



PROJECT SAMMAAN

Communal Sanitation For Urban Slums In Orissa

USI Matchmaking Conference

Sammaan: Dignity & Respect

An urban infrastructure project designed with rigorous impact evaluation in mind.

A

Project Overview

Project Sammaan is an urban infrastructure project that seeks to design & build improved sanitation facilities in the cities of Bhubaneswar & Cuttack.

119 toilet facilities (87 community sanitation facilities & 27 public sanitation facilities) will be built in Bhubaneswar & Cuttack between 2012-2013.

60,000 + people in Bhubaneswar & Cuttack are expected to directly benefit from this.

B

Project Goals

Provide a replicable model of improved sanitation for urban slums that get used and sustained

HW Challenge

- Design facilities that people want to use
- Design facilities that adequately address unique sanitation needs

Are complementary services cost effective & do they drive adoption ?

SW Challenge

- Facility Level: Design facility management systems that ensure sustainability
- User Level: Design household and community behavioral interventions and marketing to encourage use

Should toilets be run by professionals or communities ?

Can we make toilet use a habit ?

C

Planned Improvements

These upgrades will comprise of 5 different types of improvements, three of them at toilet facilities and one of them, a capacity building intervention at municipal corporations, and demand generation in communities.

Capacity Building

- Program Management Office designed and deployed at to enable rollout and management of sanitation services in Bhubaneswar.

Demand Generation

- Sanitation demand generation activities executed with the help of community NGO at slum locations within Bhubaneswar

Experimental Layer

- Additional utilities such as bathing areas, areas for washing clothes, facilities to manage menstrual waste
- Complementary products provided to users: children's potty seats

- Two different types of toilet management systems: private contractor management or community management
- Household level payment systems that enable higher levels of adoption

Base Layer

- Sufficient number of toilet seats designed for universal access
- Washbasins
- Water Supply
- Professional Branding Of Toilet Facilities + Caretaker
- Aesthetics: art, landscaping
- Functional: Natural lighting + ventilation
- A professional branding system at the facility + community level

Hardware

Software

D

Randomized Impact Evaluation - Toilet Level

Management Models

Community Managed**Private Vendor Managed****Enhanced Layer****Design 2****Design 4**

Architecture Models

Base Layer**Design 1****Design 3**

E Project Consortium & Roles

Project Sammaan is an example of how a complex Urban Infrastructure project can be designed and evaluated

	JPAL	Quicksand	Bhubaneswar + Cuttack Municipal Corporations	Feedback Foundation	CFAR
Project Scope	X	X	X		
Locations	X	X	X	X	
Sanitation Facility Design		X			
Community Engagement					X
Sanitation Facility Construction		X	X		
Design Facility Management Models	X	X	X		
Design Behavior Change Interventions	X				
Implement Behavior Change Interventions	X			X	X
Data Collection + Evaluation	X				

Design

1

Design-Led Innovation Process

Design research is a methodology that is intrinsic to robust program / product / service development

empathise

define

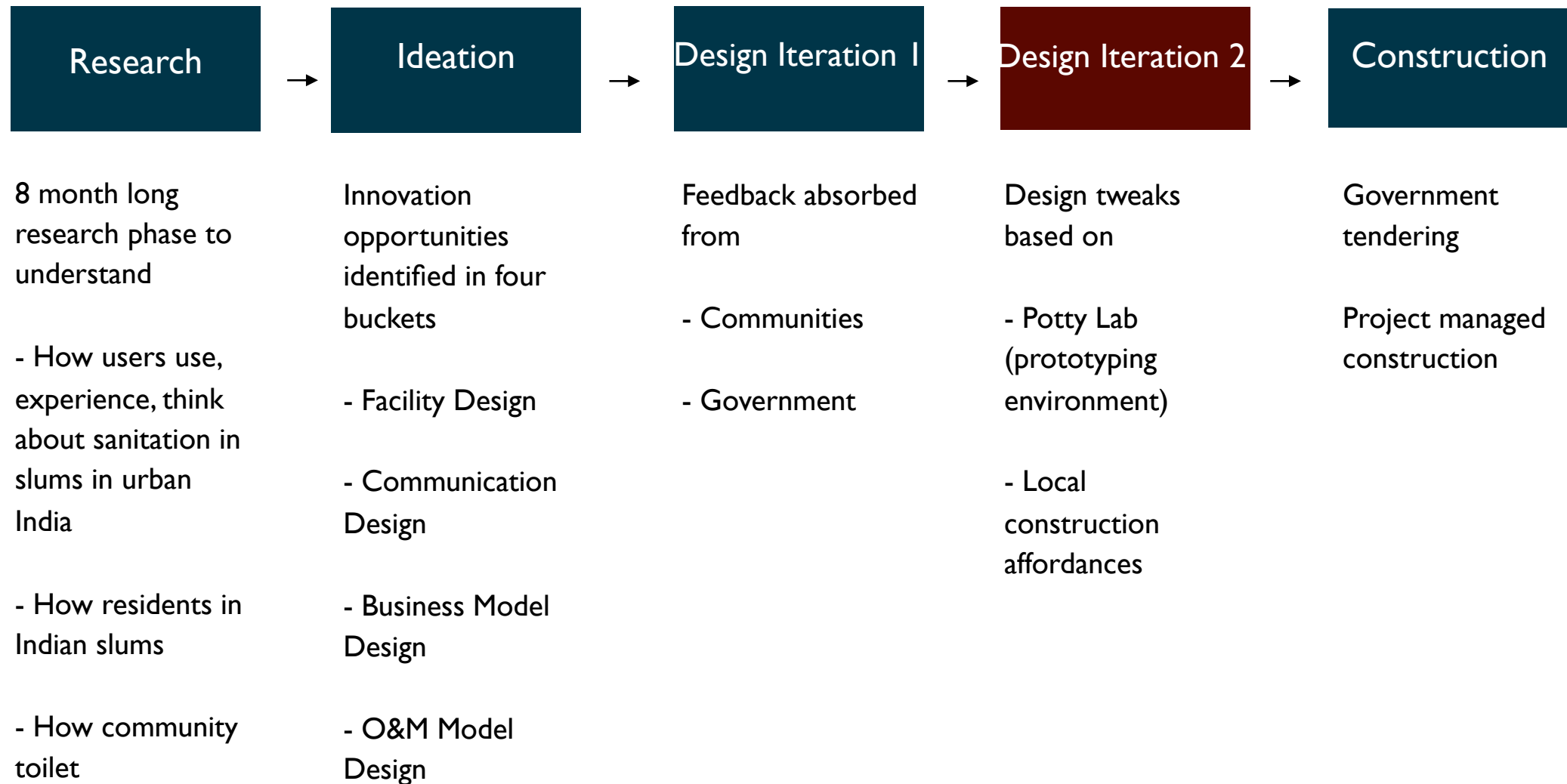
ideate

prototype

test

2 Project Sammaan Design Process

Using the User-Centered Design process to design communal sanitation solutions



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Behind The Scenes



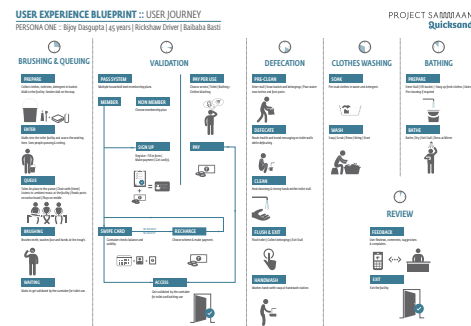
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Interim Design Outcomes



Personas

- Man
- Woman + Child



User Experience Blueprint

- User Journey
- Thought Triggers
- Design Opportunities
- Value Adds



Floor Plans

- Size Constraints
- Design Filters



3D Models

- Design Concepts 1 + 2
- Details
- Walkthroughs

5

Personas

Personas are a great way to de-average users of urban services and enable optimally designed services that people optimally use




Tonni Rai, is a 35 year old housewife, who lives in Science Park Basti with her husband, Mahendar, son, Satya and Mahendar's old and ailing mother.

Mahendar is the sole breadwinner working as a construction site carpenter earning Rs. 4000-5000 per month.

The family spends a lot on medical bills because of their son's regular bouts of diarrhea and Tonni's mother-in-law's various illnesses

The family defecates in the open fields bordering the slum

They aspire for a better life and hence make every attempt to save any money they can




Bijoy Dasgupta, is a 45 year old man, who lives in Baibaba Basti, with his wife, Minta & 3 kids.

He works as an auto-rickshaw driver and his wife works as a maid in nearby affluent houses.

They pay a hefty rent for the 200 sq. ft. house that they live in.

The family uses the community toilet that was built by the early residents of the community.

He hopes to save money for his daughters' wedding, and enough for building a house in his hometown.

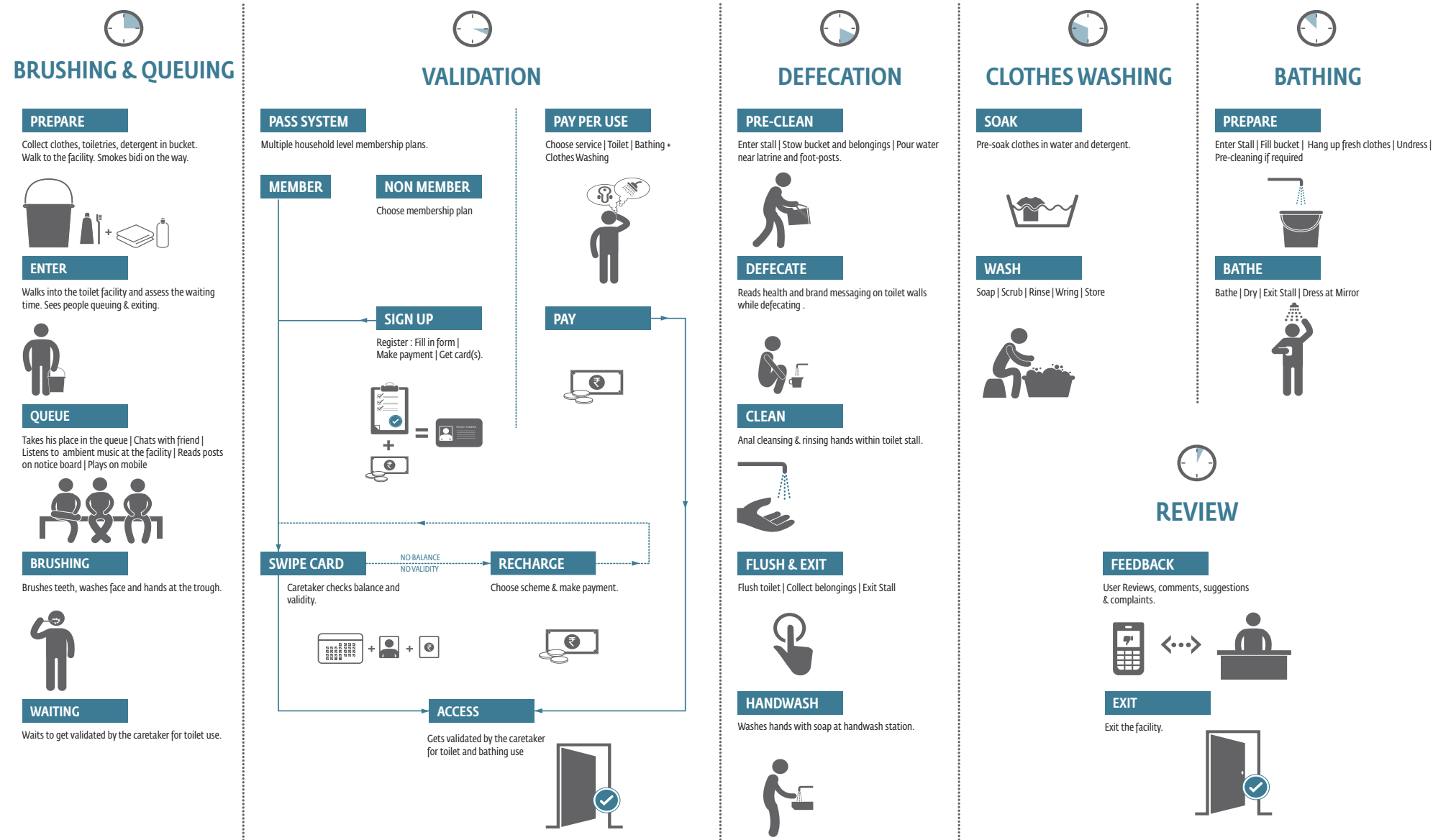
6 User Experience Blueprints

UX Blueprints map out the user's experience of urban services

USER EXPERIENCE BLUEPRINT :: USER JOURNEY

PERSONA ONE :: Bijoy Dasgupta | 45 years | Rickshaw Driver | Baibaba Basti

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Quicksand



7 User-Centered Design Innovation

UX Blueprints lead seamlessly to service or product features

USER EXPERIENCE BLUEPRINT :: USER JOURNEY

PERSONA ONE :: Bijoy Dasgupta | 45 years | Rickshaw Driver | Baibaba Basti

PROJECT SAMMAAN
Quicksand



BRUSHING & QUEUING

EXPERIENCE OBJECTIVES

Welcoming • Recognizable Entrance • Aesthetic • Efficient • Productive Waiting • Encourage Social Interaction • Informational • Promoting Hygienic Practices

DESIGN OPPORTUNITIES

- Reduce Bottle-necks
- Reduce perceived wait time
- Space to lean/sit
- Space to keep articles
- Waste Management
- Hygienic brushing area
- Contained wet areas
- Brand & Health Communication

VALUE ADDS

- Advertising
- Job Posts
- Health & Hygiene related messaging
- Radio
- Mirrors & Soap Dispensers



VALIDATION

EXPERIENCE OBJECTIVES

Formalized • Transparency • Efficient • Simple • Incentivized • Affordable • Non-threatening/ Approachable • Ease of Use

DESIGN OPPORTUNITIES

- Interface Design
- Automation
- User Loyalty
- Minimize Revenue Leakage
- Enforcement of Rules
- Brand & Health Communication
- User Friendly Pricing Packages
- Information Exchange
- Symmetry Of Status

VALUE ADDS

- Linking Membership to Value Added Services (E.g.: 'Sarvajal' Water ATMs)
- System Generated Alerts for Recharge
- System Generated Alerts on Up-coming offers and discounts



DEFECATION

EXPERIENCE OBJECTIVES

Comfortable • Hygienic • Aesthetic • Less Stressful • Informational • Promoting Hygienic Practice

DESIGN OPPORTUNITIES

- Low Maintenance
- Hygienic
- Vandal Proofing
- Reduced water usage
- Storage
- Brand & Health Communication
- Maximize user triggered cleaning activity
- Waste management
- Aesthetics : maximize light & ventilation.

VALUE ADDS

- Secure Mug in Toilet
- Soap Dispensers
- Health & Hygiene related messaging
- Radio
- Mirrors



CLOTHES WASHING & BATHING

EXPERIENCE OBJECTIVES

Comfortable • Convenient • Ergonomic • Private • Access to Water • Promoting Hygienic Practice

DESIGN OPPORTUNITIES

- Low Maintenance
- Minimal Contact
- Vandal Proofing
- Reduce Water Usage
- Ergonomic Washing Stations
- Contained wet area
- Storage
- Brand & Health Communication
- Social interaction

VALUE ADDS

- Paid hot water
- Detergent, soap, shampoo available at shop
- Full Length mirror to dress
- Radio



REVIEW

EXPERIENCE OBJECTIVES

Formalized • Empowering • Transparency • Fast • Simple • Approachable •

DESIGN OPPORTUNITIES

- Self Learning System
- System Design & Protocols
- Maximize P2P regulation
- Feedback loops for continuous improvement
- MIS for Municipal Corporation

VALUE ADDS

- Visitor book
- Flyers for health camps & events

8 Project Sammaan Design Specs

Ideal User Experience

- As per User Experience Blueprints

Utilities in toilet

- 10 toilets (5 men + 5 women)
- 10 bathrooms (5 men + 5 women)
- 1 Universal Access stall (toilet + bathroom)
- Kid's Toilet
- Clothes washing areas
- Space for a shop
- Space for Sarvajal
- Caretaker living quarters

Space Constraints

- 1600 - 1700 square feet plot size constraint
- Two plot shapes considered
 - a) Constrained 28 ft x 72 ft
 - b) 40 ft x 40 ft

Cost Considerations

- Within existing budgets for 10 seater toilet block

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Some Interim Designs



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Some Interim Designs



Design 01

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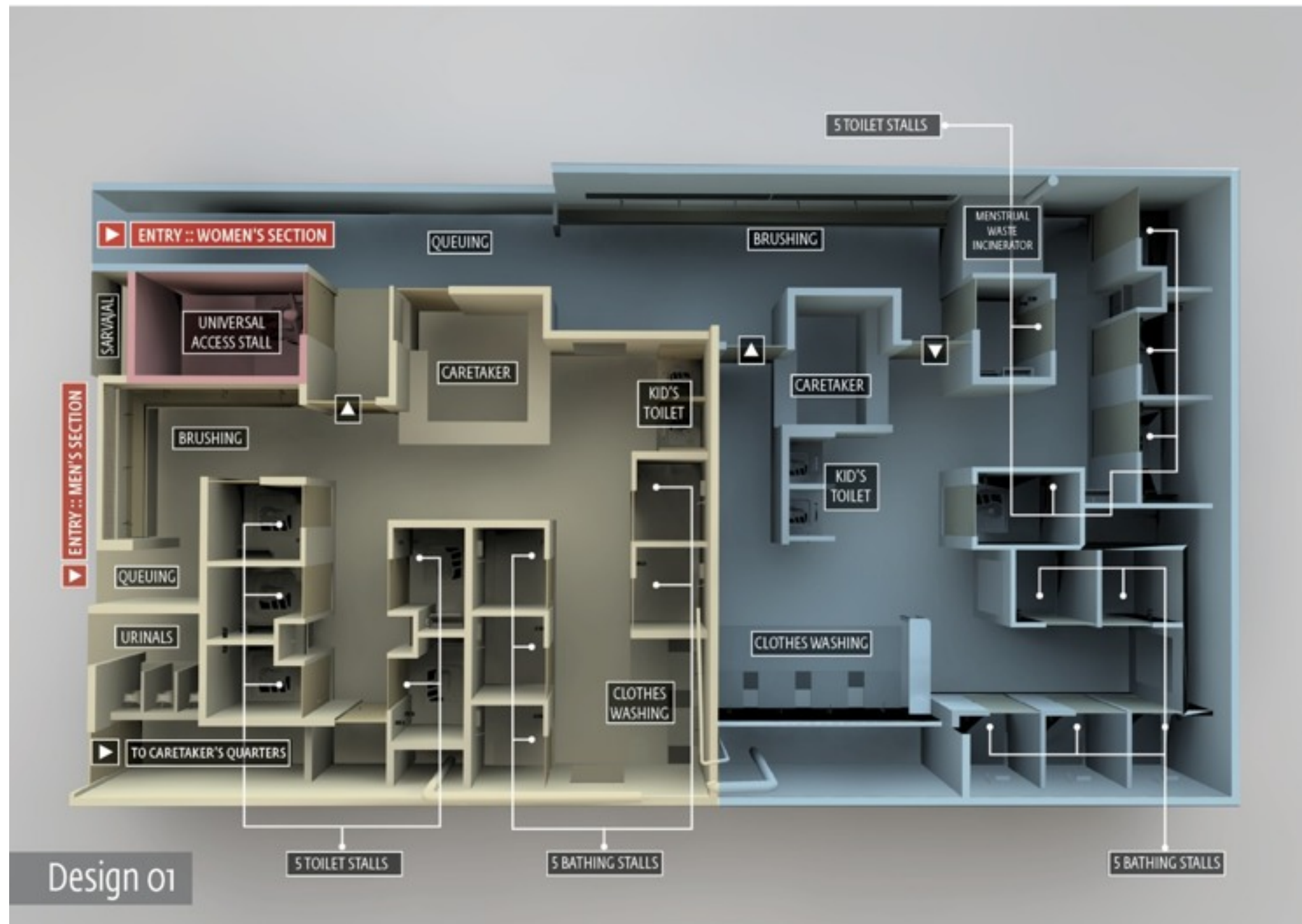
Some Interim Designs



Design 01

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Some Interim Designs



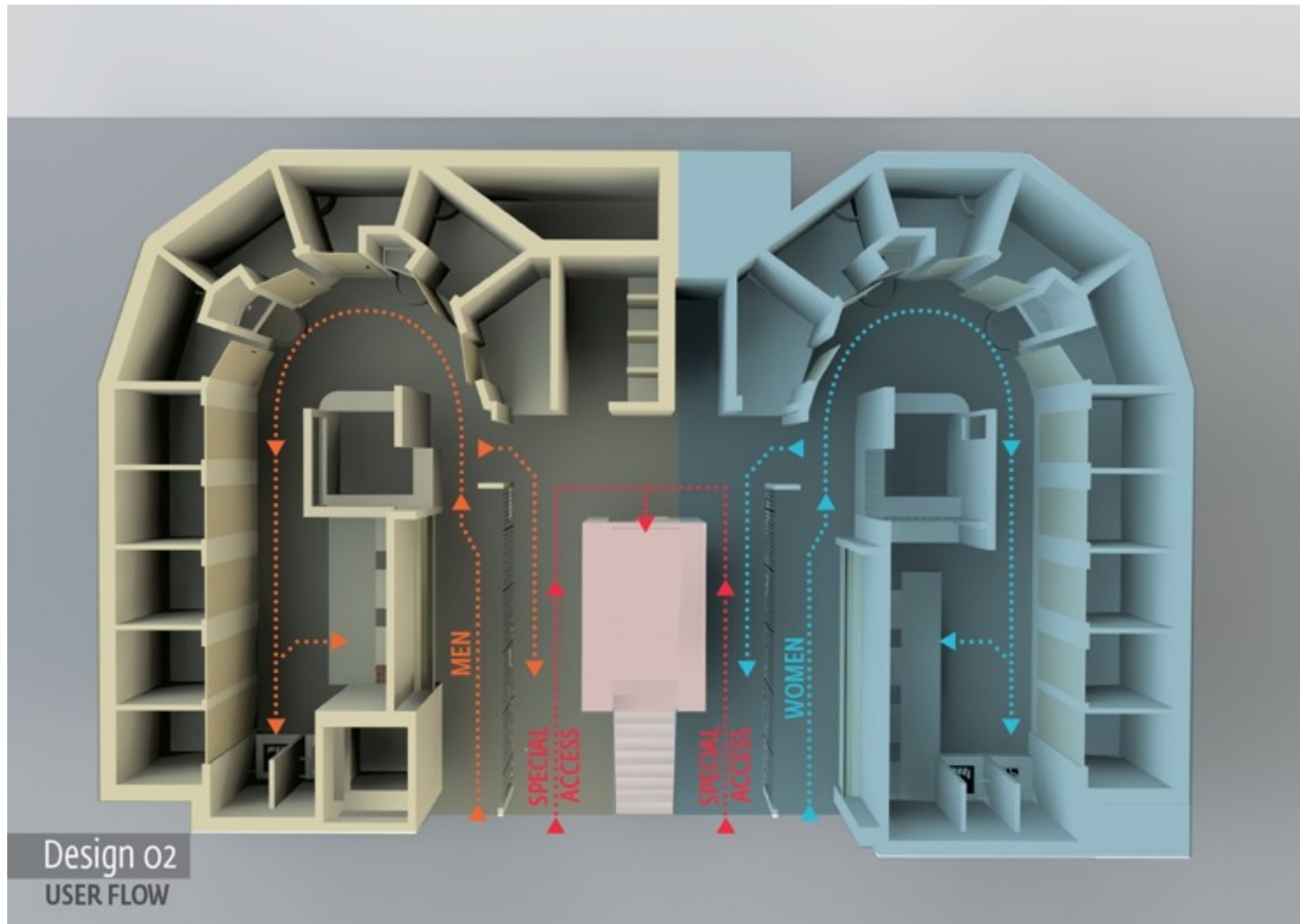
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Some Interim Designs



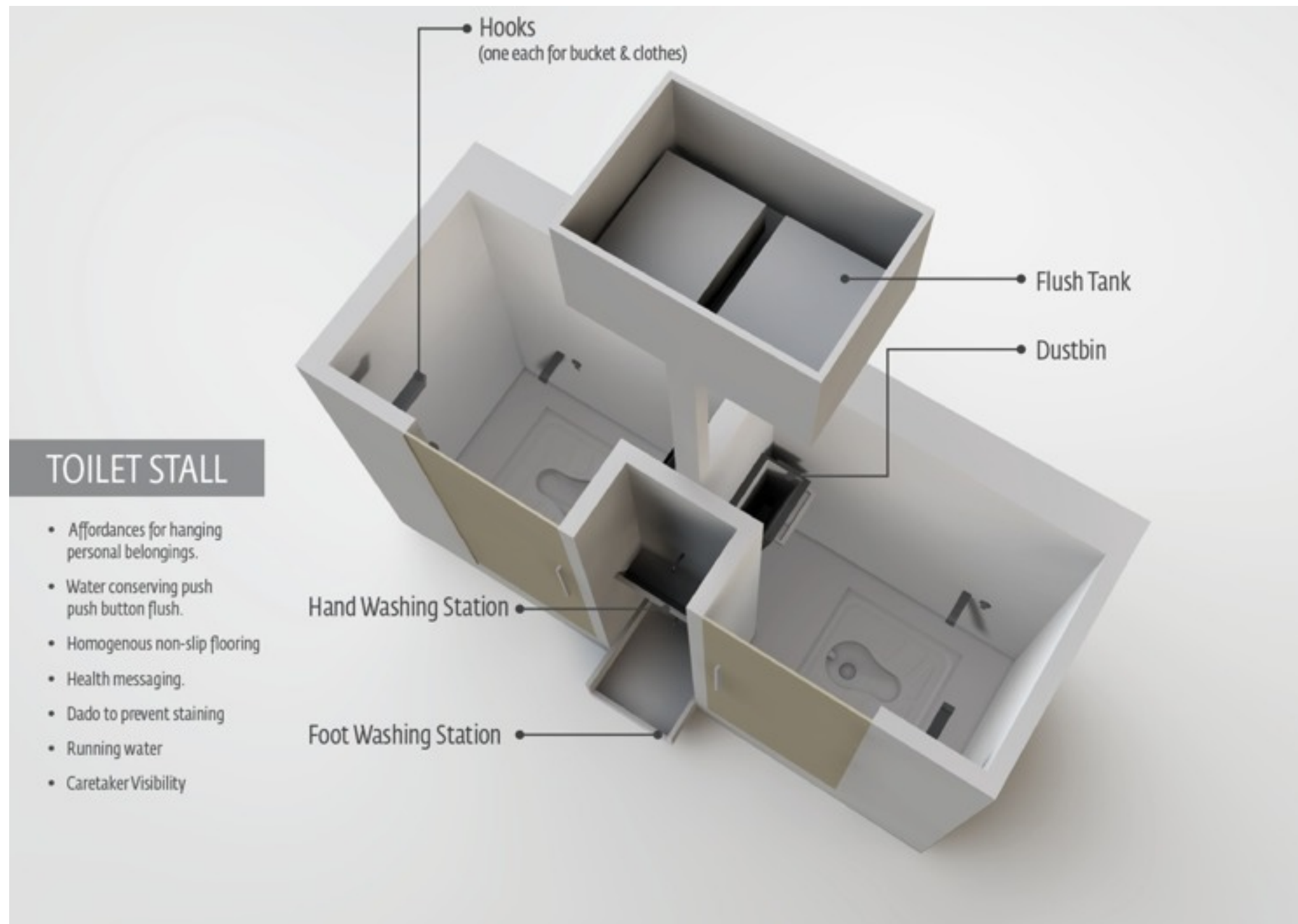
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Some Interim Designs



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Some Interim Designs



Thank You

Please contact the Quicksand or JPAL in case you have questions.

Mushfiq Mobarak
ahmed.mobarak@yale.edu

Sharon Barnhardt
sharon.barnhardt@ifmr.ac.in
+91 99620.72412

Nirat Bhatnagar
nirat@quicksand.co.in
+91 98996.92572