

The BA in a Low-Code World

Alex Bath
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Alex Bath

Strategic Adoption Lead | Accelerated Focus

@ alex.b@acceleratedfocus.com

in /alex bath

 /12794781

Intended Outcomes

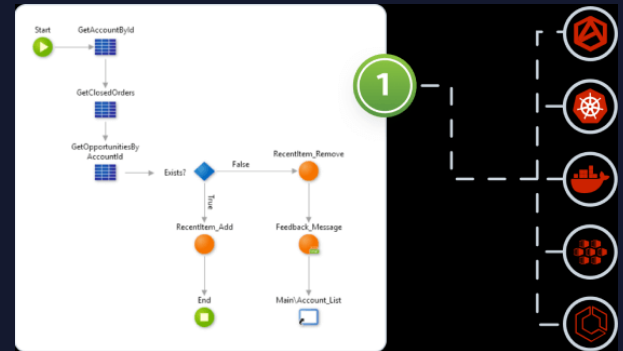
- Introduce low-code platforms with a BA centric view
- Reinforce importance of Agile methodology through a low-code lens
- Have great discussions and have fun
- Answer your questions

A nighttime cityscape featuring a prominent arch bridge in the foreground, illuminated with blue and white lights. The bridge spans across a body of water. In the background, a dense skyline of skyscrapers is lit up with various colors, including yellow, white, and blue. The overall scene is a vibrant urban night view.

What is Low-Code?

What is Low-Code?

- Low-code is a way to design and develop software applications fast and with minimal hand-coding
- It enables skilled people to deliver value more quickly and more reliably
- It allows developers to focus on the unique 10% of an application
- A way for developers to get more done



Low-Code Benefits

- Speed
 - Leads to a better customer experience
- Improved agility
- Decreased costs
- Improved standardization
- Higher productivity
- Built-in governance
 - Solution is administered by IT team
- DevOps support
 - Deployment, analytics and management
- Omni-channel capabilities
 - Progressive Web Apps (PWAs)
- Citizen Development

Reasons for Using Low-Code

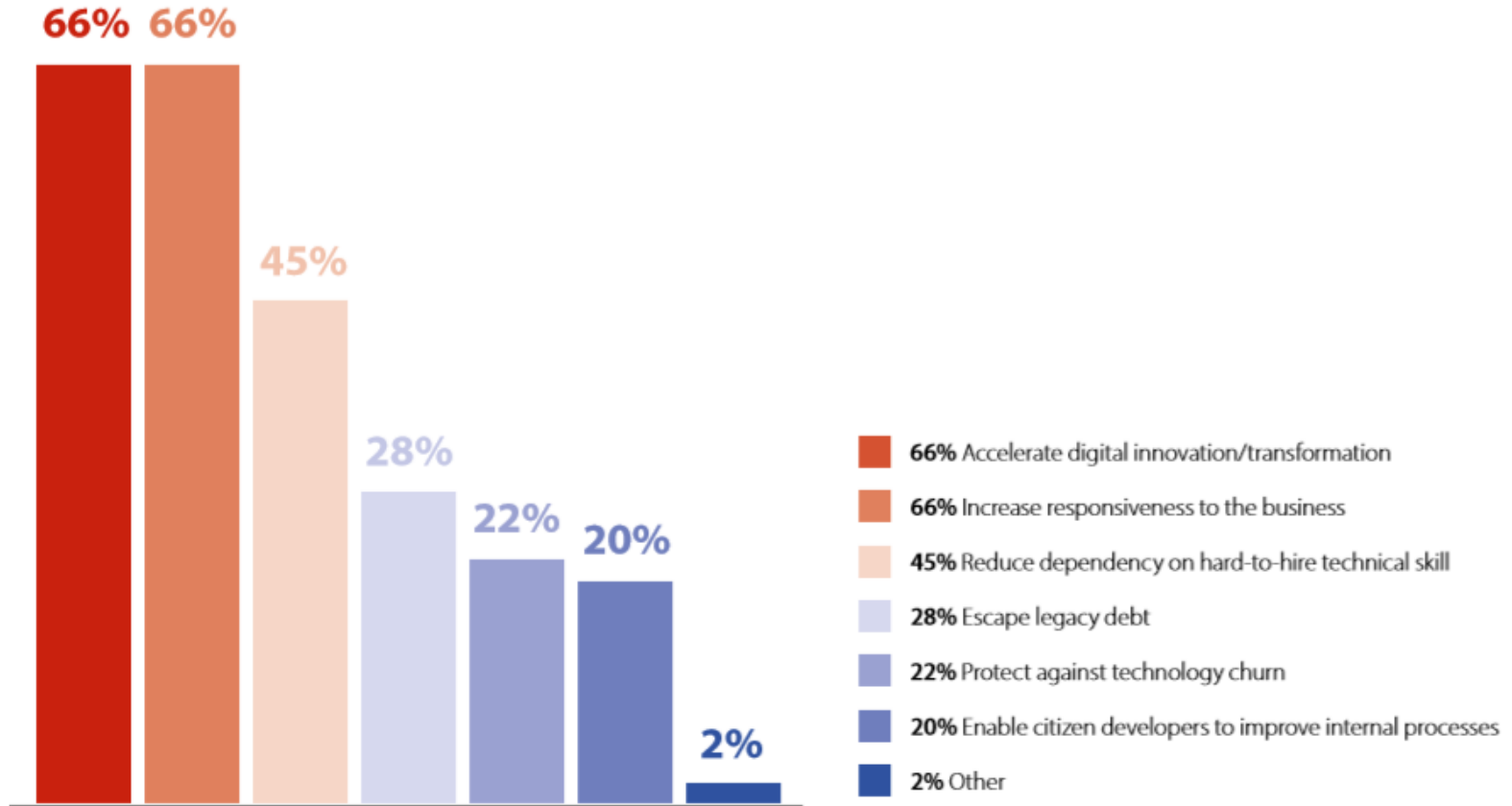


Fig. 40: Reasons for Using Low-Code Platforms

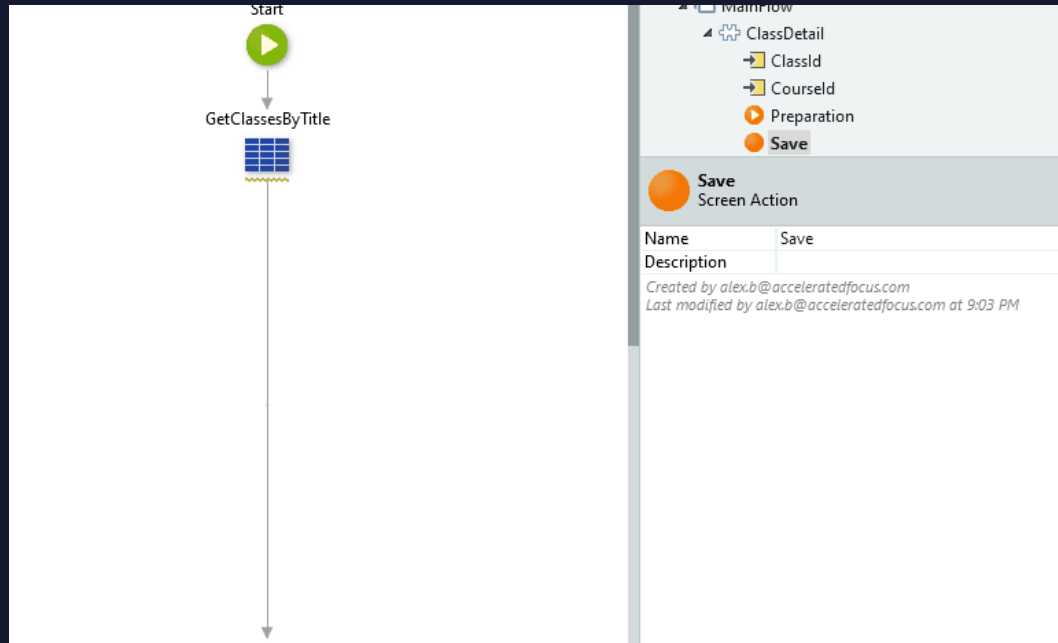
Source: State of Application Development 2019/2020. OutSystems ©

Progressive Web Apps (PWAs)

- Websites that look and feel like an app
- Reduced development costs
 - Multiple platforms or channels are supported with a single codebase
- Most often used B2C
- Remove pain points from customer journey
- Offline access

AI Assisted Development

- Low-code platforms are introducing AI assisted development
 - Further reduces development time up to 25%



Low-Code Developers

- Shallow learning curve

	Less than a week	One week to less than two weeks	Two or more weeks
Solution Architects		X	
Developers	X		
Business Analysts			X
DBAs	X		

- Citizen developers
 - Non-professional users who can build simple applications
 - Includes business users
 - Lack professional experience required to build complex applications

Low-Code Skills

- **Empathetic**
- SQL
 - Relational database knowledge for low-code data modeling
- Web development basics
 - Lack of understanding can lead to poor decisions
- Mobile development (nice to have)
- Good logic and problem-solving skills

A nighttime cityscape featuring a prominent cable-stayed bridge in the foreground, illuminated with blue and white lights. The bridge spans across a body of water. In the background, a dense urban skyline is visible, with numerous skyscrapers and buildings lit up, creating a vibrant city glow. The overall scene is captured in a slightly hazy, atmospheric style.

The BA Role in Low-Code

The BA Role in Low-Code

- Uniquely positioned to be natural adoption champions or change agents

Past	Future
Formerly task-oriented <ul style="list-style-type: none">• Requirements• Documentation• Project artifacts	Change Agents <ul style="list-style-type: none">• Build strategy• Define vision and goals• Support continuous improvement• Focus on growth Citizen Developers

- Low-code favors domain knowledge over technical know-how

The BA Role in Low-Code - Technical Debt

- Technical debt represents the extra costs that arise as a result of implementing sub-standard solutions
- Low-code = low-debt
 - Custom code is more complex and harder to maintain than low-code
- So? What does this have to do with the BA?
 - BAs are positioned to be change agents – a “debt collector”
 - Domain knowledge enables the BA to identify high-value targets to reduce technical debt
 - For example, identifying highly integrated business processes

The BA Role in Low-Code – Change Drivers

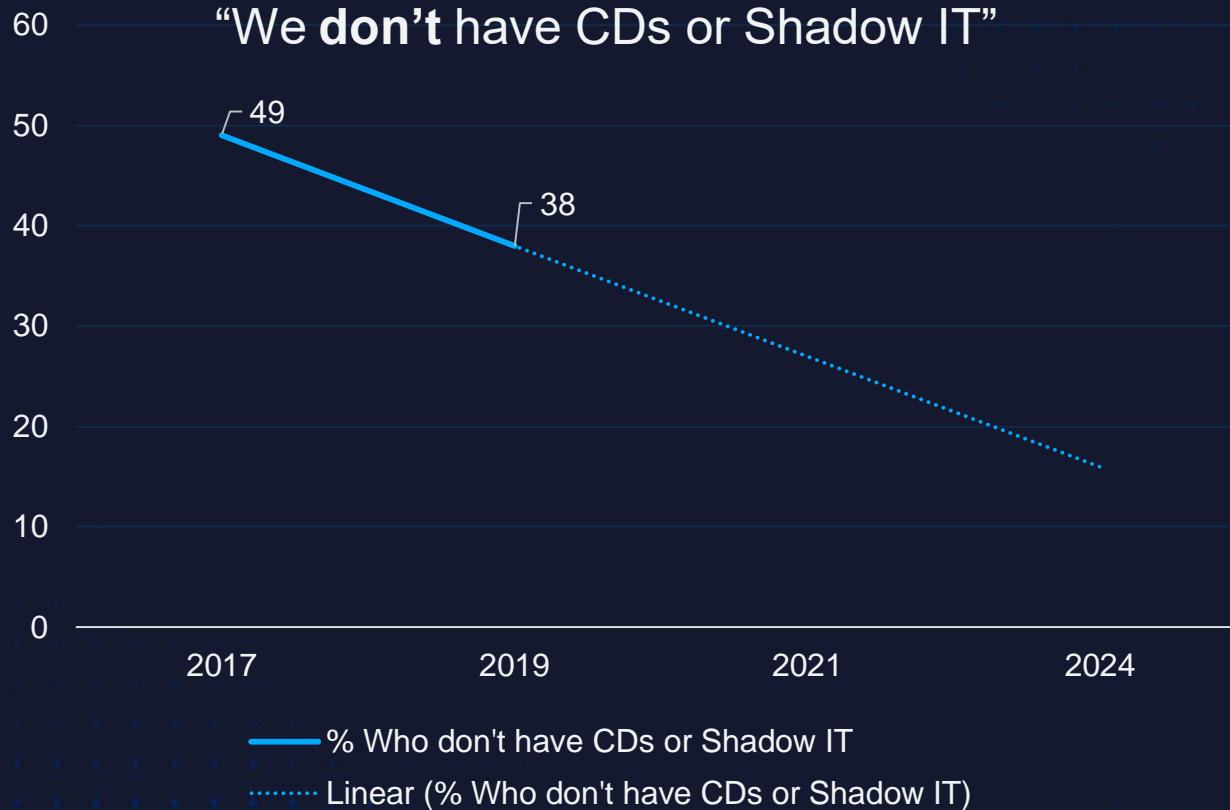
- Very few business executives approve of the rate that IT is introducing new technologies
- And...?
 - Despite slow IT, business is pushing forward
 - Many employees have engaged in “shadow IT” to achieve their goals
 - Business Analysts are the front line – perfectly tailored to drive change in collaboration with IT and business

The BA Role in Low-Code – Citizen Developers



- Useless Stats Time!
- Based on a 2019 Gartner report:
 - Only 15% of respondents described recruitment of dev resources as “easy”
 - For specialists, recruitment was described as hard or very hard
 - Retention of developer talent is equally challenging
 - Only 16% said that IT was fully involved with citizen development
 - 36% said IT was mainly for back-end support of such development efforts
 - IT oversight and governance are lacking

The BA Role in Low-Code – Citizen Developers



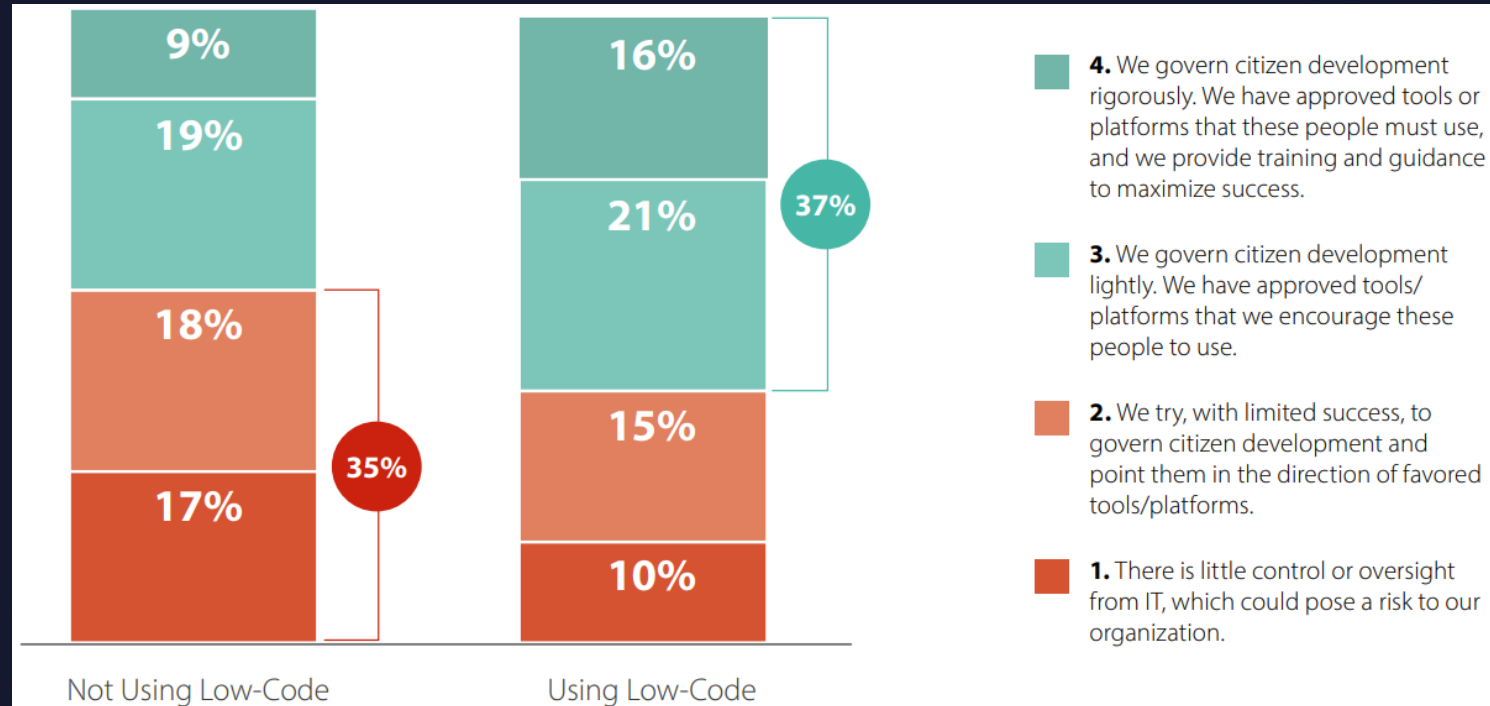
The BA Role in Low-Code – Citizen Developers



- The numbers may not be accurate
 - Are the respondents aware of shadow IT?
- Story time:
 - Excel Spreadsheets and tuition reporting
 - Business area, frustrated with slow delivery times, developed Excel Macros (VBA) to classify tuition fee categories
 - WOW! And... YIKES!
 - We had no idea! How long did it take them? About 1 week
 - Important to note that slow delivery times were a result of technical debt and low supply of developers (because they were too busy delivering crappy, low-value features on legacy technology...)

The BA Role in Low-Code – Citizen Developers

- Development skills are in **short supply**, especially in low-code
 - **If governed**, citizen developers can mitigate this



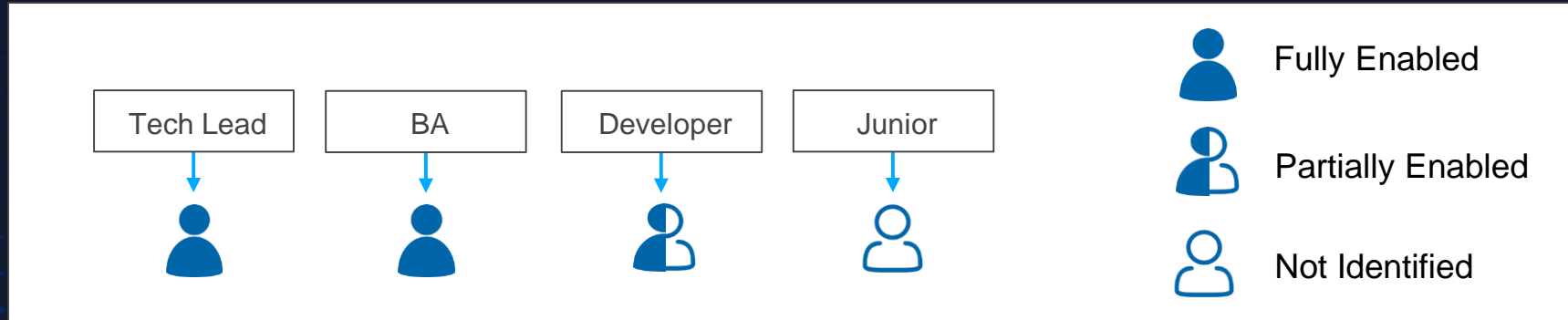
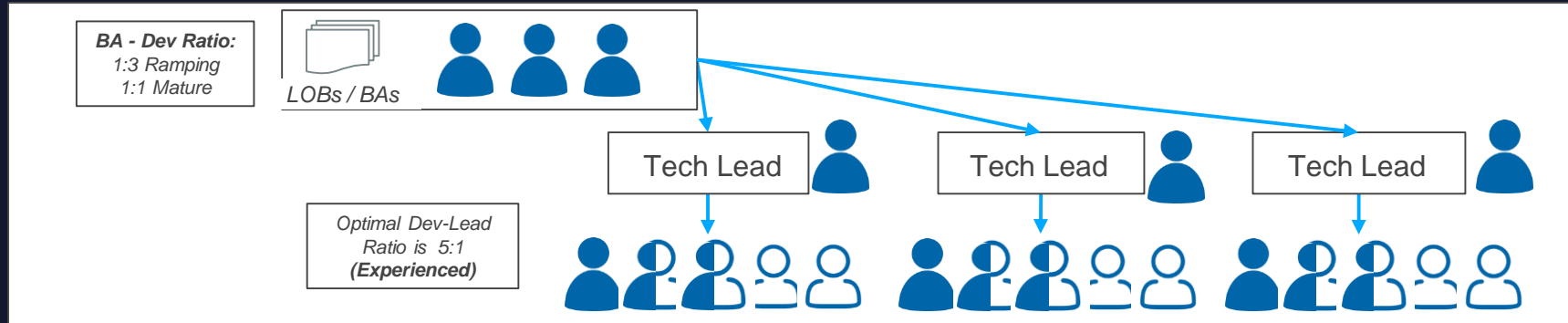
The BA Role in Low-Code – Citizen Developers



- Domain knowledge > technical know-how
 - BAs have both (usually)
- Business Analysts are fundamentally aware of the constraints and practices of IT delivery teams
 - Most understand SDLC
- The Business Analyst, with the power of low-code platforms and good governance, are the growth engines of IT

The BA Role in Low-Code

- What is the optimal team composition in a low-code environment?



The BA Role in Low-Code

- What makes a good team?
 - Knows and believes in the vision or purpose
 - Knows what to do and when to do it
 - Makes their own calls
 - Able to analyze and improve without taking it personally
 - **Isn't afraid to communicate**

The BA Role in Low-Code – Product Owner



The BA Role in Low-Code – Product Owner

- Responsible for managing the Product Backlog
 - Clearly expressing Product Backlog items
 - Ordering the items in the Product Backlog to best achieve goals and missions
 - Optimizing the value of the work the Development Team performs
 - Ensuring that the Product Backlog is visible, transparent, and clear to all, and shows what the Scrum Team will work on next
 - Ensuring the Development Team understands items in the Product Backlog to the level needed
- Overlaps with traditional BA roles and responsibilities
 - As a result, the BA can act as a co-product owner, especially in a low-code environment

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Product Intake

Product Intake – Project vs Product

- Project
 - Temporary (has a start and end date)
 - Success is defined as on-time, under budget and within scope
 - All of which are defined up front
 - Rigorous, verbose documentation
- Product
 - Focused on customer delight
 - Continuously respond to change to ensure delivery of the right product
 - Adaptable
 - Defined by a product strategy and vision
 - Deliver value, not features
 - Maximize ROI

Product Intake – Business Analyst

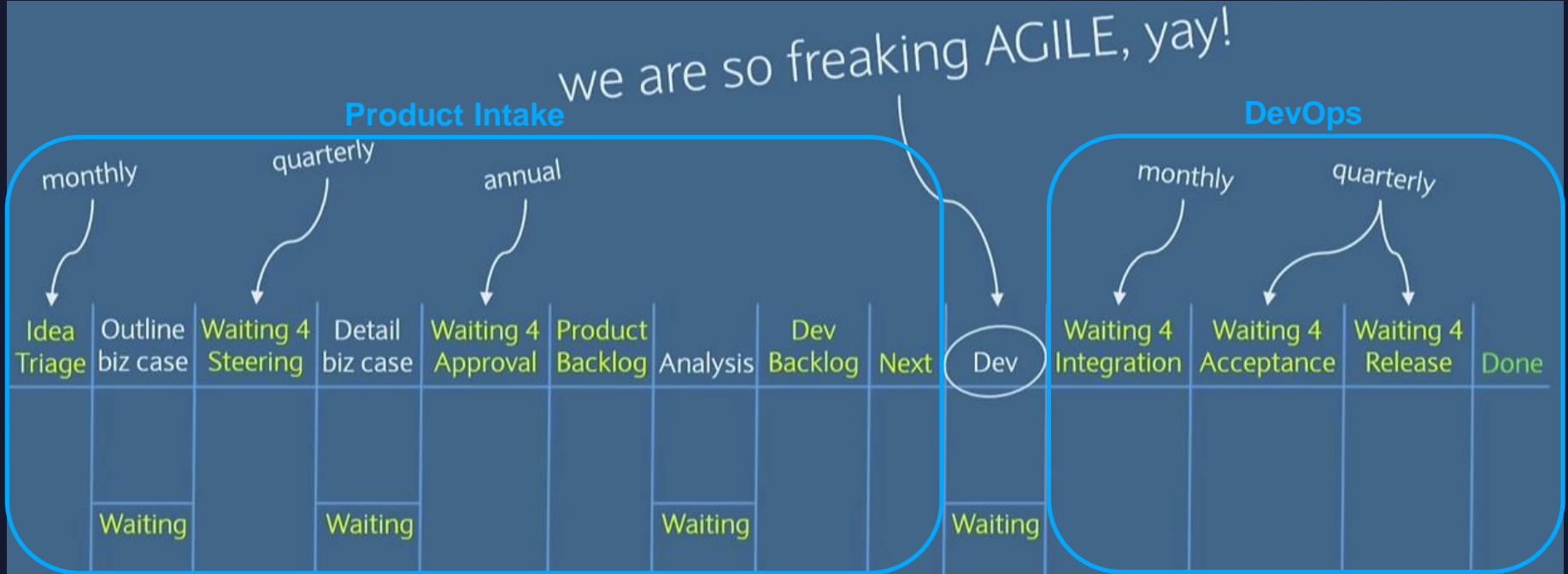
- Generic Business Analyst
 - Gather requirements and write stories
 - Supports testing
- Technical Business Analyst
 - Writes stories
 - Develops low and high fidelity mock-ups
 - Participates in delivery
- Low-Code Enabled Business Analyst
 - Writes stories
 - Develops low and high fidelity mock-ups
 - Participates in delivery
 - Develops and demonstrates MVPs in low-code

Product Intake – Business Analyst



	Support	Verify Solution	Test Cases	Adoption Champion	Citizen Developer	Data Modeling	Mock-ups	User Stories	Req. Gathering	Planning
Generic Business Analyst	X	X	X				X	X	X	X
Technical Business Analyst	X	X	X			X	X	X	X	X
Low-code Enabled BA	X	X	X	X	X	X	X	X	X	X

Product Intake



Product Intake

- Every product starts with an idea
 - What aspects of an idea do we care about?
 - How do we decide which idea to pursue and productize?
- Evaluate ROI on the idea as soon as possible
 - How?
 - Derive business value
 - Determine a high-level effort estimate
 - Calculate ROI

How to Play the Business Value Game

- All stakeholders are invited from the Product Owner to estimate the value of requirements in a meeting time-boxed to 2 to 4 hours.
- Each stakeholder is given a deck of cards that have values of 100, 200, 300, 500, 800, 1200, 2000, 3000 and a ? or coffee mug (which means take a break).
- If the game is played for the first time, a baseline requirement is chosen and assigned an amount of Business Value (aim for one that lands at 500 or 800 for value).
- The facilitator reads the requirement to be prioritized by business value.
- Each stakeholder can relatively estimate the value of the requirement in the following categories:
 - (N) New Value: Will bring new, valuable services.
 - (U) Up Value: Will extract more value from existing services.
 - (R) Retainment: Not implementing will cause reduction in service.
 - (O) Operational efficiency: Will save on operational expenditures.
- Each stakeholder plays their card with the number facing down. When all cards are on the table, the cards are turned over.
- The stakeholders estimating the highest and lowest value will justify attributing the decision to one of the 4 mentioned categories (NURO)
- The round continues until the stakeholders have reached an agreement on the value for the requirement or the Product Owner decides to split the requirement into more parts if the value proposition is not clear.



Calculate ROI

- $ROI = \text{Business Value} / \text{Duration}$

Business Value Game Demonstration



- Scenario
 - We run a brewery and we want to create a new line of craft beers
 - We had four directors go research which beers should be included in the lineup - they are ready to bring their research to the table
 - For brevity, just tell me your favorite beer and be ready to convince others!

A nighttime cityscape featuring a prominent arch bridge in the foreground and a dense skyline of illuminated skyscrapers in the background. The scene is captured from an elevated perspective, showing the bridge's structure and the surrounding urban environment. The text "Product Discovery" is overlaid in the center of the image.

Product Discovery

User Centered Design

- What is it?
 - Iterative design process focused on users and their needs
 - Helps understand the context of the product we are developing
 - Considers the whole experience
 - Before, during and after using your product
 - Environmental factors
 - Deeper sense of empathy
 - UX is a pivotal role within product development and low-code
 - As a business analyst, your role is to bridge the UX gap that exists between customers and development teams

Product Vision

- Every product starts with an idea
 - What aspects of an idea do we care about? Why is it important?
 - Develop a vision to crystalize the idea
 - Define what will make the idea successful
 - If you can't – it is probably a bad idea

DEFINING VISION

Use as a starting point. Ideally, each team member will create their own pitch and then come together for discussion. Eventually, the team will arrive at a well-defined vision with clear success criteria.

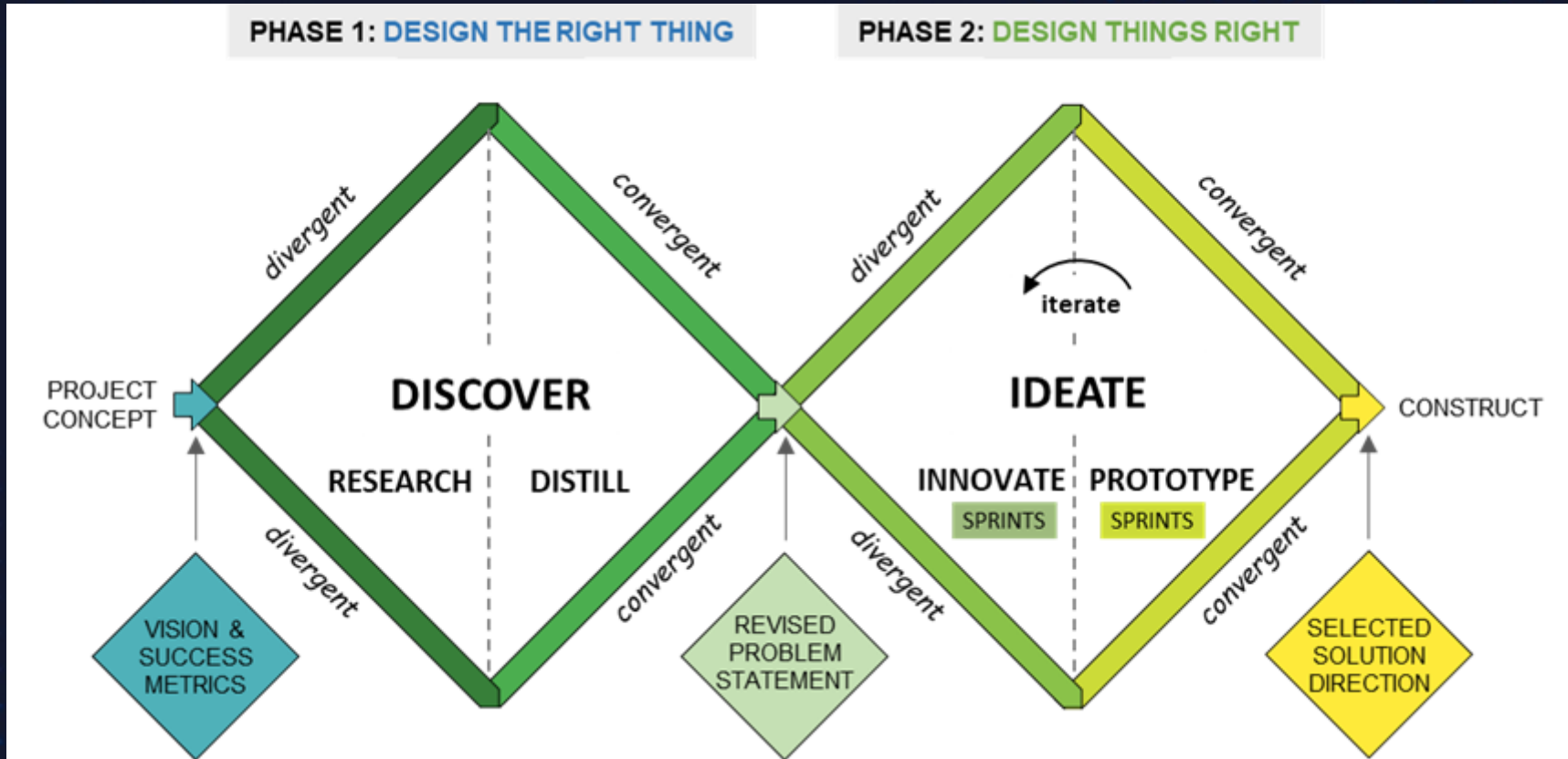
FOR <target customer>
WHO <statement of the need>
THE <product name>
IS A <product category>
THAT <key benefit>
UNLIKE <primary competitor (optional)>
OUR PRODUCT <further differentiation>

Success Criteria Examples

- More business value delivered
- Faster deliveries
- More business agility
- Higher velocity or productivity
- Higher customer satisfaction
- More innovation
- Higher quality
- Faster feedback
- Better response to competitor challenges

Important to get
baseline measurements
as early in the process
as possible.

Product Discovery – DICE Framework



Product Discovery – Digital Greenhouse

GREENHOUSE FLAVORS

5 - DAY GREENHOUSE



VISUALIZE A POSSIBLE FUTURE

REQUIREMENTS WORKSHOP	1 D
IDEATION	1 D
VISION MOCKUPS	1 D
VALIDATION & ITERATION	2 D

2 - WEEKS GREENHOUSE



FROM PROBLEMS TO GRAND VISION

REQUIREMENTS WORKSHOP	2 D
IDEATION	2 D
PROTOTYPING	4 D
VALIDATION & ITERATION	2 D

4 - WEEKS GREENHOUSE

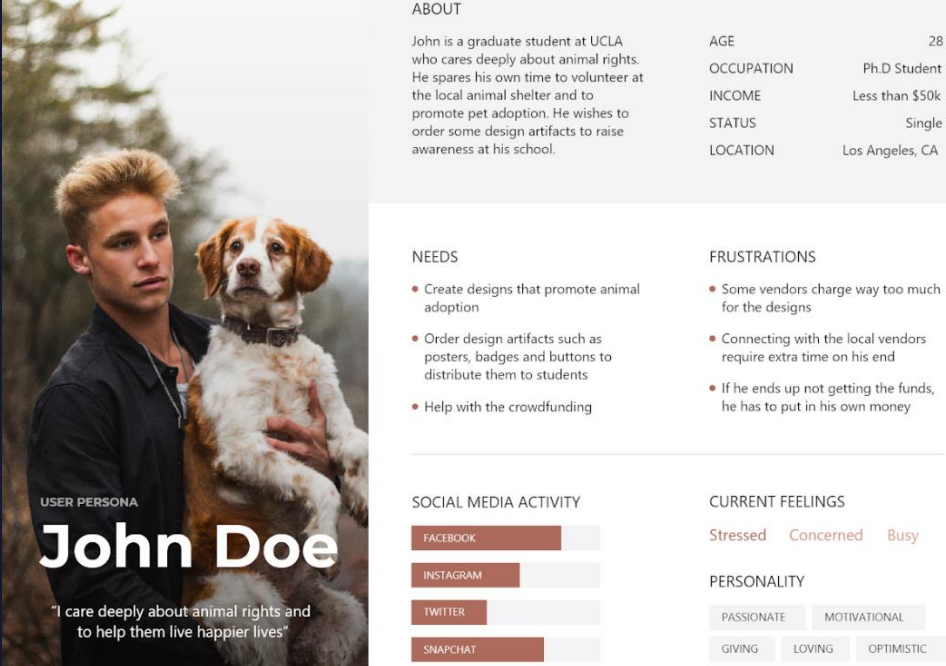


ROADMAP OF A GRAND VISION

REQUIREMENTS WORKSHOP	2 D
IDEATION	3 D
PROTOTYPING	10 D
VALIDATION & ITERATION	5 D

Product Discovery – Personas

- User Personas
 - Identify background, needs and frustrations of the individuals you are designing the product for
 - Collect statistics and context information about each persona
 - Understand the importance of each persona towards the product goal
 - Group into specific roles when they use the solution for different purposes



USER PERSONA
John Doe
"I care deeply about animal rights and to help them live happier lives"

ABOUT
John is a graduate student at UCLA who cares deeply about animal rights. He spares his own time to volunteer at the local animal shelter and to promote pet adoption. He wishes to order some design artifacts to raise awareness at his school.

AGE	28
OCCUPATION	Ph.D Student
INCOME	Less than \$50k
STATUS	Single
LOCATION	Los Angeles, CA

NEEDS

- Create designs that promote animal adoption
- Order design artifacts such as posters, badges and buttons to distribute them to students
- Help with the crowdfunding

FRUSTRATIONS

- Some vendors charge way too much for the designs
- Connecting with the local vendors require extra time on his end
- If he ends up not getting the funds, he has to put in his own money

SOCIAL MEDIA ACTIVITY

FACEBOOK	██████████
INSTAGRAM	██████████
TWITTER	██████████
SNAPCHAT	██████████

CURRENT FEELINGS
Stressed Concerned Busy

PERSONALITY

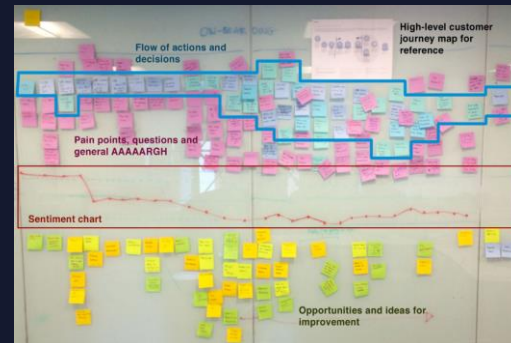
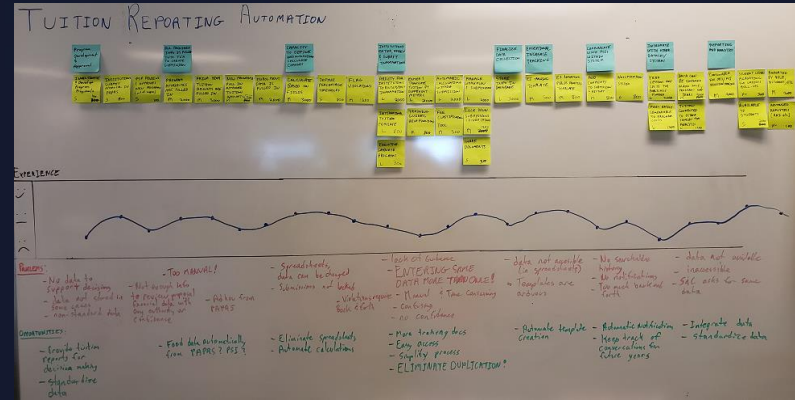
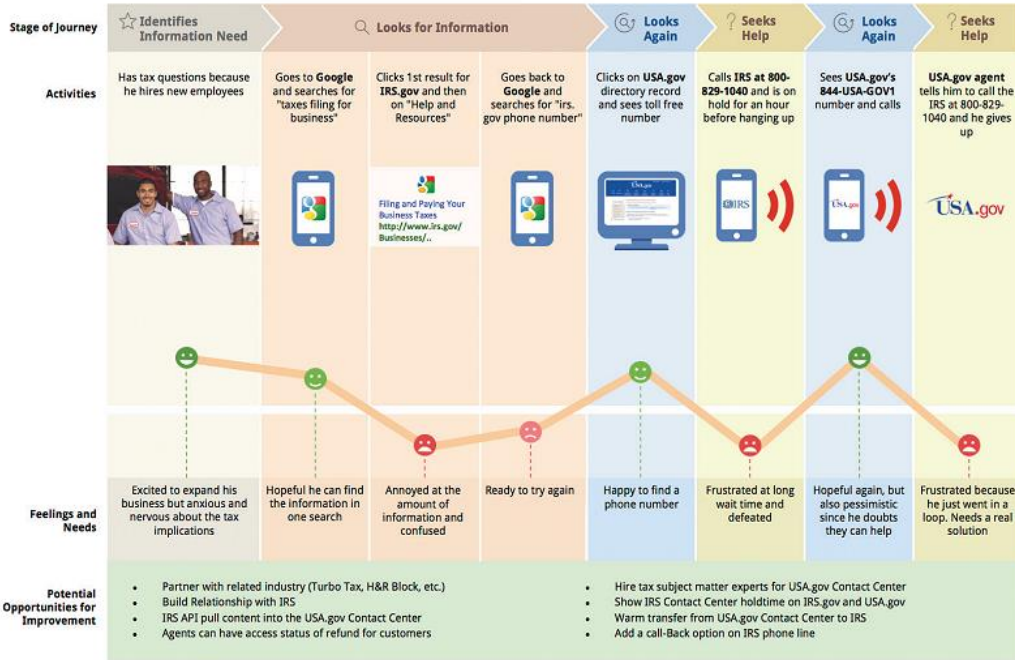
PASSIONATE	MOTIVATIONAL	
GIVING	LOVING	OPTIMISTIC

Product Discovery - Journey Maps



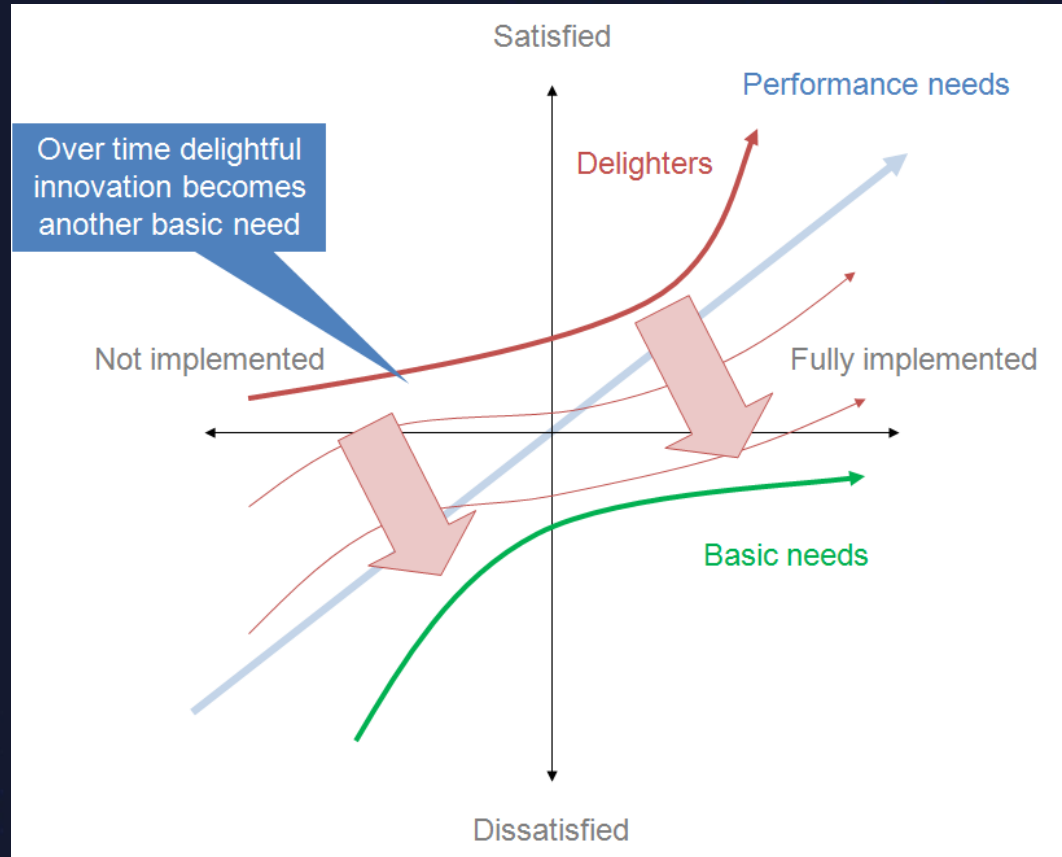
Michael's Journey Map

Find contact information for an agency or elected official



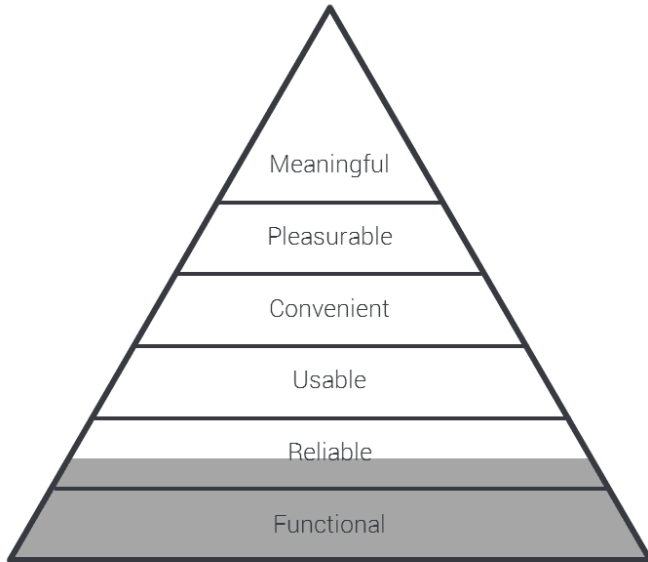
Product Discovery – Kano Model

- Kano model
 - Helps frame features generated from ideation
 - Focuses on customer satisfaction



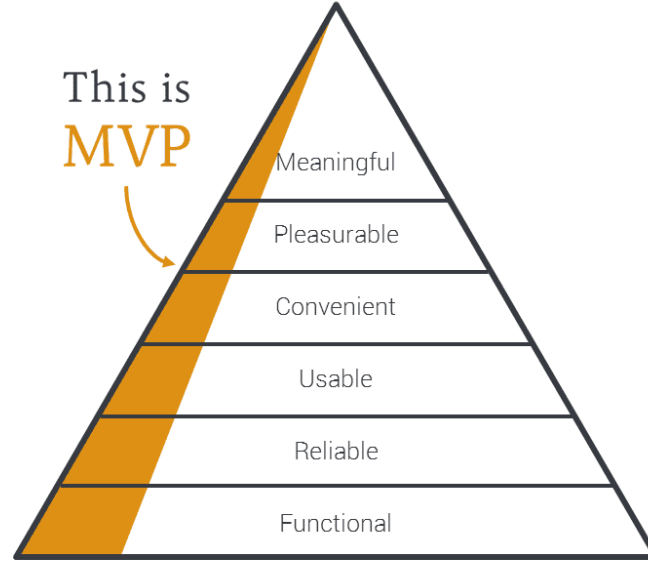
Product Discovery – MVP

Minimum Viable Product



Lots of features done poorly

vs.



Core features done well

Product Discovery - Levels of Planning



A nighttime cityscape featuring a prominent arch bridge in the foreground and a dense skyline of illuminated skyscrapers in the background. The scene is captured from an elevated perspective, showing the bridge's structure and the surrounding urban environment. The text "User Stories" is overlaid in the center of the image.

User Stories

User Stories

- Three parts: the three C's
 - Card: a brief written description of the story
 - Conversation: a real-time discussion to understand the details of the story
 - Confirmation: acceptance criteria to validate completion
- Who, What and Why
 - As a <WHO>
I want <WHAT>
so that <WHY>

User Stories

- What makes a good user story?
 - Independent
 - Negotiable
 - **Valuable**
 - Estimable
 - Small
 - **Testable**

User Stories

- Acceptance Criteria
 - Define boundaries
 - Reach consensus
 - Serve as test cases
 - Allow more accurate planning and estimation
- Styles:
 - Bullet points
 - Examples
 - Diagrams and pictures
 - Given-When-Then

As a logged-out user
I want to be able to sign into a website
So that I can find access my personal profile

Scenario: System user signs in with valid credentials

Given I'm a logged-out system user and I'm on the Sign-In page
When I fill in the "Username" and "Password" fields with my authentication credentials and I click the Sign-In button
Then the system signs me in

User Stories

- Splitting User Stories
 - Workflow Pattern
 - Business Rule Variations
 - Major Effort
 - Simple / Complex
 - Variations in Data
 - Data Entry Methods
 - Defer Performance
 - Operations (CRUD)
 - Break Out a Spike
 - Investigation work

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Preparing for Low-Code

Conclusion

- Low-code introduces development speed that far exceeds custom development
- Customers are asking for features at a much faster pace
- As a BA, your future depends on keeping up with this new, fast-paced world

Next Steps

- Learn and understand Agile
 - Take what works, leave the rest behind
 - Remember, you need to keep pace with development and customer expectations
- Familiarize yourself with a low-code platform

Reading

- *Crossing the Chasm* – Geoffrey Moore
- *The Lean Startup* – Eric Ries
- *Originals* – Adam Grant
- *Principles* – Ray Dalio