



## **ENSE 271 Project report-out & lessons learned**

### **Roasted Sugar Maple Nuts**

Abraham Mugerwa

Taishi Barth

Tirth Patel

Kristina Langgard

### **Project sponsor**

Dr. Tim Maciag (ENSE 271 Lecturer)

### **Business need/opportunity**

As part of the accreditation process managed by Engineers Canada, engineering programs offered by the University of Regina must prove that graduating students possess 12 attributes defined by the organization. To manage this, the accreditation admin at the university laid out the IDA (Introduced, Developed, Assessed) map spreadsheet. The spreadsheet shows which courses have what attributes, as well as whether data has been provided by professors in the form of an Outcomes-Based Assessment (OBA). The OBA is used to see if students are demonstrating a single attribute, which the accreditation admin chooses, by selecting a specific indicator for that attribute.

If it was not apparent, the process is very prone to confusion, especially to professors new to the attributes, the IDA map, and OBA. Professors unfamiliar with the OBA process are likely to not send data or send in incorrect data. Each part of the process is documented with separate files, of which copies must be sent to each professor by the admin.

The main goal of the project is to make this process more simple for the staff. Our group will first focus our attention on facilitating ease of access to information on the graduation attributes and the OBA process for professors. In addition to this, our team has decided to make the IDA map more interactive and easy to understand required information for a class.



## Reflections on project planning

**Northstar customer:** Professors

**Carryover customers:** Accreditation administration (Gina), students

### Assumptions made, constraints covered

#### Assumptions:

- Done with front end web technologies, in this case Wordpress.
- Desktop focused/mobile capable
- Engineering faculty would be separated and identifiable to assign privileges/allow access

#### Constraints:

- Model after UofR website to retain unity/familiarity
  - Colour scheme (yellow/green/grey/white)
  - Logos
  - Typeface is Segoe UI from UR Courses
- Keep design simple and interactive to expand on questions progressively.
- Do not overwhelm the user with all info on screen at once.

### Key findings from affinity & empathy mapping

- Heard a lot of misunderstandings and organizational complaints
- Where is the information you're looking for located?
  - No central location
- Customers did not like the IDA Map on an excel spreadsheet
- Some professors were either submitting the wrong data or no data
- The OBA process was not understood by all faculty members

### Evolution of User Story Map

- Began with addressing lack of centralized knowledge base, data collection, and central database
- Eventually leaned toward focus on the knowledge base and moving other features to possible future releases



## Prototyping

- First low fidelity prototypes based on initial versions of the user story map
  - Address all problems with accreditation
- Of the initial ideas
  - Interactive IDA caught the most interest of customers
  - Database layout also well received
- Future prototypes were more focused on a new IDA map
  - Changed tabular layout to list
  - Filtering classes by selected criteria well received
- **Design Topics**
  - Metaphors
    - Using easy icons to recognize functionality, ie:
      - house for 'home page'
      - 'Filter' icon
      - '?' for info
  - Gestalt
    - Keep concepts linear and expected
    - continuity: numerical order
    - proximity: ideas/groups together
  - Heuristics
    - User control and freedom
    - Back button allows user to go back to previous page
    - Filter data for user to view what they wish



## Reflections on project results

### *Likes/dislikes*

- Likes:
  - Making a project based on a real challenge with real customers was challenging but exciting
  - Working on hi-fidelity prototypes with Adobe XD was a great experience due to its ease of use and endless possibilities (low threshold, high ceiling)
- Dislikes:
  - Plugin ecosystem hard to navigate
  - Wordpress functionality requires knowledge of what plugins to use

### *What went well during the project?*

- Each group member participated in completing their assigned tasks and asked for help when necessary
- Meeting on weekends helped our organization for the coming week

### *What did not go well during the project?*

- Working with certain plug-ins on wordpress proved to be challenging
  - Filter plugins made for commerce or blogging rather than general purpose
  - Proper filtering system using a plugin wasn't figured out in time
- Didn't experiment with as many plugins as might have been required to get best product

### *How did the Adobe prototype translate to Wordpress?*

- Plugins are much more limited than Adobe prototyping tools
- Wordpress block system imposed limitations on connections of elements
- Blocks were harder to format than just moving around content in XD
  - Appearance in block editor wasn't the same as the actual website

### *How did the lecture content help our project?*

- People-centered design concepts are at the forefront
  - Focus on the customer's needs as the primary problem
    - Understand customer beyond what they are saying
  - Use design topics listed before
  - Implement feedback from customers to change project to better suit customer needs
- Remember that the designer is not the user
  - Steers us away from imagining ourselves using it, which we as students likely won't



***What would we do the same on future projects?***

- Empathy/affinity mapping really helped focus in the early stages
- Start with an achievable MVP and expand more if time permits.

***What would we do differently on future projects***

- More communication earlier on could've lead to perhaps a more well-rounded and diverse project in the end
- Spend less time trying to detail our prototype as some things weren't easily integratable in Wordpress
  - Potentially review ahead of time how constrained the system of implementation will be
- Make use of Github Projects kanban to assign tasks and review progress.

***Opportunities/design ideas for future projects***

- There was a lot to explore here about form submissions and data collection that could be useful on numerous future projects

## WordPress themes and plugins

**Theme:** Astra.

**Starter Templates plugins we used in our project.**

**Name:** Duplicate page

**User rating:** 4.5 Stars

**Last update:** March 2021

**Active installations:** 2+ million

**General-purpose:** Any created page can be duplicated with the exact same content. It was used to quickly duplicate our IDA map page so that we could show the user how we envision the filters button looks. Also used to duplicate the detailed GA information pages and adjust the information as necessary.

**Name:** Search & Filter

**User rating:** 4.6 Stars

**Last update:** May 2021

**Active installations:** 40,000+

**General-purpose:** The purpose is to create customized search and filter systems. It was used to create a filter option for selecting courses by term. Also used for search functionality on the IDA map pages.

**Name:** WP Extended Search

**User rating:** 5 stars

**Last update:** April 2021

**Active installations:** 20,000+

**General-purpose:** When searching for content, this plugin manipulates what results are shown. It was used to customize search results for when a specific class was searched.

**Name:** Conditional menus

**User rating:** 4.4 Stars

**Last update:** January 2021

**Active installations:** 60,000+

**General-purpose:** Menus can be changed depending on certain conditions. It was used to hide the primary menu from users not logged in to keep information in-house.



**Name:** Forminator

**User rating:** 4.8 Stars

**Last update:** May 2021

**Active installations:** 100,000+

**General-purpose:** Forminator is meant to create and customize input forms. It was used to create a login form and registration form for user verification purposes.

**Name:** Popup Maker

**User rating:** 4.8 Stars

**Last update:** March 2021

**Active installations:** 600,000+

**General-purpose:** It allows for the creation of popups on Wordpress pages. It was used to create popups or modal windows to represent additional information in the IDA map page.