Branding guidelines are very important for creating awareness and a knowledge of the work being done.
- When followed, these guidelines enable a wider reach and recall for the projects and the CITIIS program.
PARTICIPANT FEEDBACK

Relevance
More than 60% of the participants expressed that the User-Centric Design Workshop was timely since the projects are in their maturation-phase. During this phase the SPVs are expected to engage with citizens, understand their needs and aspirations and design respective CITIIS projects which are responsive to their needs.

Group activities provided an interesting platform for participants to understand various elements of project design. A key learning was how preliminary design concepts can be improved through exchange of ideas, discussions, presentations and sharing of prototypes.

Participants found the communication and outreach session highly relevant. They were introduced to a variety of methods in which stakeholders can be engaged while keeping CITIIS specific guidelines for Engagement activities in mind. Participants found the discussion on how to document such engagements and communications very useful.

Overall, participants conveyed that the sessions were short, crisp, relevant and understandable.

Feasibility
Nearly 60% of the participants felt that the design-thinking approach can be applied to CITIIS projects, however, the process would be time-consuming. Some participants were of the opinion that steps in the design-thinking process do not coincide with the steps taken by the government while planning and implementing any development project.
Thus, it would be interesting to see how these two approaches can be integrated to reflect upon the problems of the end-users.

More than 85% of participants agreed that the instructions and guidelines shared by the speakers during communication and outreach session could be incorporated in CITIIS projects.

**Practicability of the concepts shared during the workshop**

| Steps to draft a Communication and Outreach Plan | 86.7 |
| Design-Thinking Process (Empathize > Define > Ideate > Prototype > Test) | 60 |

Percentage of respondents finding the concept applicable to CITIIS project

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**Key Takeaways**

The User-Centric Design Workshop provided a platform for peer-learning to participants from twelve CITIIS-SPVs. Participants were able to learn a comprehensive approach to project designing. Thwe approach, illustrated through various planned activities, helped participants to apprehend how understanding and prioritizing the needs of end users while designing a project could play a significant role in effective implementation of the project. Activity which involved developing personas and user-profiles made the participants realize the presence of multiple stakeholders with differing interests, powers and goals and every possible project design would affect each of the stakeholders, differently.

Participants appreciated a special session on ‘Communication and Outreach of projects’ in which presenters talked in length about stakeholders’ engagement, various mediums of communication with timelines and time frame, use of social media and CITIIS specific guidelines.

**Apertures**

Participants expected to gain a deeper understanding of the design-thinking process through project-specific discussions.

They requested for Indian case-studies as this could bring more clarity on the nature of challenges that arise during different phases of a project and how those challenges are addressed keeping contextuality in mind.

It was highlighted that since Communication and Outreach Plan is considered as one of the deliverables under Maturation Framework, more time should have been given to that session.
A number of steps were discussed in order to build on the work started and maintain progress:

- Developing prototypes for the Quick Win Project of the Maturation Phase
- Using the processes of UCD at the heart of projects as they move to the end of the Maturation Phase and on to implementation.
- Developing a communication and outreach plan
SPEAKERS

**Anant Tambade**, is a design evangelist and a TEDx Speaker with more than 17 years of global experience in various fields of design and user experience. He has worked on many successful projects in the domain of experience design, consumer appliances, electronics, packaging and branding. Currently, he is the Director for the Experience Design Center of Amdocs in India and leads a team of 25 designers working on designs of multiple software solutions for the telecom industry. Some of the prestigious on-going projects include experience design for large scale digital transformation for telecom companies in US, Malaysia, Russia and Philippines.

**Sarang Ganoo**, creates desirable Industrial designs, viable Business and service models, reaching from far out to the future to the implementable solutions in the present scenario. He also creates micro-farms for restaurant, cafes, AOF residences and kitchen composting systems. The aim of the Kitchen Compost system is to by 2022 compost 5% of the 50 biggest cities in India creating nutritious soil in the city. This will help us grow community gardens on rooftops and open spaces.

**Radhika Takru**, is the Regional Communications Manager for AFD in South Asia. She has a background in development communications, with specific experience in developing digital communication around overcoming gender-based violence and discrimination. She has a Master’s degree by coursework in media and communications as well as a Master’s by research on online journalism and critical authority from Monash University.

**Nidhi Misra** is a development communication specialist with over five years’ experience in bringing together stakeholders, unpacking and communicating research. She has managed projects for a wide set of clients, from international development organizations, to local research and aid groups. Nidhi has also worked in research and advocacy, as a research and outreach associate. She worked with non-governmental organisations that defended the rights of waste workers, the homeless, and slum dwellers, to access social benefit schemes, formal employment, and affordable housing. An alumnus of the Asian College of Journalism, Nidhi reported issues of urban development for Mint in New Delhi.
# LIST OF ATTENDEES

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<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>SPV</th>
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<tr>
<td>Pranjali Deshpande</td>
<td>Domestic Expert CS Mobility</td>
<td>SPV</td>
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<td>Shahena Khan</td>
<td>Domestic Expert</td>
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<td>Swati Janu</td>
<td>Domestic Expert</td>
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<td>Sharath Chandra Holla</td>
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<td>Gurmeet Rai</td>
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<td>Vidhya Mohan Kumar</td>
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<td>Seetha Raghupathy</td>
<td>Domestic Expert</td>
<td>BSCL</td>
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<td>Raman Sharma</td>
<td>PEPO</td>
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<td>Rajeev Giri</td>
<td>Environment Nodal officer</td>
<td>ASCL</td>
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<td>Munna Kumar</td>
<td>Social Nodal officer</td>
<td>ASCL</td>
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<td>Bibhuti Bhusan Barik</td>
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<td>S. Manickadeepan</td>
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<td>J. Soma Sundaram</td>
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<td>Ar. Anita C Jakkappanvar</td>
<td>Urban Designer CITIIS, Hubballi</td>
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<td>Dr. Rajani Iyer</td>
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<td>Shrutika Wadre</td>
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<td>Keertana Tangamaneni</td>
<td>Component lead Skill Development , Amaravati</td>
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<td>Lakshmi Sahita Rachapudi</td>
<td>Architect Lead- E sub Centre</td>
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<td>Sankeerthana Ananthula</td>
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<td>M.V. Rao</td>
<td>CE</td>
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<td>Ira Mohanty</td>
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<td>Ashok Choudhary</td>
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<td>Rashmi Ghosh</td>
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<td>Debjyoti Dam</td>
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<td>Siddhi Dubev</td>
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<td>Binnya Joseph</td>
<td>Project In charge, Kochi</td>
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<td>Raj Cherubal</td>
<td>CEO Chennai</td>
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<tr>
<td>Anant Tambade</td>
<td>workshop Co-ordinator</td>
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<td>Sarang Ganoo</td>
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<td>Aiswarya k</td>
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<td>Manal Zia</td>
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<td>Anandita Kaur</td>
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<td>Sabareesh</td>
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<td>Neha Dobhal</td>
<td>Environment &amp; Social Nodal officer</td>
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<td>Abhishek. D</td>
<td>Project Assistant, GVSCCl</td>
<td>Visakhapatnam</td>
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<td>Swapnil Saxena</td>
<td>Program Officer</td>
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<td>Akanksha Laroiya</td>
<td>Junior Planner</td>
<td>PMU</td>
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<td>Nidhi Misra</td>
<td>Communications Specialist</td>
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<td>Pranay Bharadwaj</td>
<td>Tech lead</td>
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<td>Naim Keruwala</td>
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<td>Siddharth Pandit</td>
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<td>Abdul Mabood</td>
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<td>Anjum Dhamija</td>
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