

INNOVATIVE DESIGN CREATION PROCESS

WORKBOOK



"The contents of this workshop were developed, in part, by the Wireless RERC and RERC TechSAge under grants from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant numbers 90RE5007-01-00 and 90RE5016-01-00 respectively). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this workshop do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government."

DESIGNING SOLUTIONS

Workshop Organized by:





PROBLEM FOCUS AREA

Personas



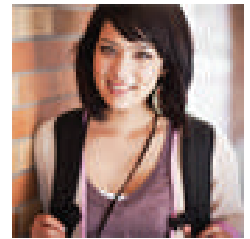
Sarah



Otis



Martha



Kim

- STEP 1 MEET YOUR TEAM
- STEP 2 DEFINE A PROBLEM
- STEP 3 DESIGN A SOLUTION
- STEP 4 PRESENT A CONCEPT
- STEP 5 NEXT STEPS

MEET YOUR TEAM



(5 Minutes)

- 1 Each member should provide a 20-second introduction including:

 - University/College/Company and program of study
 - One sentence to describe your primary expertise related to TECHNOLOGY and/or ACCESSIBILITY/UNIVERSAL DESIGN (e.g., I am a researcher designing technological innovations to benefit people with disabilities and older adults)
 - Print your name on the Team Member list provided on the table
- 2 Designate a scribe for your group who can capture important ideas and get them on paper. List that person next to “SCRIBE” on the Team Member list.
- 3 If you don’t have a team leader, appoint one now. List that person next to “LEAD” on Team Member list.



DEFINE A PROBLEM

(20 Minutes)

- 1 INDIVIDUAL ACTIVITY (2 minutes):** Using your persona _____, fill in the following chart considering problems or needs that the individual could be experiencing.

What is the problem/need?	Why is it important to solve problem/need?
1.	1.
2.	2.
3.	3.

- 2 TEAM ACTIVITY (5 minutes):** Add each team member's idea of a problem (what and why) to the flip chart.

- 3 TEAM ACTIVITY (3 minutes):** Which of those problems/needs may benefit most from new technology-based solutions? Vote on **3** to discuss in greater detail. NOTE: You will choose 1 of these to address in your concept design. Place a * next to each that topped the list.

EXPANSIVE THINKING



- 1** **TEAM ACTIVITY (5 minutes):** For these 3 problems/needs, discuss in greater detail and get closer to settling on 1 problem to solve. Some possible discussion points:
- a. Who is going to benefit from solving the problem (stakeholders)?
 - b. Who might be the true market for a solution to this problem (buyers/users)?
 - c. What solutions already exist?



DESIGN REQUIREMENTS

(10 Minutes)

Define the most important elements/features your solution will require to address the needs and succeed in the market and write them on the flip chart under the Design Problem.

NOTE: Consider similar solutions. What works and what doesn't? Why? How can you improve on existing solutions?

For example,
The medication dispenser must:

- 1 be user friendly
- 2 be acceptable for use in the home
- 3 alert the user when it is time to take medication
- 4 dispense medications reliably on demand or at a specific time.
- 5 not allow overdose ...

CONCEPT DESIGN



(15 Minutes)

STEP 1

- 1 TEAM OR INDIVIDUAL ACTIVITY:** Brainstorm up to 5 solutions to your problem. You may try this as a large group, as smaller groups or as individuals, then come back together and discuss each.

- 2 CHOOSE 1 SOLUTION:** Some solutions may meet more design requirements than others. Reject those that don't meet the requirements. You may combine the elements of others in the next step, but one concept should be the basis for developing the final concept.



CONCEPT DESIGN

(15 Minutes)

STEP 2

TEAM ACTIVITY: Develop your solution further. Work as a group to refine and improve all aspects of the solution. Remember to design for the needs of the user(s) and thinking of UD.

Work toward a visual representation of all the elements considered. Write a short description. Include both this description and this visual on the flip chart.

PRESENTATION



(5 Minutes)

Each team will give a brief presentation about their problem and design concept(s).

- 1 A Project Title and Team Member names
- 2 Your persona
- 3 Your Design Problem description
- 4 Design requirements
- 5 A visual representation and short description of your solution





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EXPANSIVE THINKING



(5 Minutes)

- 5 Write a Design Problem description at the top of the NEXT flip chart page in the format of “Who needs What because Why”?