



Developing a Design Center in Japan

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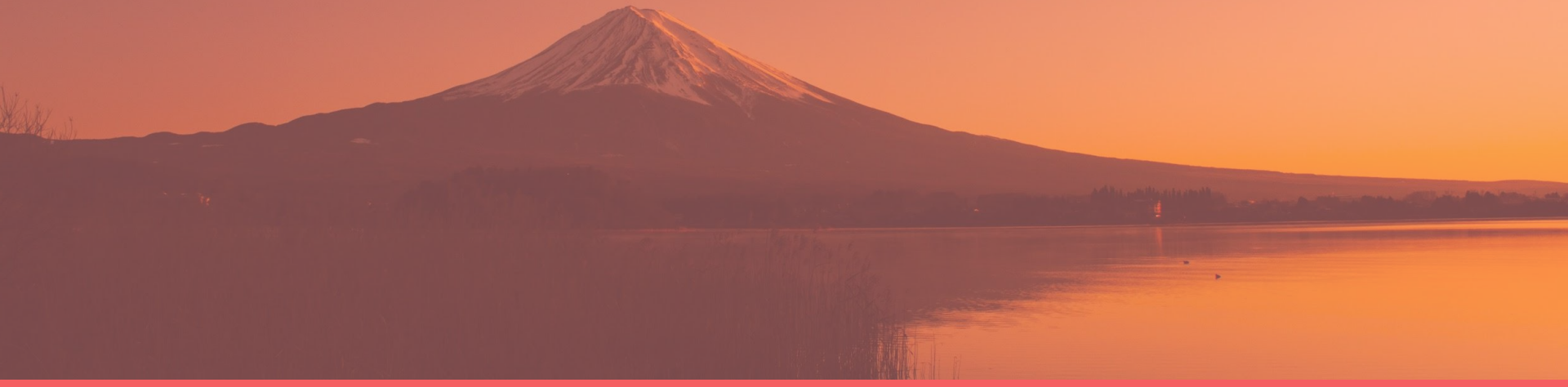
Our Goal

Determine the feasibility of a global design-themed IQP center for WPI project teams by exploring opportunities in Japan as a pilot program.



What is Design?

Design is the process of planning, optimizing, and producing an effective solution to a known problem.



Objectives

01

Identify unique design philosophies in Japan

02

Identify opportunities and potential sponsors for design projects in Japan

03

Investigate interest in design at WPI

04

Evaluate the IQP system to determine the integrability of a new global project center

05

Evaluate the best option for a center-wide Data Pool



Validating a Design Center at WPI

Interest in Design at WPI

- ❖ Interest in Design/Design Center
 - Faculty/Alumni
 - 30+ faculty are interested
 - Expressed need for more design education
 - Students
 - 65.5% believe a Design Center would be a good addition to WPI out of 29 student surveys

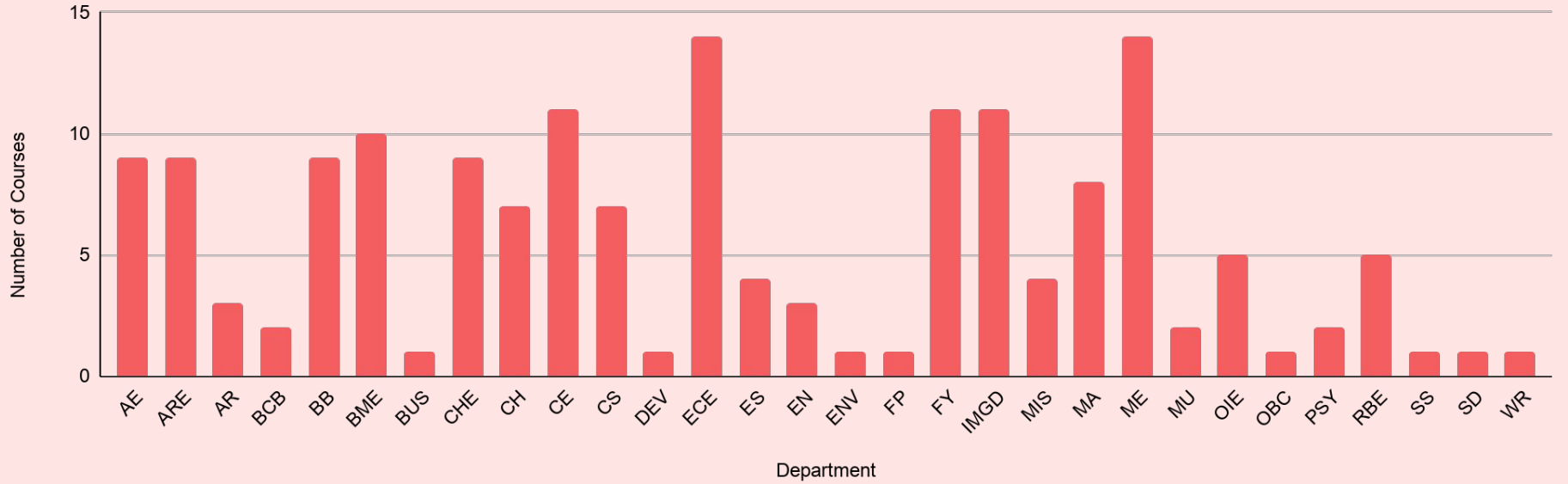




Interest in Design at WPI

- ❖ Lack of Design Curriculum
 - 24% of all undergraduate classes are design focused, even though 19/29 students believed that their majors involved design
 - Spanning approximately 20/30 Majors, and excluding 23/53 courses codes
 - 11 of the available design courses are exclusive to first year students
 - Departments with the most design
 - Mechanical Engineering (ME)
 - Electrical and Computer Engineering (ECE)

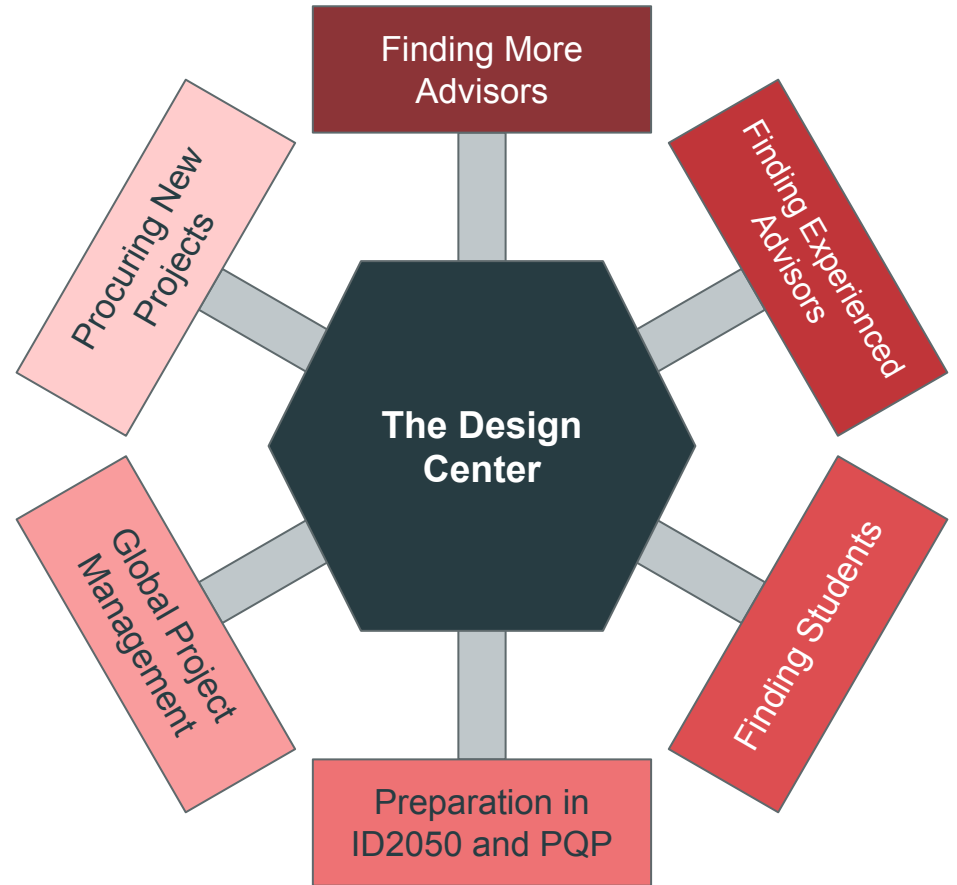
Number of Design Courses Per Course Code



Introducing More Design At WPI



Implementation Considerations





Implementation Considerations

- ❖ Finding More Advisors
 - Faculty have large workloads
 - Advising a global IQP means not being on campus for term
 - Solution: Remove travel requirement and let advisors be remote
- ❖ Finding Experienced Advisors
 - Inexperienced faculty can create bad projects
 - Solution: Find advisors who have experience in design

Implementation Considerations

❖ Finding Students

- Project offerings and student numbers balanced
- Adding a new center upsets the balance
- Solution: Remove project centers with double or triple listings

❖ Preparation in ID2050 and PQP

- Students have little previous knowledge of design
- Need to prepare students for a design project
- Solution: Offer a Pre-PQP course to teach design





Implementation Considerations

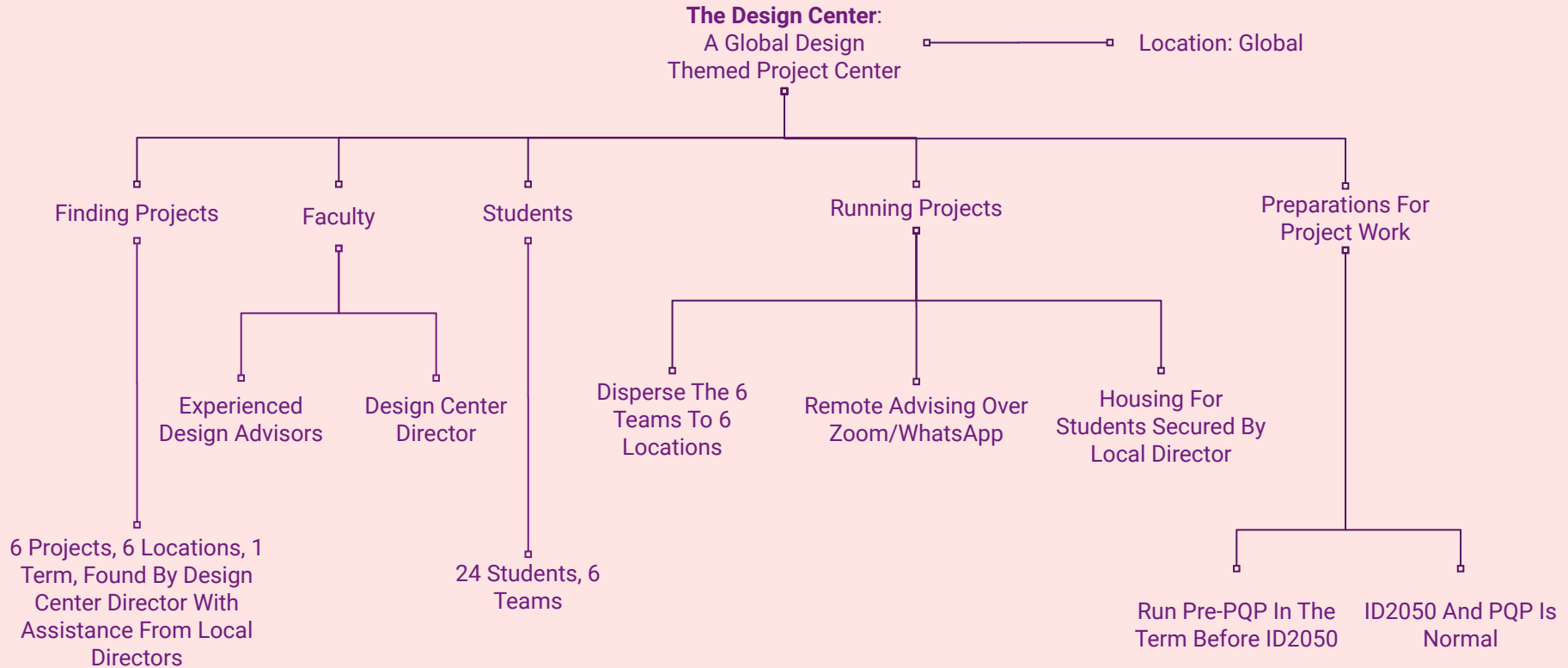
- ❖ Global Project Management
 - Distributing Teams
 - Solution: Send only one team per location to be 7th team at that location and locations are chosen by director
 - Remote Advising
 - Advisors can't be in six places at once
 - Solution: Advisors stay at WPI and advise remotely
 - Housing and Safety
 - Solution: Local directors will secure housing in advance to offering a project

Implementation Considerations

- ❖ Procuring New Projects
 - Can not be done solely by local directors
 - Solution: Design Center director will receive assistance from local directors



Recommendation



Phased Approach Implementation

Phase 1

- Single Project Replacement At Kyoto
- No Pre-PQP
- Students Given Design Readings In ID2050
- Regular IQP Project With a Focus on Design

Phase 2

- Multiple Project Replacement
- No Pre-PQP
- Students Given Design Readings In ID2050
- Projects Not Limited To a Single Term
- Design Center Director Helps Find Projects

Phase 3

- End Project Replacement
- Installation Of The Design Center
- Pre-PQP Begins
- Full Operations Of Design Center Begin

Japan as a Test Case





Unique Design Philosophies

- ❖ High-Tech Design
 - Toilets, Kitchen Gadgets
 - Machines, Toys, and Services
- ❖ “Pocket Design”
 - Convenience/Practicality
- ❖ Minimalism
- ❖ Kawaii
- ❖ Environmental Design



Unique Design Philosophies

- ❖ Historical Uniqueness
- ❖ Traditional and Urban Design
 - Businesses, Crafts, Organization, Temples, etc.
- ❖ Universal Design & 'Social Currency'
- ❖ Spiritual Connection
 - Wabi-Sabi
 - Craft Mastery





Technical Design Project Opportunities

- ❖ Game Design
 - Nintendo
 - 17-BIT Inc.
- ❖ Anime Design
 - Kyoto Animation
- ❖ Graphic design
 - Kyoto Journal
- ❖ Technology Design
 - Atmoph
 - Hacarus
 - Kyoto Maker's Garage



Academic Project Opportunities

❖ Kyoto University

- Large (22,000+ students)
- Wide variety of academic departments

❖ Kyoto Seika University

- Small (<5,000 students)
- Art, Design, Manga, Popular Culture, Humanities
- New Human Environmental Design Program

❖ Kyoto Institute of Technology

- Small (<5,000 students)
- Applied Biology, Material Science, Electronics, Information Science, Mechanical Engineering, Design and Architecture

KYOTO SEIKA UNIVERSITY



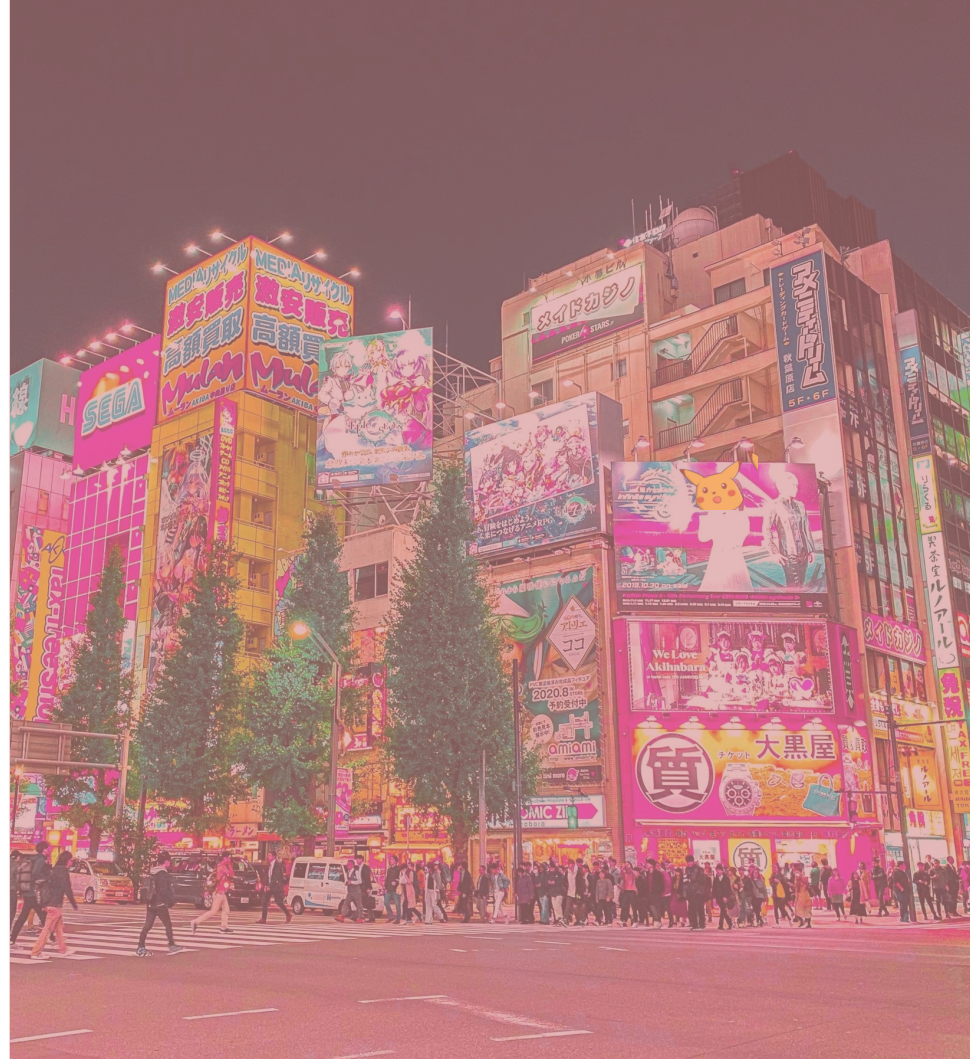
京都精華大学



K Y O T O
I N S T I T U T E
O F
T E C H N O L O G Y

Urban Project Opportunities

- ❖ Urban Revitalization
 - Kyoto townhouses
- ❖ Historical Craftsmanship
 - Kyoto Artisans Concierge
 - TCI Laboratory
- ❖ Zen Buddhist Temples
 - Taizoin, Shunkoin
- ❖ Garden/Landscape Design
 - Muranin





Data Collection

- ❖ Stackable Projects
- ❖ Data types:
 - Research Material
 - Architectural/Geographical
 - Structures or Locations of Note
 - Field Data
- ❖ Openly accessible
- ❖ CSV, Spreadsheet, or Database?

Thank You to:

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Questions?



Student Interest in a Design Project Center

