Rutgers MBS Externship - Data Storytelling LLC



Ideas. Inspirations. Insights.

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Literary Review

<u>List of NoCode Apps/Websites</u> <u>Other example sites</u>

https://medium.com/code-store/how-does-the-rise-of-apis-boost-no-code-adoption-in-the-world-65e82b9afa93

https://www.kpmg.us/alliances/kpmg-unqork/adoption-low-no-code-tech.html

https://www.datarobot.com/blog/why-adopt-zero-code-data-prep-now

https://www.techtarget.com/searchsoftwarequality/definition/no-code/

https://medium.com/crowdbotics/the-best-low-and-no-code-mobile-app-development-platforms-53bc0b4f3558

https://apptooltester.com/app-examples/

https://uxdesign.cc/create-your-own-product-persona-ba19b53c0c78

 $\underline{https://www.fixusjobs.com/what-is-considered-high-traffic-website/\#:\sim:text=High\%20traffic\%20w}$

ebsite%20is%20one,countable%2C%20less%20than%20200%2C000%20worldwide

https://apptooltester.com/app-examples/

https://www.youtube.com/watch?v=EvGt7FodD4g

https://bubble.io/

https://shoutem.com/

https://www.goodbarber.com/

https://www.appypie.com/

https://code.visualstudio.com/

Initial Research on No-Code Platforms:

GoodBarber

- Youtube Comparison: GoodBarber vs. Bubble
- Focuses on High Quality Design Elements (Visually Appealing)
- Drag & Drop Template System (Convenient, but Limiting)
- Low Customization
- Overall: GoodBarber is a Low-Code platform. It goes beyond the barebones "drag and drop", and instead allows developers to import/export their own data via .csv files. It also allows users to open existing templates and edit the html or javascript directly, distinguishing it from a No-Code platform. Optimal for beginners with light coding experience, aiming to create simple, yet non-trivial apps
 - Perfect Example of NoCode's Strengths and Weaknesses: Feasibility is largely determined by the variety of blocks/templates available on GoodBarber.

Shoutem

- Simple to use, takes a step-by-step approach to get to the desired mobile app design
- Tons of features for somebody making a simple app design
- Sleek and modern designs/ layouts
- *Pros of no-code: Having the GUI there with options of each design allows you to design *while* you create
- What i mean by this is, you may not have an exact idea of what you want your app to look like, but with Shoutem (and I'm guessing other no-code platforms out there) they give you options for your app design and you choose what you like
- This can reduce time to create and increase simplicity
- They also offer a service to consult with somebody (30 min call) and have them create the app with your input
- Costs money to use and publish the app (~\$80 (a month? <u>Source</u>) to create and publish an app)
- Is better suited for social network type settings (according to https://apptooltester.com/app-examples/)
- Does not create web apps, just mobile apps for the app store
- Overall: Easy to use, good-looking mobile app creator, for not too hefty of a price point. Falls in No-Code category

Appypie

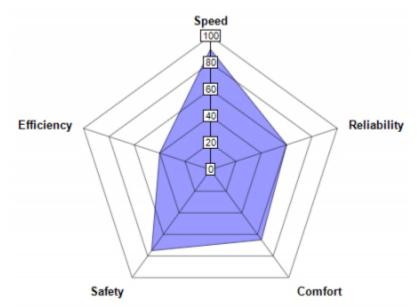
- Can build websites and apps web is free, the mobile is 40 a month
- 6 basic creation templates (mobile, website, NFT, task automation, chatbot, graphics)
- Website Features:
 - Choose between 12 different options(other being one of them) of the main point of the website.
 - o 6 different styles in light or dark themes.
 - o Pay to view the website created however no options to put code in
- Graphics:
 - countless options on the type of graphic design a user wishes to make from yoga covers to nfts
 - There is a wide variety of elements and photos to choose from however they allow you to **upload your own photos. Can** this be considered a form of low code? Because it deviated from the idea of preset parts to build from!
 - In the advanced settings you can change the colors using any **hex code**. **Can** this be considered low code or still no code? Either way we need to change our definition!
- Overall: Appypie is either Low Code or No Code. It's simple and easy to use, and only offers small customization features atop the usual "drag and drop" functionality it utilizes to build websites and apps

Conclusion: Initial Definitions of Coding Spectrum

- No Code: Purely "Drag and Drop", uses pre-coded blocks
- Partial/Low Code: Mainly No-Code, but offers some customization and editing of existing code blocks
- Open Source: Entirely developer's own code, no premade blocks

Final Definition for NoCode

- Categories
 - NoCode No Customization (GoodBarber)
 - NoCode w/ Customization (Appypie)
 - o LowCode
 - 0 7777
 - o Full Code (VSCode, Android Studio)
 - Other: Overleaf (LaTeX <-> Text Editor), Android Studio
- Variables to Consider (Ownership, Outsourcing Work as in Shoutem)
- List of Platforms: GoodBarber, Appypie, Shoutem, Bubble, VSCode
- **GRAPH**: Category vs. Amount of User Code/Customization (linear or 4 quadrants?)
 - Maybe think of it like a multivariable function? Amount of user code is definitely the most important variable tho
- **GRAPH**: Radar Chart of Risk Score vs. Platform (Monetary Cost, Privacy, Data Ownership, etc.)
 - What values determine Risk Score? (Weighted) (Binary Discrete) (Continuous)
 - Does the user own the customer's data? AKA, is the data transferable? (3)
 - Potential for App Failure (2)
 - Does the platform manage Google/Apple submission? (2)

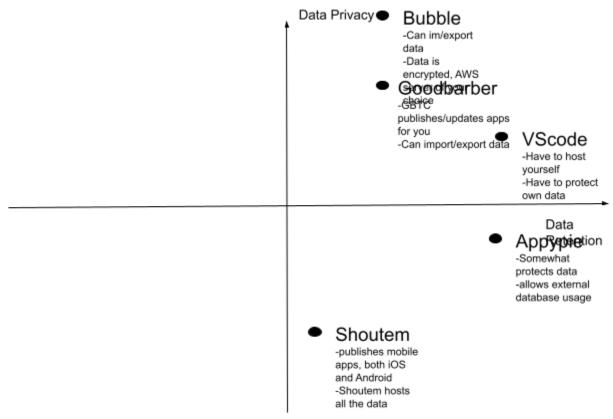


- GRAPH: Learning Curve/Time Efficiency vs. Platform
- Category = f(many vars)
 - Level of Customization
 - Ownership

- Outsourcing Work
- o Where is Customer Data Stored
 - Is it stored right in the software or do I have that data? (Yes or no / 1 or 0)
- Costs of the websites (Money, time, ownership)
 - Security concerns (borrowing code/ having several sources)
- Learning curve(how user friendly is it?)
 - Level of Code Needed (1 10)
 - Level of Customization(number of clicks/ time it takes to customize) w/ Templates (1-10)
 - Amount of time it takes to complete a website
- Action Items:
 - o Individually: Define our "Scoring System", preferably on a scale of 1-10
 - Look at each platform, find characteristics to use for the score
- Placing each website/ type into "buckets".
 - o Letter grades?
 - What questions are we asking to analyze each website/ category

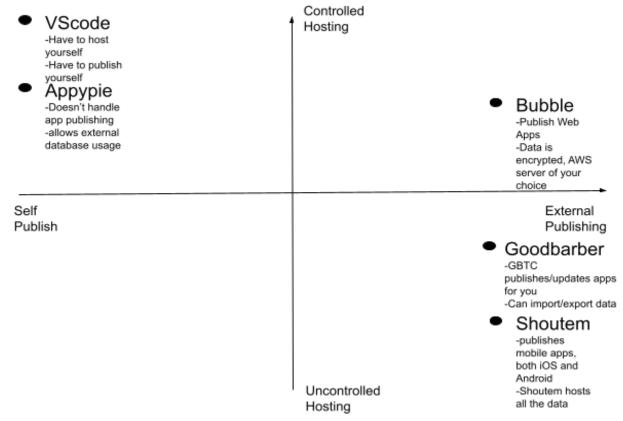
Quadrant Graphs

Data Privacy Vs. Data Retention



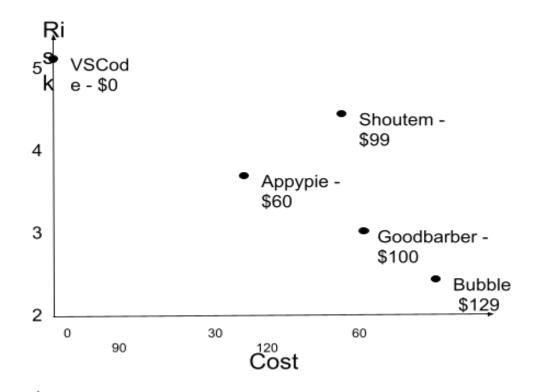
Hosting vs. Publishing to App Stores

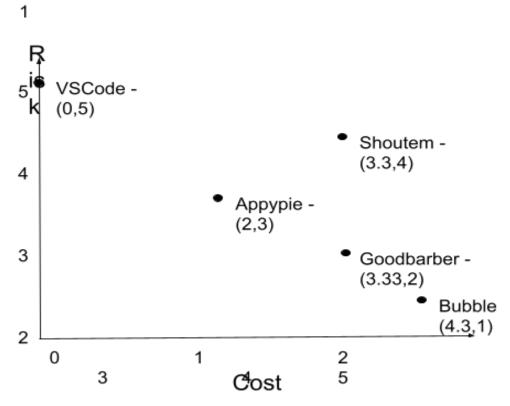
Hosting Vs. Publishing



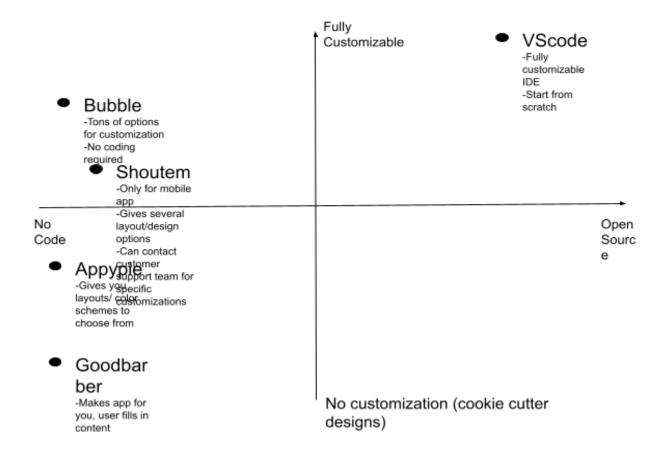
Ideal: Control Data Hosting and Let the Platform Publish Best to Worst: Bubble > VSCode > GB > AppyPie > Shoutem

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Customizability Vs Code type



Swot Analysis of Websites

Goodbarber:

Price range: \$25-\$96 per month (yearly subscription)

Strengths:

- Variety of templates/ app types
- Easy to design
- Multi-platform apps (app store, android, web page)
- Easily invite team members to the app
- Tons of different features
- Very versatile
- Goodbarber does a lot of the updates for you (GBTC)
- Can export own data list

Weaknesses:

- While one can create a unique app, their app will always be within Goodbarber's parameters and chance being similar to another app (no guarantee your app design is completely unique/ proprietary
- Some features cost extra \$\$

Opportunities:

- Great for the first-time small business owner to use to create an app/webpage
- Easy as drag/drop, people who have been using smartphones for years should have no problem adjusting

Threats:

- As mentioned before, run the risk of not being a completely unique app

Appypie:

Price range: \$0-\$120 per month (yearly subscription)

Strengths:

- Variety of templates/ app types
- Can make a basic application in minutes
- Variety of features
- Team available to help/ book a call

Weaknesses:

- Free version shows Appypie ads
- Seems a bit more difficult to to use than Goodbarber
 - Not as simple as "click here for this"
 - A bit more of a maze to find what you want than Goodbarber

Opportunities:

- Option to create either webpage or Mobile application
- Major player for ecommerce and marketing

Threats:

- As mentioned above as well, run the risk of not being a completely unique app
- Appypie can be a bit misleading, claiming that you can build certain apps with ease, but it requires third party integration

Shoutem:

Price range: \$49-\$149 per month (yearly subscription)

Strengths:

- Variety of templates
- Very easy to use
- Lots of features
- Team available to help/ book a call

Weaknesses:

- Only available in English
- Does not create web apps, just mobile apps for the app store

Opportunities:

- Similar to Goodbarber, great for the first-time small business owner to use to create an app/webpage

Threats:

- As mentioned above as well, run the risk of not being a completely unique app
- Missing out on an entire aspect of marketing as there is no webpage option

Bubble:

Price range: \$29-\$529 per month (yearly subscription)

Strengths:

- Bubble handles deployment and hosting for you, with no limit on the number of users, volume of traffic, or data.
- Lots of features
- Team available to help/ book a call
- Create interactive, multi-user apps for desktop and mobile web browsers.

Weaknesses:

Can be difficult to use

Opportunities:

- Similar to Goodbarber, great for the first-time small business owner to use to create an app/webpage

Threats:

As mentioned above as well, run the risk of not being a completely unique app

VScode:

Price range: FREE

Strengths:

- Free to use
- Start from scratch so can create anything one desires
- Very little limitations
- Blank canvas

Weaknesses:

- Requires in-depth knowledge of a programming language
- Takes significant time time create
- Steep learning curve

Opportunities:

- Blank canvas, can create whatever one desires
- Can be proprietary, if you only know the code that's written then you can protect it

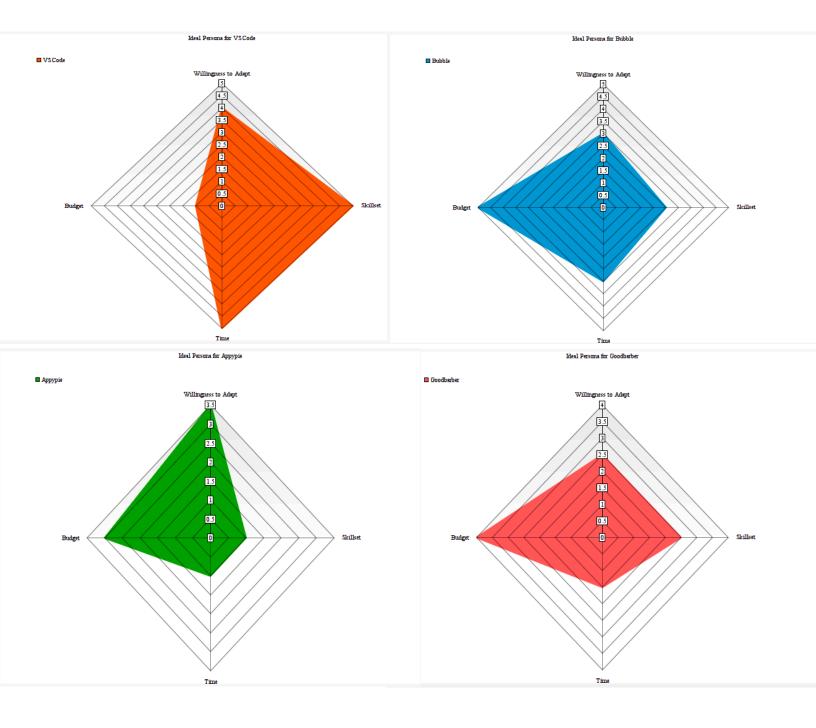
Threats:

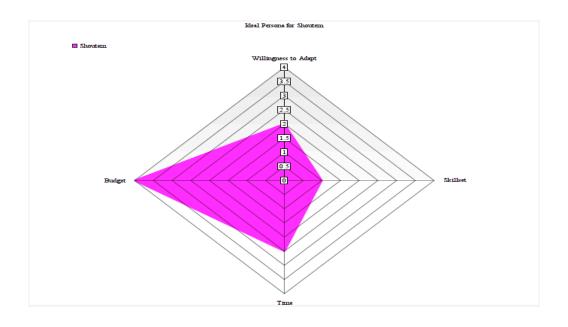
- Large population of people who have zero coding knowledge
- One small mistake can ruin the entire project
- Tedious

Initial Affinity groups/ Personas

Buckets of time and skill set, adapting and adopting tech affinity groups:

- -Looking to see how somebodys current skill set, time available, and monetary budget affect which characteristics of each website they might want.
- ex) Does somebody with more money, no time, and no coding knowledge want to just spend the most amount of money to get a good product?





Bookends of each relationship:

Ease of starting:

VSCode vs. Appypie

- VSCode requires programing knowledge while appypie does not require any

Price:

VSCode vs. Bubble

- Another spectrum VSCode is free and bubble is the most expensive out of all the websites

Data Ownership:

VSCode vs. Shoutem

- VSCode you have to host and protect all your own data
- Shoutem they host all of your data on their end

Proprietary Ownership: (Proportionate to level of customization/ number of design choices)

VSCode vs. Appypie

- VSCode you can make anything you want
- Appypie is more so plug and play

Growth Opportunity(how much limitation is there):

Design customization vs utility customization

Go over the utility of appypie on the chart

High Utility Customization

VScode

-Can basically Bubblecreate anything -Variety of you want with design and whiteoptions, but not as much VSCode

Appypie
-Several types of applications available -Plug and play design, low customization for those applications

Low Design Customizat ion

Goodbarber

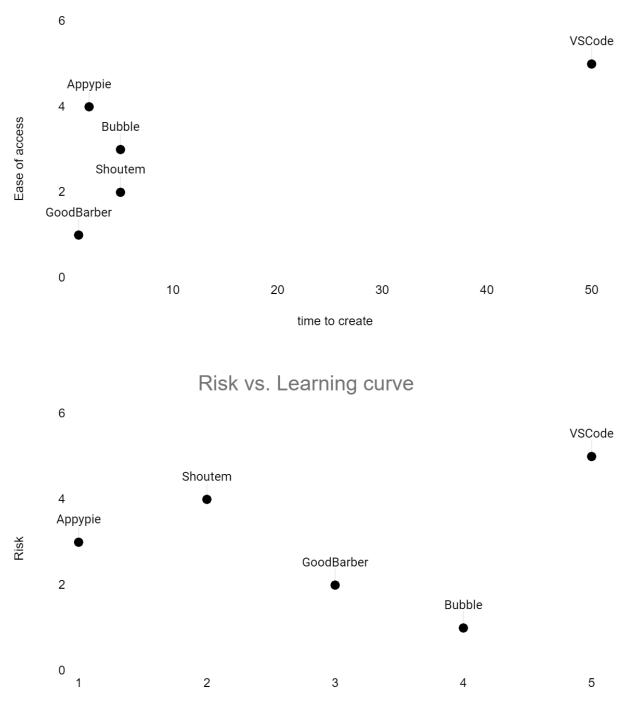
-Decent amount of design options -Middle of the pack utility applications available

High Design Customizati

Shoutem

-Several utility limitations Low Utility Customization Good amount of design options

Ease of access vs. time to create



Learning curve

- Skillset is the actually skill or disposition to learn new technical skills
- Willingness to adapt should be adapt/ adopt
 - Willingness to adapt/ adopt new technology and skills
- Budget == cost/pricing
- Time == Time to learn vs time to do
- **We assume that someone looking for this no code platform has an end goal in mind, so their time isn't spent in the assessment.

Low willingness to adopt == not willing to compromise much, only want EXACTLY what I want. Essentially, extremely high customizable

Willingness to adapt = Level of commitment to adapting and adopting new tech

- How committed am I to this project and learning new things?
- Low level of commitment: -> I need this to be easy

Skillset = Level of programming knowledge, ability to learn

Instead of time == capacity to execute and use skills/ knowledge

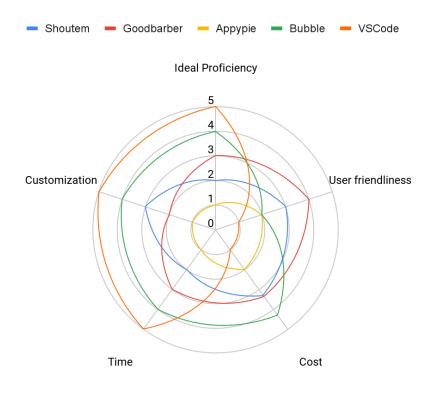
- Ex) Week before midterms, no capacity for anything other than midterms until they're over

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^{**}https://uxdesign.cc/create-your-own-product-persona-ba19b53c0c78

Final Personas

Persona Radar Chart



	Shoutem	Goodbarber	Appypie	Bubble	VSCode
Ideal Proficiency	2	3	1	4	5
User friendliness	3	4	2	2	1
Cost	3.3	3.33	2	4.3	1
Time	2	3	1	4	5
Customization	3	2	1	4	5
Minimum Proficiency	2	2	1	3	5

Characteristics within the chart

<u>Ideal Proficiency</u>- Programming and technical skills/ experience required to get the most out of the platform (1 = lowest, 5 = highest)

<u>User friendliness</u>- how easy is the website to use or how likely are you to run into a problem. (1 = least user friendly, 5 = most user friendly)

Cost- how much does each website cost in dollars (1 = lowest cost, 5 = highest cost)

<u>Time</u>- assuming the programmer fits the required programming proficiency, the amount of time it takes for the programmer to complete the product (based on the given platform's user friendliness). *Time does not reflect how long a new programmer takes to learn and/or build the product (1 = lowest, 5 = highest)

<u>Customization</u>- how precisely the programmer can depict their vision of the final product on the platform itself (1 = least specific, 5 = most specific)

 Minimum Proficiency Required - Programming and technical skills/ experience required to be able to use the platform at all (1 = lowest, 5 = highest)

Risk: The likelihood of encountering obstacles

- Categories of Risk: User Risk, Data Risk, Publishing Risk, Security Risk
 - User Risk: The likelihood of the developer making an error during coding/constructing the application (Risky < Safe)
 - VSCode < Bubble < Goodbarber < Shoutem < Appypie
 - Data Risk: The likelihood of losing your data during migration to another data hosting service
 - Appypie < Shoutem < VSCode < Bubble = Goodbarber
 - Publishing Risk: The likelihood of encountering an error during publishing the app to Google Play or App Store
 - Bubble < GoodBarber < Shoutem < Appypie < VSCode
 - Security Risk: We ran down this road, however it wasn't feasible to measure for this project

Ideal Developer Personas

Persona 1 (GoodBarber & Shoutem) - Griffin

Priorities: Low Coding Knowledge, Customer Service, Data Ownership, Time to Create Cons: Cost, Customization, Limitations on Final Product

While these platforms are considered "low-code", there is no coding *requirement*, so it is friendly for all users. There is an option for an HTML plugin, so if one has some coding experience, the option is there for further customization. Both platforms offer contact lines with highly rated customer service teams to walk you through building the app. With both platforms, infrastructure for the app is already in place, which means you don't need to be an IT wiz to run your app. This infrastructure also allows your application to be created fairly quickly and easily, though for someone less tech-savvy things could move a bit slower. Overall, application development shouldn't take more than <u>a few days</u>, if that, and all content created on the platform belongs to the user.

Some downsides of these platforms are the cost. You are due to spend at least \$100 monthly on these apps, and likely will spend more on customizations/ maintenance. The application formats are there for you to drag and drop, and while there seems to be unlimited features to play with, there is going to be a limit to how precise you can come to creating your specific vision. If you have the budget, Shoutem will create your app for you, offering more customization options, but this will cost upwards of \$1500. There are limitations on the final application as well- Shoutem only creates mobile apps (not web apps) and is only available in english. If you're looking to create an app and let it ride long term, you may want to consider Goodbarber over Shoutem, as future data migration could prove difficult and annoying. Overall, if you're a small market company looking for a simple, set-and-forget, low-function website with a large budget, this is the level of code for you.

Persona 2 (Appypie) - Diego

Priorities: Time to Create, Low Coding Knowledge

Cons: Cost, Customization

The ideal developer of Appypie is a person with almost no coding experience and has plans to create a simple and small-scale website. Appypie requires no previous coding experience thus the learning curve is very low. The large appeal of this website is its low time to create as well as how low of a risk it is to use it. In comparison to the other websites in this category it has the quickest time to create, this is due to the limitation in user input thus narrowing the options however at the same time making it more streamline. By having fewer options it allows for less user mistakes thus the risk to use the website is lowered. Likewise all the data is stored on an external cloud, therefore no user data could ever be lost on their end. Another benefit is the direct publishing of the website, the developer does not have to wonder how to release it when it's handled already. Lastly the help resources available are found as classes and chat bots that can aid you for any potential problems found.

While there are several benefits to using Appypie there are also downsides to it. The first is the cost, while it is not the most expensive website found in the No coding genre it is still a substantial amount of money when compared to free resources such as VSCode. The low time to create comes at this cost just like the level of customization available, drag and drop creation is useful to keep up with a time limitation however it drastically lowers just how much the user can create the website to their liking. Thus developers who have the budget but no time to create a website should go towards Appypie as their website development platform.

Persona 3 (Bubble) - Humza

Priorities: Regular and High Quantity Use of App, Wide Target Audience (iOS and Android),

Advanced App Features/Functionality

Cons: Not Beginner Friendly, High Cost, Overwhelming Options

Bubble's ideal developer aims to create a large-scale app targeting a wide user base on both Android and iOS platforms. Bubble offers several advanced features options without the requisite of coding expertise, although having some would allow some additional functionality to be used. As one of the more premium platforms, Bubble expedites the process of publishing a developer's app and allows an easy method to continually update and manage the app's progress over time. Additionally, Bubble guarantees protection for all data hosted on its servers, and allows developers to easily import/export data for migration purposes. These characteristics, along with the higher cost, make Bubble ideally suited for industry-level app development: apps with millions of regular users, apps needing regular updates, apps with a more professional aesthetic, etc. The expense of Bubble's feature set is mitigated by the fact that most of its clientele consists of larger companies, not individuals or small teams looking to make a start-up application. In fact, most individuals or smaller teams could be overwhelmed by the plethora of options Bubble offers, and may be better suited with a simpler platform like Appypie. Bubble presents an accessible, high performance development platform with the potential for higher customization if the proper expertise and money is available.

Persona 4 (VSCode) - Together/Humza

Priorities: Cost, Customization

Cons: High Proficiency, High Time to Create, No Publishing Support

VSCode's ideal developer has years of software development experience and aims to complete a highly detailed, large-scale project over a longer period of time. While VSCode offers a higher degree of customization to its users, it provides little assistance in the development or publication processes of building an application. This high barrier to entry is compensated by several benefits when compared to other platforms: VSCode is free to use, allows full control over one's data, and since code is traditionally saved on GitHub it is easier to see the history of one's work and revert to a previous version if necessary. This control is a common theme for VSCode:

The downsides come in the form of increased time to create an app (compared to drag & drop platforms like Appypie) and the lack of support from VSCode itself; no customer service, publishing support, or data hosting will be provided. If a problem arises and the developer is stuck, VSCode will not offer any consulting services to assist; it's an IDE, not a company designed to help developers publish apps. Therefore, skilled developers with the time to prioritize the customization and cost of their app will find the most success with VSCode.

Persona breakdown

Appypie

- Ideal customer- developer with little to no experience in coding, therefore anyone can navigate this website.
- No code is simply a drag and drop website creation platform with no further input required.
- Cost- a middle ground among the other platforms of its type in terms of price therefore most developers can afford it.
- Lowest customization- because it is a No code website there are no other customization options available other than what is provided by it.
- Lowest time to create a website
- Help on website- There are help channels available on the website as well as classes for student developers.
- Publish through the website as soon as you're finished.
- External data hosting- all the information of your website is stored on a secure cloud without needing to maintain a server.
- Lower risk

Bubble

- Ideal Customer Companies or Large Teams seeking to build an app for a wide audience with advanced/non-trivial features
- Allows constant upkeep easy to add new functionality
- Large bank of features w/ customization
- Well-rounded platform, comes at a higher cost due to the amount and quality of services offered

VSCode

- Ideal Customer A developer with years of software development experience
 - Tradeoff: High Proficiency Required
- Open Source Requires knowledge of programming languages and relevant libraries
- Cheapest Option Best choice for Cost Priority
- Highest Customization Best choice for Customization Priority
- Much Higher Time to Create
- No Provided Help; if you're stuck, have to figure it out yourself
- No Publishing Resources
- No External Data Hosting Full Control over own Data
- Higher Risk

GoodBarber & Shoutem

- Ideal Customer- developer with little to no coding experience, however there is zero coding requirement
- Cost ~\$100 per month avg, changes depending on what you're looking for
- For a more custom app Shoutem offers option to have their team develop the app for you
 - This option is substantially more expensive (~ \$2000)
- Customer Service Shoutem and Goodbarber offer meetings with their team to help walk you through the app making process. They will walk you through, but will not make the app for you (that comes at a price)
- Time to create Not a 5 minute play, but can be done effectively in <u>a few days</u>.
 - Someone with zero coding experience can easily have a fully functioning app within a week
- Content ownership The developer owns the content on their app
- Infrastructure infrastructure is already in place so no need to create your own in the company
 - No heavy IT requirements on your company's end
- Limitations Shoutem is only in english and is only mobile applications, not web apps
 - o Migration will likely be necessary, which may prove difficult
- Low risk due to help from company and drag/ drop format

Persona Quiz Part 1:

In the first portion of this quiz, the developer will answer a series of Yes/No questions to determine their priorities for constructing their app. The Quiz assigns negative points to platforms based on the developer's choices; at the end, the platform with the lowest score is removed from consideration. Part 2 of the Quiz will examine the remaining 3 platforms more closely to give the developer a final answer: the persona that best describes the developer and the platform that corresponds to that.

Question	Υ	N
Have you ever created a project using code?		-5 VScode
2) Are you willing to let the platform build the app for you?(are you willing to not customize?) (Do you need flexibility when making the website.)(restrictive customization	Select Y if you need customization	-1 Appypie
3) Are you willing to spend over \$100 per month?		-1 Goodbarber/ Shoutem -1 Bubble
4) Do you require developer/tech support?	- 1 VScode	
5) Do you intend for your project to handle high traffic? (high ex: Uber, Instagram, Airbnb) (low ex: Local Restaurant, Local Bowling Alley, small niche hobbies/interests)	-1 Appypie	
6) Do you plan on adding new features to your app after publication? (Ex. Instagram stories, snapchat updates) (low ex: order notifs, entry updates, updating a menu, change/update notifs)	-1 Appypie	

7) Does your app contain large-scale features? (Ex. Search algorithms, large number of files, hosts wide variety of data/ distinct customizations/ features)	-1 Appypie -1 Goodbarber/Shoutem	
8) Do you need your app to be in any language other than english?	-1 Shoutem/Goodbarber	
Does your audience include non-English speaking users?		

Persona Quiz Part 2:

For the 6 available categories, list 2 that you really need (+), 2 that you don't mind having the undesirable option (-), and 2 that you wouldn't mind having either way (0).

High Customization
Low Build Time
Low Cost
High User Friendliness
Low Developer Risk
High Rate App Scale

Customization- how precisely the programmer can depict their vision of the final product on the platform itself

Time- The amount of time it takes for the programmer to complete the product from start to finish. *Time does not reflect how long a new programmer takes to learn how to use the program

Cost- how much does each website cost in dollars

User friendliness- how easy is the website to use or how likely are you to run into a problem. **Developer Risk:** The likelihood of the developer making an error during coding/constructing the application.

App Scale - A mix of the number of features and expected traffic, as well as the desire to consistently update the application over time

Each Question assigns a -1 point to some platform(s). At the end, the platform with the lowest score (most negative points) will be eliminated. Then move onto part 2 of the quiz, w/ ranked questions.

Appypie - Cheap, Easy Learning Curve, Low Customization, Low Time to Create, Most User Friendly (\$), 0 Publication, Has Data Hosting

GoodBarber/Shoutem - (\$\$) Slightly Cheaper and Lower Grade Bubble, Low User Friendly, Full Publication, Has Data Hosting + Import/Export .csv

Bubble - Industry-standard large-scale application, Lower User Friendly(\$\$\$), Full Publication + Updates

VSCode - (\$0) Cheapest, Highest Customization, Higher Time to Create, Hardest Learning Curve, Least User Friendly, 0 Publication, Highest risk of failure, 0 Customer Service, Highest Proficiency Required, ³/₄ On scale of application, Lowest amount of limitations, All self updates

Quiz test examples

Ideal Proficiency
Minimum Proficiency Required
User friendliness
Cost
Time to create
Customization
Risk
Customer service
Learning Curve
Scale/ size of application
Content ownership
Limitations
Publishing resources
Updates

Ideal Platform: (4 is most desirable, 1 is least desirable)

Customization 4 (Highest amount of customization)

~Time 4 (Lowest amount of time)

~Cost 4 (Lowest cost)

User Friendliness 4 (Highest/ easiest user friendliness)

~User Risk 4 (lowest user error)

App Scale 4 (Largest app scale)

```
Appypie: 17(-Customization +Time +Cost)
Customization 1
~Time 4
~Cost 3
User Friendliness 4
~Developer Risk 4
App Scale 1
GB/Shoutem: 15 (Leftover) (+Time +Low Risk - Customization)
Customization 2
~Time 3
~Cost 2
User Friendliness 3
~Developer Risk 3
App Scale 2
VSCode: 14 (+Customization -Time +App Scale)
Customization 4
~Time 1
~Cost 4
User Friendliness 1
~Developer Risk 1
App Scale 3
Bubble: 14 (+App Scale +Customization -Cost)
Customization 3
~Time 2
~Cost 1
User Friendliness 2
~Developer Risk 2
App Scale 4
Humza Quiz Part II: (+Customization +AppScale -Time -Cost)
Customization 1
~Time 6
~Cost 5
User Friendliness 3
~Developer Risk 4
App Scale 2
<u>Griffin Quiz Part II:</u> (+Cost +Time -AppScale -Customization)
```

Customization 6

- ~Time 2
- ~Cost 1

User Friendliness 4

~Developer Risk 3

App Scale 5

<u>Diego Quiz Part II: (+app scale +risk -user friendliness -time)</u>

Customization 4

- ~Time 5
- ~Cost 3

User Friendliness 6

~Developer Risk 2

App Scale 1