# InterchangeableX.™

## Product Production Plan
## For An Interchangeable Classroom



**Creative Brief By:** Sabina Rana, Rex Yun, Emma Brooks, Deepali Nagaonkar | Interactive Media Management | Decmeber 09, 2016

# Project Description

Our vision for an immersive kindergarten classroom combines a focus on children's mental health and student collaboration with cutting edge technology. We are committed to working alongside educators and conducting intensive research into advanced theories on pedagogy and the latest in augmented reality and LCD technology to design an environment that is welcoming, engaging, and stimulating for each child, regardless of background or level of ability. Our ultimate goals are to help raise children who are mentally and physically healthy, free to express and explore their innate creativity, comfortable with technology, and confident in their own abilities. We will create a physical classroom design and accompanying curriculum recommendations to achieve these goals.

# Target Audience

This project is geared towards five-year-old children attending senior kindergarten in public schools in the province of Ontario. The program will be accessible to students from a variety of cultural and economic backgrounds. Students from higher income, mid-range income, and lower income families and neighbourhoods, children of immigrants, and children with mental or physical disabilities would all be targeted in this project. The guardians and families of these children will also be included in our scope.

In addition, the project will take into account senior kindergarten teachers working at public schools in the government of Ontario, principals of said schools, members of school board councils, members of Ontario School Boards, and members of the Ministry of Education.

# Goals and Objectives

- Customize learning material so that children with difficulties are not left behind and leave the environment with confidence and discipline.
- Integrate technology seamlessly into the classroom in a way that is beneficial to both children and educators, and familiarizes students with technology; ensure that this technology is balanced with traditional methods and play.
- Stimulate a sense of wonder in children to increase engagement.
- Reduce paper waste and clutter by digitizing student work and portfolios

# Project Features

## Physical Features

• A circular layout that encourages collaboration and free movement throughout the space
• A large, bright window on one side of the room to let light stream in and children get a good look at the outdoor space.
• A sunroof that can be electronically opened and closed
• Adjustable soft lighting with colour options
• Chairs that are comfortable, soft, and lightweight
• An outdoor gardening area for children to play and engage their senses in learning about nature
• A kitchen area
• Washroom

## Technology

• AR glasses for each student to display learning material, large-scale objects and demonstrations superimposed on the environment, and student-generated content
• LCD wall with touch component that can be used as a whiteboard, to display educational material and student-created content
• LCD table for each student to allow children to write, draw, and use customized educational applications; content from the tables can be displayed on the LCD wall

## Prioritizing Mental Health and Self-Regulation

We want to emphasize mental health and self-regulation in the classroom. For us that means giving children the tools to cope with and recognize their emotions.

• Incorporate mindfulness, with a focus on paying attention to deep slow breaths, and identifying and accepting their emotions. Techniques and visual aids can even be displayed on the LCD screen.
• Students are then free to step away and take a moment when they become upset or frustrated.
• Periods of focus interspersed with periods of free play and physical activity to keep students from getting restless.
• All students are given ample time to play outdoors, get some fresh air, and engage their senses.

## Student Collaboration

Students who have a hand in creating their environment feel a sense of ownership and pride, and are more comfortable in the space. Some suggestions for how that can be done are:

• Proudly displaying student artwork, research, photographs, and student-generated rules throughout the room. This can be done on the LCD screen, on available wall space, and even brought to life through the use of the classroom's AR technology. Technology allows the displayed elements to be saved to the student's portfolio and shared with guardians.
• Having lightweight chairs that can be moved into different configurations throughout the classroom, for individual and group learning.
• Allowing children to work at their own pace and use customized apps or assisted technology to support individual learning.
• Customizing learning material based on students' emerging interests and passions.

# Deliverables

**Short video selling our concept to our audience**
**10-minute presentation telling the story of our concept**
**Final publication containing:**

• Introduction and description of our finalized concept
• Detailed timeline and budget for our project
• Classroom floor plan/layout and accompanying system diagram
• 3D visual prototypes of classroom furniture, LCD wall and tables, and furniture
• 3 user personas and journey maps outlining how our design works and who it benefits
• Specific curriculum recommendations and how they are supported by the classroom's technology

# Process Overview

**Implement Agile Process throughout project to complete tasks by deadline and stay apprised of team tasks, deadlines, and obstacles.**

1. Intensive research (including generation of detailed user personas) and generation of ideas based on research
2. Identifying team structure, roles, and responsibilities
3. Discuss and identify best method for open communication and collaborative work (Trello and Google Docs)
4. Creation of moodboard to refer to and revise continually throughout process
5. Synthesizing research and refining our concept
6. Presentation of concept to Heather and Chris
7. Revising and finalizing concept based on feedback
8. Production of deliverables
9. Presentation

# Project Timeline and Deadlines

## Phase 1

**Research and Development (Sept. 22 - Oct. 6)**

- User personas
- Moodboards
- Technology
- Pedagogy
- Generating initial concept
- Gather feedback from advisors

## Phase 2

**Revision and Finalization of Concept (Oct. 6 - Nov. 3)**

- Revising and consolidating concept based on feedback
- Prototypes of classroom layout, technology
- System diagram

# Phase 3

**Discussion and Production of Project Details (Nov. 3 - Nov. 17)**

- Gather feedback from advisors
- Division of tasks
- Specifics of technology and classroom layout based on prototypes and system diagram
- Diagram of project specifics; what is used in the classroom, how, and why

# Phase 4

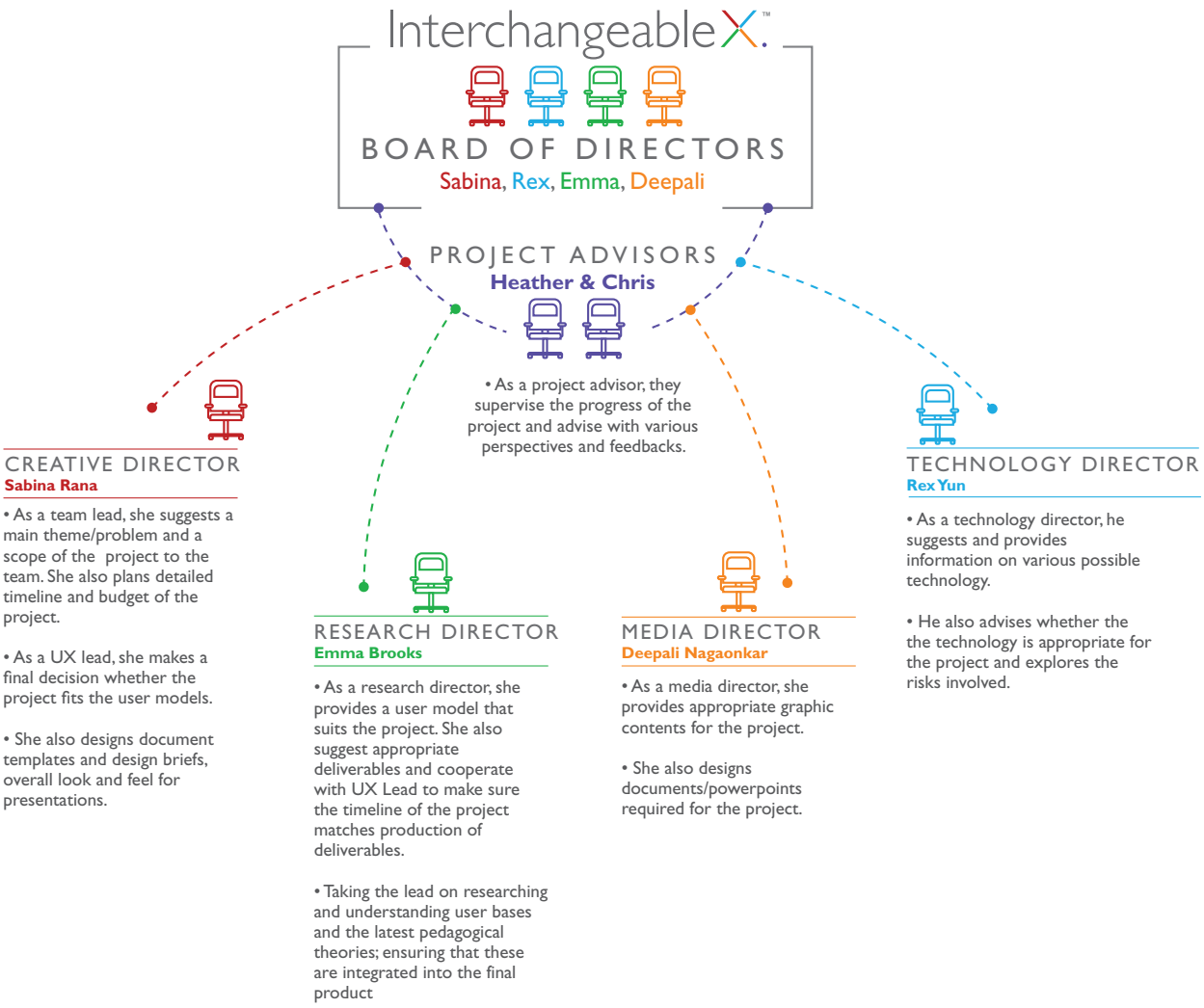
**Production of Deliverables (Nov. 17 - Dec. 8)**

- Video
- Publication
- Presentation
- Review and practise presentation

# Phase 5

**Presentation (Dec. 8 2016)**

# Team structure




## Interchangeable X Structure Description

Our team for this project has a fairly flat structure, with each member specializing in specific areas and reporting to our project advisors. As our creative director and User Experience specialist, Sabina Rana synthesizes the research and information gathered by the rest of the team in order to create a final project that meets the diverse needs of our client. As such, she is in regular communication with each member of the team, and is responsible for the final decision on project attributes. However, since we are a small team, meetings which include all team members are held on a regular basis, and each member is encouraged to voice their findings and help guide the direction of the project.

Our team also comprises two project advisors, Heather and Chris, who communicate with us periodically to monitor progress and offer feedback and suggestions. Communication with our advisors is funnelled through the creative director when it is concerned with User Experience or the overall scope of the project. If our advisors have concerns or questions regarding specific aspects covered by either Rex Yun, Emma Brooks, or Deepali Nagaonkar, these can be brought directly to the relevant employee for the sake of efficiency. Communication with external clients or vendors can also be brought directly to the relevant employee, with said employee providing updates to the creative director to keep her apprised of updates and pertinent information.

# Roles & Responsibilities

## Sabina Rana - Creative Director

• As creative director, she suggests a main theme/problem and a scope of the project to the team. She also plans detailed timeline and budget of the project.
• As a UX lead, she makes a final decision whether the project fits the user models.

## Rex Yun - Technology Director

• As a technology director, he suggests and provides information on various possible technology. He also advises whether the the technology is appropriate for the project and explores the risks involved.

## Emma Brooks - Research Director

• As a research director, she provides a user model that suits the project. She also suggest appropriate deliverables and cooperate with UX Lead to make sure the timeline of the project matches production of deliverables.
• Taking the lead on researching and understanding user bases and the latest pedagogical theories; ensuring that these are integrated into the final product

## Deepali Nagaonkar - Media Director

• As a media director, she provides appropriate graphic contents for the project. She also designs documents/powerpoints required for the project.

## Chris, Heather - Project Advisors

• As a project advisors, they supervise the progress of the project and advise with various perspectives and feedbacks.

## Measures of Success

- Meeting deadlines, keeping ahead of schedule when feasible
- Strong communication between team members
- Healthy and productive resolution of conflicts and handling of obstacles
- High quality of deliverables
- Emotional well being of team members
- Positive feedback from both advisors and panel

## Resource Planning

- Location-based research and up-to-date data
- Interviews conducted with educators in the area
- Time spent to improve skills in Adobe Illustrator, general graphic design
- 3D animation and Adobe Suite
- Trello and Google Docs
- Tangible tools such as whiteboard and posterboard, markers, pens, post-its, etc.