# PROTOTYPE TO PRODUCT
## Bringing an Idea into Reality

prodcon
by nvisia

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# MEET THE PANELISTS
## 'prototype to product' experts

**BARB VANDENBERG**
Product Fellow & Delivery
27 YEARS IN CONSULTING

**KEN LUBERT**
Product Fellow
27 YEARS IN CONSULTING

**ROB MIROBALLI**
Principal Architect
9 YEARS IN CONSULTING

**SAVINA IMRHAN**
UX Lead
11 YEARS IN CONSULTING

*Moderated by Shawn Spartz, Creative Partner at nvisia

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# Today's Discussion Focus

1. **The process of identifying the need for change and modernizing legacy systems**, including recognizing the limitations and pain points of existing solutions,

2. **Importance of user research and understanding user needs** to drive product development decisions and prioritize features.

3. **Effective strategies for consolidating and prioritizing a large wish list of features** into a feasible and impactful product roadmap.

4. **Critical steps in gaining business approval**, including evaluating ROI, considering budget and resource constraints, and creating a comprehensive roadmap for ongoing improvements and maintenance.

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# STAGE-GATE PROCESS
## for product development

- Idea Generation
- Stage 1: Scoping
- Stage 2: Build Business Case
- Stage 3: Development
- Stage 4: Testing & Validation
- Stage 5: Launch
- Post Launch Review
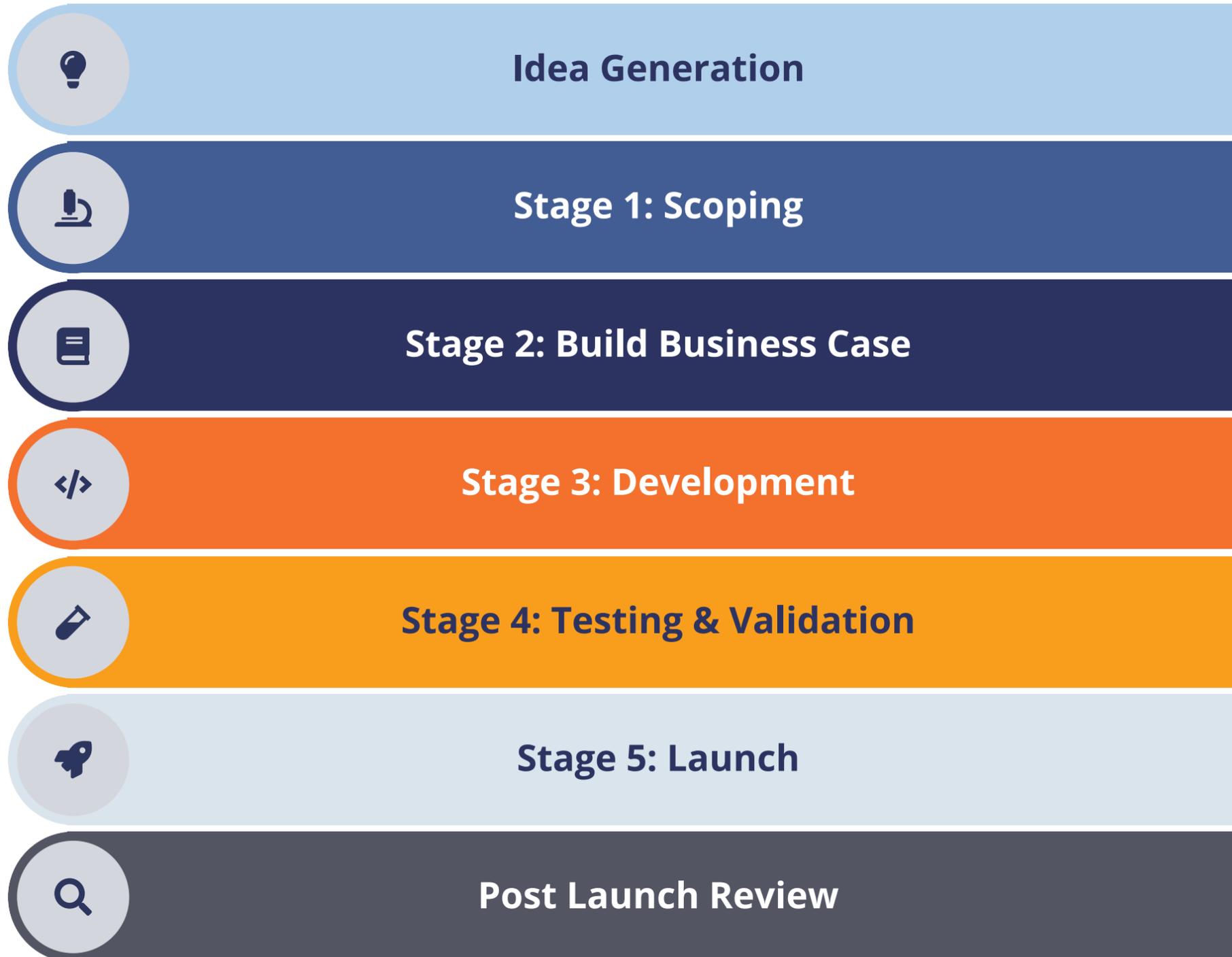
Idea Gen

WHERE TO START

IDEA GENERATION
discover new concepts w/prototypes

nvisionaries SCIENCE FAIR

by nvisia

tech showcase

by nvisia

COMING AGAIN SOON

December 2023

# nvisionaries
**by nvisia**
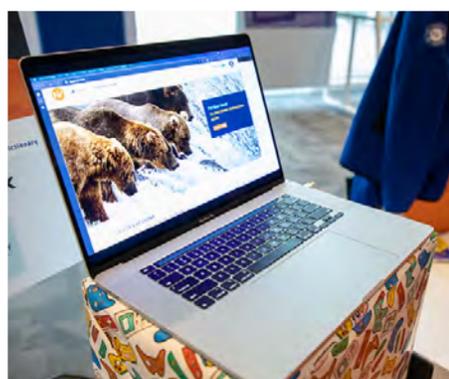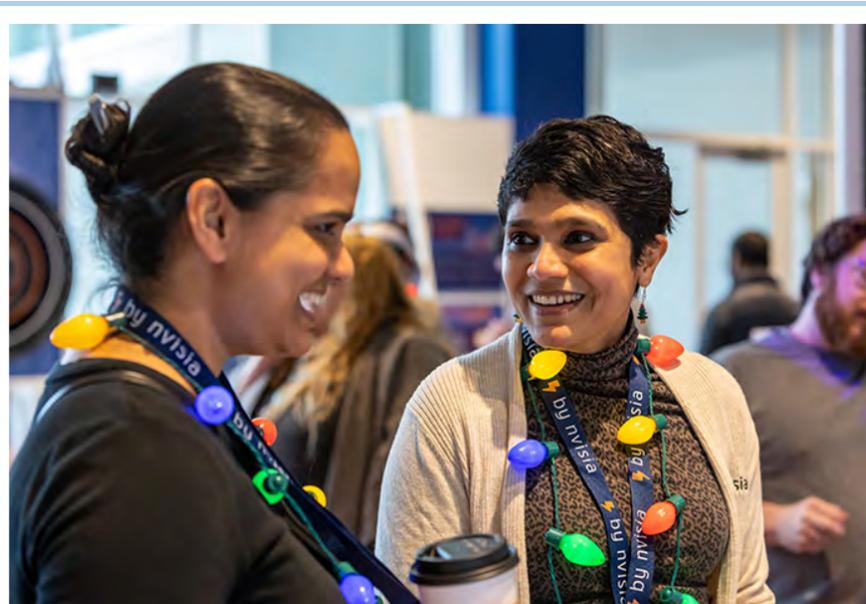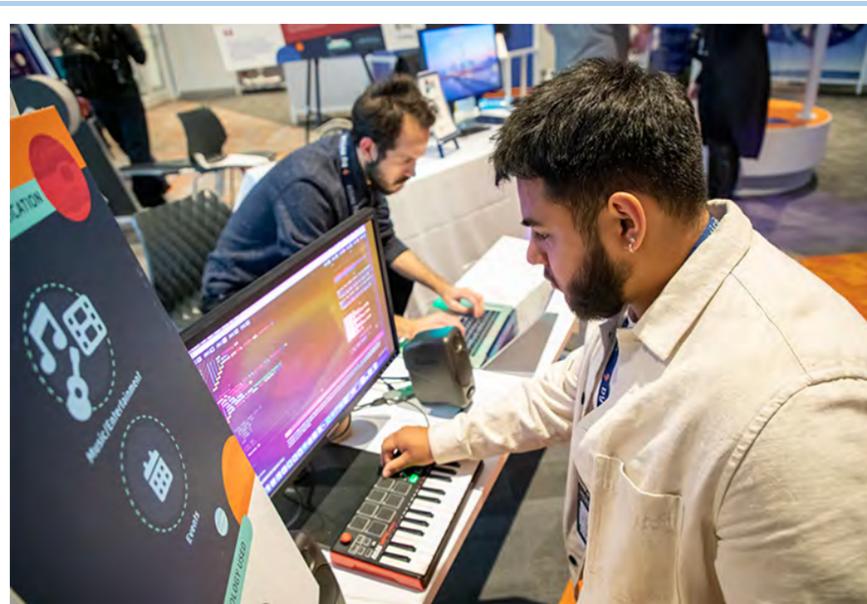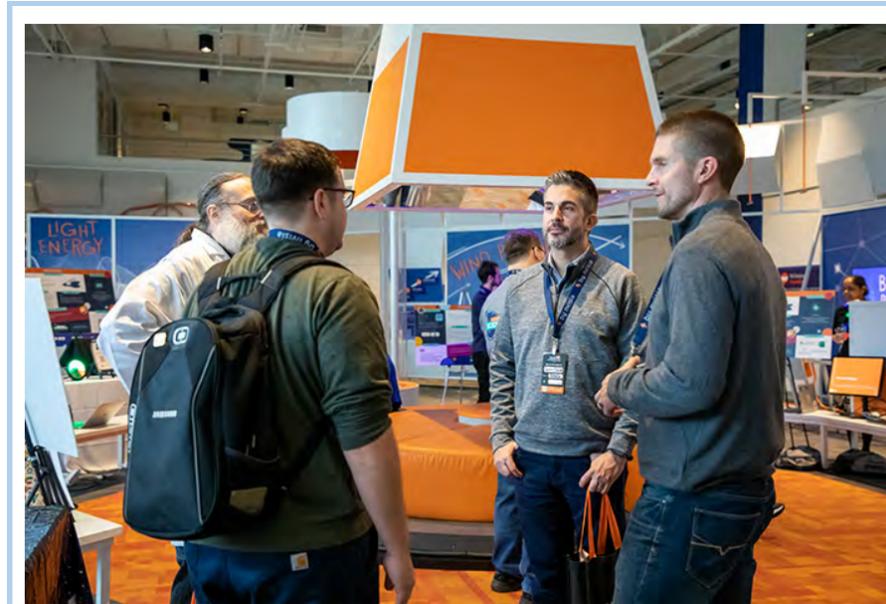
## Skills Matrix Glow Up

### CONSULTANT PROFILE

**Chris Dykstra | Senior Technical Architect | Technical**
**01** years at nvisia
**Specialities:** Simple yet elegant solutions to complex problems
**Favorite sci-fi/fantasy world:** Middle-earth (Lord of the Rings)

**Jennifer Posh | UX Designer | Creative**
**1.5** years at nvisia
**Specialities:** UX design, content, and digital marketing
**Favorite sci-fi/fantasy world:** Middle-earth (Lord of the Rings)

Chris' recent projects at **nvisia**
Landmark, Northwestern Mutual, Douglas Dynamics, Generac, MKE Tech Hub Coalition

Jennifer's recent projects at **nvisia**
MEA, MKE Tech Hub Coalition, Penta Technologies

### OBSERVATION

> **What inspired you to want to do this experiment?**
>
> C: The original prototype was a tool I made for myself in order to better visualize the data in the skills matrix excel sheet. I decided to continue the project for the tech showcase because it was already partly started, was something I have heard my peers looking for, and gave me opportunities to try things that I might otherwise have taken a simpler path on with real budget and timelines to consider.
>
> J: I was excited by the opportunity to take information that was complicated/difficult for the user to parse and try to make it more easily understandable

### nvisia SKILLS MATRIX APP

#### OVERVIEW
This application utilizes a graph database and micro frontend components to make nvisia's skills matrix more easily accessed and understood by users.

#### GOAL
Try out some new tech (specifically, a graph database), practice/show off devops skills I have, and get a better designed UI in place of the original prototype in hopes that the skills matrix excel spreadsheet might actually turn into skills matrix the web application.

#### METHODOLOGY

**TEST**
Everything ended up as expected, no changes. The Gremlin graph db API delivered on what I wanted to use it for (a non-specialized graph db API rather than an API specific to one graph db) but the API, at least the JS implementation, is a bit of a mess and the documentation for the API I found to be far less than accurate

**PREDICTION**
For users to have a better view of the very useful data in the skills matrix spreadsheet and use it to track their progress in their career. In a future state, would like to see the skills matrix data get maintained in order to change and adapt to nvisia as new tracks are added or existing tracks get updated to keep up with the reality of the company.

#### FINDINGS
It's still in-progress and, by design, is meant to be flexible/stay in-progress.

The parts that are done work well. Eventually I might want to replace the nest.JS backend with an ASP.net backend or change from a rest API to a graphql API, depending on where the project evolves to.

### INDUSTRY APPLICATION

This could be used by any company to help their employees understand job requirements and set realistic goals for advancement.

Companies with a career track more complicated than linear titles based on years of service could also use this to better define and/or track their titles/ranks.

### TECHNOLOGY USED
kubernetes, node JS, docker, nest, Gremlin, React, TypeScript, Microsoft Azure

**nvisionaries SCIENCE FAIR** by nvisia

**SPECIAL THANK YOU TO THE CONTRIBUTORS ON THIS EXPERIMENT:**
Kat Rohrmeier & Shauna Fowler
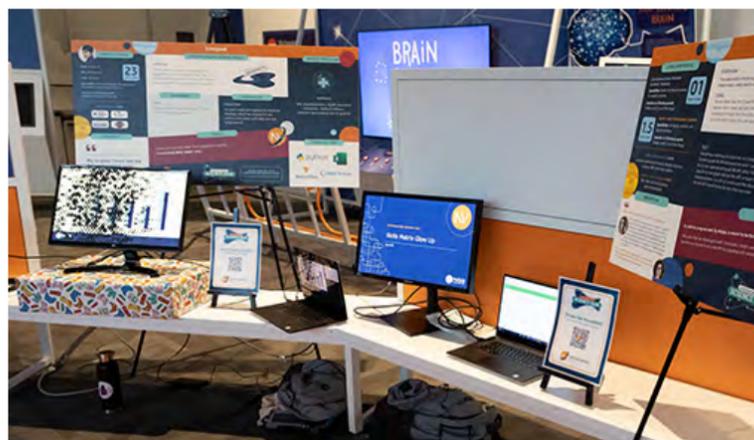
# Legacy Modernization Follows a Decade of Use

**SKILLS MATRIX SPREADSHEET**

**QUALIFIERS FOR PROMOTION TIERS**

# Start with the Problem Statement

## RELEASE V1.0

**To present the nvisia skills matrix to our consultants in a more consumable manner to assist them in managing their career path.** Allow consultants to conduct a role comparison so they understand the skills and experience they need to assume greater responsibility.

## RELEASE V1.1

**Create an area within the skills matrix that will allow for a place to keep skills, client experience, preferences, and accomplishments so that consultants can efficiently manage their review.** Allow Marketing, Sales and Delivery to understand the skills we have for projects and ID any skill gaps we need to close.

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Stage 1

STAGE ONE

# SCOPING THE PROJECT
validate user need + build vision

# STAGE 1: SCOPING THE PROJECT
## validate user need + build vision

**Idea Generation**
Discover New Concepts with Prototypes

**Define Vision and Scope Statement**
(provides guardrails)
PM

**STAGE GATE**
Validate Need and Readiness to Move Forward

**Identify User Roles for Interviews**
(segment by role type for grouping)
PM UX

**Identify Key Stakeholders for Decision Making**
PM DL

**SURVEY**
Excellent ☑ Good ☐
Average ☐ Poor ☐
SUBMIT

**Canvas Large Group with Survey**
(rating options + open field responses)
UX

**Create list of varied questions for Survey and Interviews**
UX PM DL

**Pre-Persona**
(market research or general known data)
UX

**Formal Interviews Per Group**
(split by role type)
UX

Jhon!
PERSONALITY
Goals
ABOUT
Age 25
Work Designer
Status Single
Location Ward
BIO
DISC PROFILE
Interest
FRUSTATIONS
50% 25% 75%

**Build Business Case**
Validate Business Need + Refine Goals

**Turn Identified Themes from Feedback to Prioritized Features, Needs and Pain Points**
PM UX TA

**Finalize and Complete Personas**
UX

# Gathering Details That Matter

## SURVEY QUESTIONS

**Question: On a scale of 1-5, how helpful would each of the following potential features be to you?**

- This would be very helpful to me = 1
- This is a basic requirement for me = 2
- This would not affect me = 3
- This would be a minor inconvenience = 4
- This would be a major problem for me = 5

Simplified layout (transition from an excel document to an internal application)

Make it easier to see the difference in required skills between your current role and your next role in your track

Making it easier to see the difference in required skills between your current role and a role in another track (example: for those who want to consider moving to a different track)

Ability to view or hide specific tracks or roles

Ability to access an FAQ section

Ability to submit questions or report problems

Make it clear when the last update was

## CONSULTANT INTERVIEW QUESTIONS

Notes

**Introductory Information**

Thank you for meeting with us today!

We're trying to improve the way skills tracking and career management work here at nvisia, and your input into understanding consultants' current practices and future needs will help us define what we want to improve and the priority of those improvements.

We'll be taking you through some questions regarding how you manage your development and career path, with some time at the end to discuss what we can add to the interview itself.

We're trying to improve how this works, so please feel free to be open in your feedback - we won't be offended.  Keep in mind that there are no right or wrong answers - all feedback is appreciated; if something isn't applicable or if you've never done something we ask about, just tell us so - that is also valuable to know.

Additionally, your responses will be kept confidential, with only me, Ken, and maybe Rob and Frank being able to see who said what; any feedback that we share will be aggregated across interviews, and any quotes we use will not have names associated with them.

That being said, we'd like to record today's session so that we can go back to take notes or clarify things later.  Again, this will only be visible to the people I just mentioned.  Is that okay with you? <if so, start recording>

**Biographical Info**

Great!
We'll start with some basic questions about you

- How many years at nvisia? What region?
- Did you work at another company prior to nvisia? What was your previous company?
- What is your current title?
- When was the last time you were promoted

**Your Skills Management**

Okay, now we'll move on to discussing how you manage your skills and career growth.

- Would you say that you keep track of your skills, aside from having a resume / employee profile?
- On a scale of 1-5 (with 1 meaning not at all and 5 meaning very well) how well do you understand the skills required for your job role/title? What about for your next desired role?
- On a scale of 1-5 (the same scale as before) how well do you understand what skills you need to demonstrate to get to your next role / level? How did you gain that understanding?
- On a scale of 1-5, how well do you think leadership & delivery know your skills & preferences?  Please explain. - What about your professional goals?
- If Yes: Can you describe do you do this?  How happy are you with the system? Can we get a sample of what is used?
- If No: How do you assess your skills when you need to (for example, for reviews or updating your employee profile)?

**Current Skills Matrix**

Now that we've talked about skills management in general, we'd like to ask you about nvisia's skills matrix.

- On a scale of 1-5, how familiar would you say you are with the skills matrix? - When and how have you used it in the past?
- In your own words, what is the skills matrix?
- Do you have a coach/mentor? If so, how does your coach/mentor use the skills matrix in your career discussions, if at all? - Would you like for it to be used during these discussions?
- Do you understand how the skills matrix plays into your career at nvisia and how to utilize it to grow?  Please tell us about it in your own words
- What do you like about the skills matrix?
- What do you dislike about the skills matrix?

- What was the most difficult thing about starting to use the skills matrix, when you first joined the company?
- If you could change anything about the skills matrix, what would it be and why?
- On a scale of 1-5 how easy is it to find the skills differences between the title you have and the one you want to grow into? Why?

**Additional / Ending Questions**

- In an ideal world, how would you go about finding out what skills are required for each level and tracking what skills you've demonstrated in the past?
- If not first job: How does your skills management at nvisia compare with your previous experiences?

Alright, that's all the questions we have for you - is there anything else you'd like to mention about what we've talked about today? Or do you have any questions for us?

**Parking Lot for Potential Future Efforts**

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# Rolling Up Feedback & User Themes

## PERSONAS

**The Analyzer:**
1. All levels / tenures
2. Uses the matrix heavily to guide performance reviews, kind of like a checklist, and make sure to address each point
3. Likes having details, examples, etc

**The Storyteller:**
1. All levels / tenures, though may tend to higher levels
2. Uses skills matrix as guardrails, or as a starting point to tell the story of their experience
3. Not as concerned with content details

**The Newbie:**
1. Newer to the company (though doesn't have to be)
2. Focused on performing their role and doesn't look to the skills matrix at all right now
3. May not have been coached on how to use the skills matrix (or on career planning in general)

## INTERVIEW THEMES

### Pain Point Themes

- Overwhelming
- Layout
- Need better efficiency
- Not all tracks represented
- Training tie-ins
- Large and complex
- Not enough familiarity
- Lots of flipping back and forth
- Finding what applies to me
- Knowing to to ask questions to
- Hard to compare roles
- Finding the matrix itself
- Confused by scoring system
- Abbreviations were confusing
- Difficulty understanding the content
- Relating content to themselves
- Workarounds to track individual progress

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Stage 2

# BUILDING THE BUSINESS CASE

## validate business need + refine goals

# STAGE 2: BUILDING THE BUSINESS CASE
## validate business need + refine goals

**Build Business Case**

Validate Business Need + Refine Goals

**STAGE GATE**

**Are We Solving the Right Problem?**

**Document 'As Is' Journeys** (if applicable)

PM  UX

**Define Probable MVP Candidates**

PM

**Validate Probable MVP Candidates with Stakeholders** (confirmation of intuition)

PM

**Define Non-Functionals, Security Requirements, Database Owners, Etc.**

TA

**Start Architecture Layout for Assumed Build**

TA

**AGILE PROCESS**

**Selected Formal MVP Feature List**

PM

**Generate Roadmap based on Complexity and Team Size or Skill Levels** (timeline and budget)

PM  DL

Do we need something more to gain Business Buy-In to Move Forward?

**Formal Approval to Proceed**

PM

**Development of Solution**

Begin Product Plan Towards MVP

# Imagining the Possibilities

**ARCHITECTURE DIAGRAM**
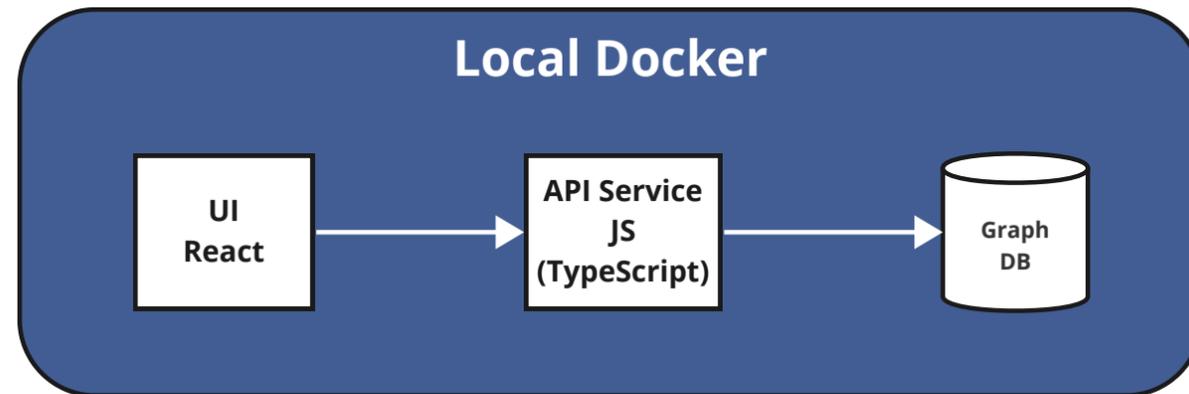
**LOW TO MID FIDELITY MOCKUPS**



**Local Docker**

UI
React

API Service
JS
(TypeScript)

Graph
DB

Hello, Jane Doe - Software Developer

Currently Showing: Skills for Role 1 Name vs Role 2

Select Track:

Select Role(s):

Role | Role | Role | Role | Role | Role | Role | Role | Role

Highlight Differences:
On ▮ Off

Show Less

Role 1: [Role Name]

Level 1

Role 2: [Role Name]

Level 2

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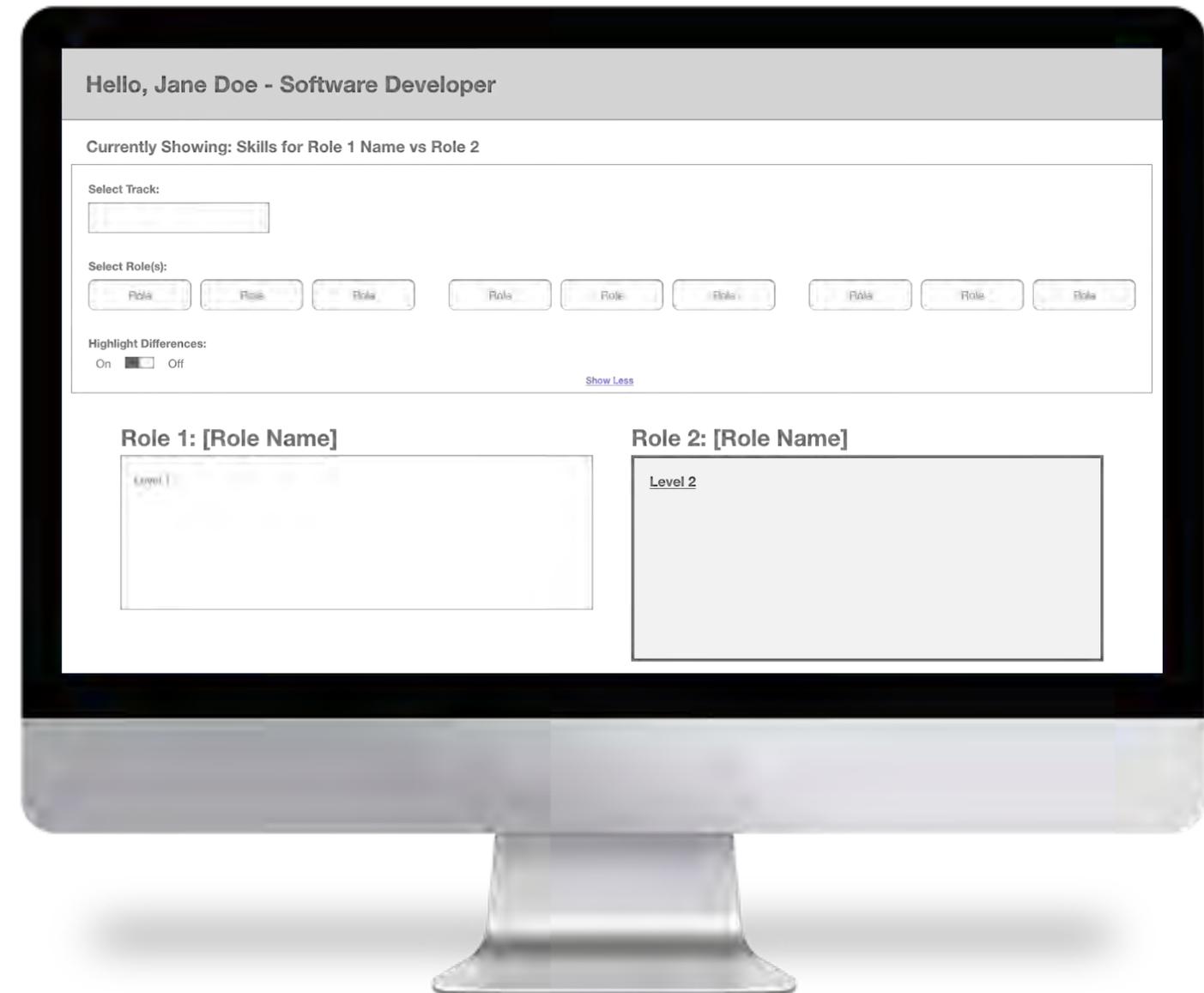
Stage 3

STAGE THREE

# DEVELOPMENT OF SOLUTION

## begin product plan towards mvp

# STAGE 3: DEVELOPMENT OF SOLUTION
## begin product plan towards mvp

**Development of Solution**

Begin Product Plan Towards MVP

**Begin Backlog of Features for Sprint Start**

PM

**Low to Mid-fi of Key Screens**

UX
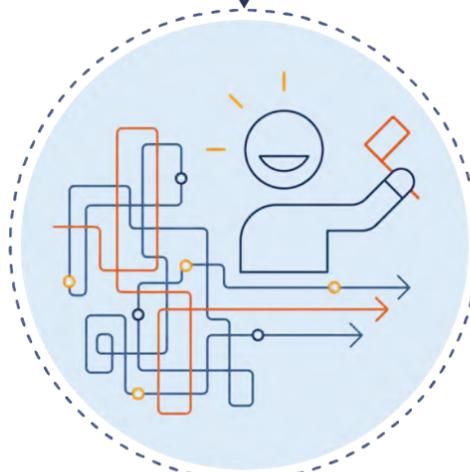
**Technical Architecture Decisions Start**

TA

**To Be Journey Maps**

UX

Sprint 1 — per user story — Review / Test / Build / Design / Plan — Launch

Sprint 2 — per user story — Review / Test / Build / Design / Plan — Launch

Sprint 3 — per user story — Review / Test / Build / Design / Plan — Launch

ITERATIVE DEVELOPMENT
TEAM COLLABORATION
PRODUCT BACKLOG
AGILE
DAILY STAND-UPS
VELOCITY
SCRUM
USER EXPERIENCE
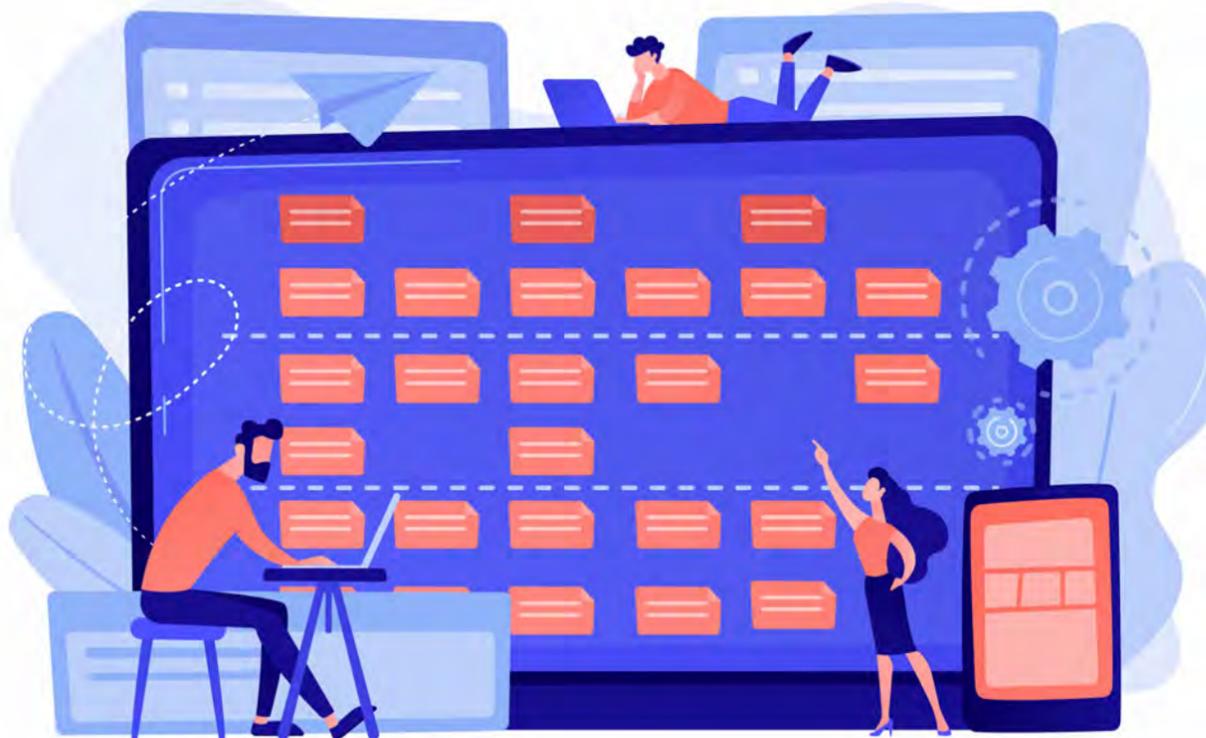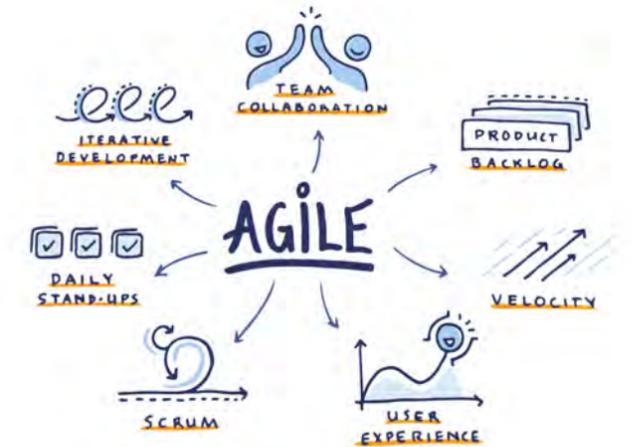
**Collab with the Client on:**

Communication Strategy
Training Efforts
Change Management
Compliance
Governance Approval
Marketing
and more!

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# Design to Scale with Future Expansion

**DATABASE DESIGN**
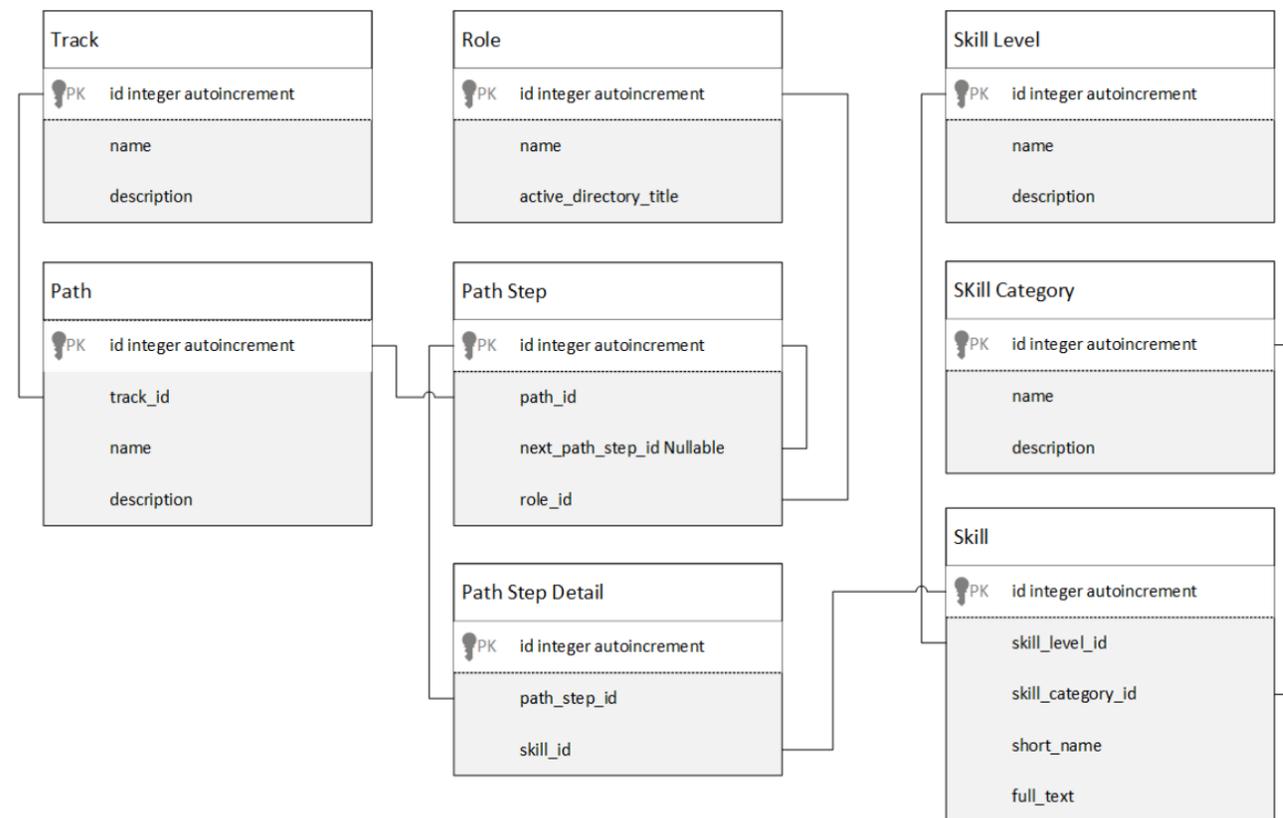
**HI-FIDELITY MOCKUPS / FRONT-END UI**
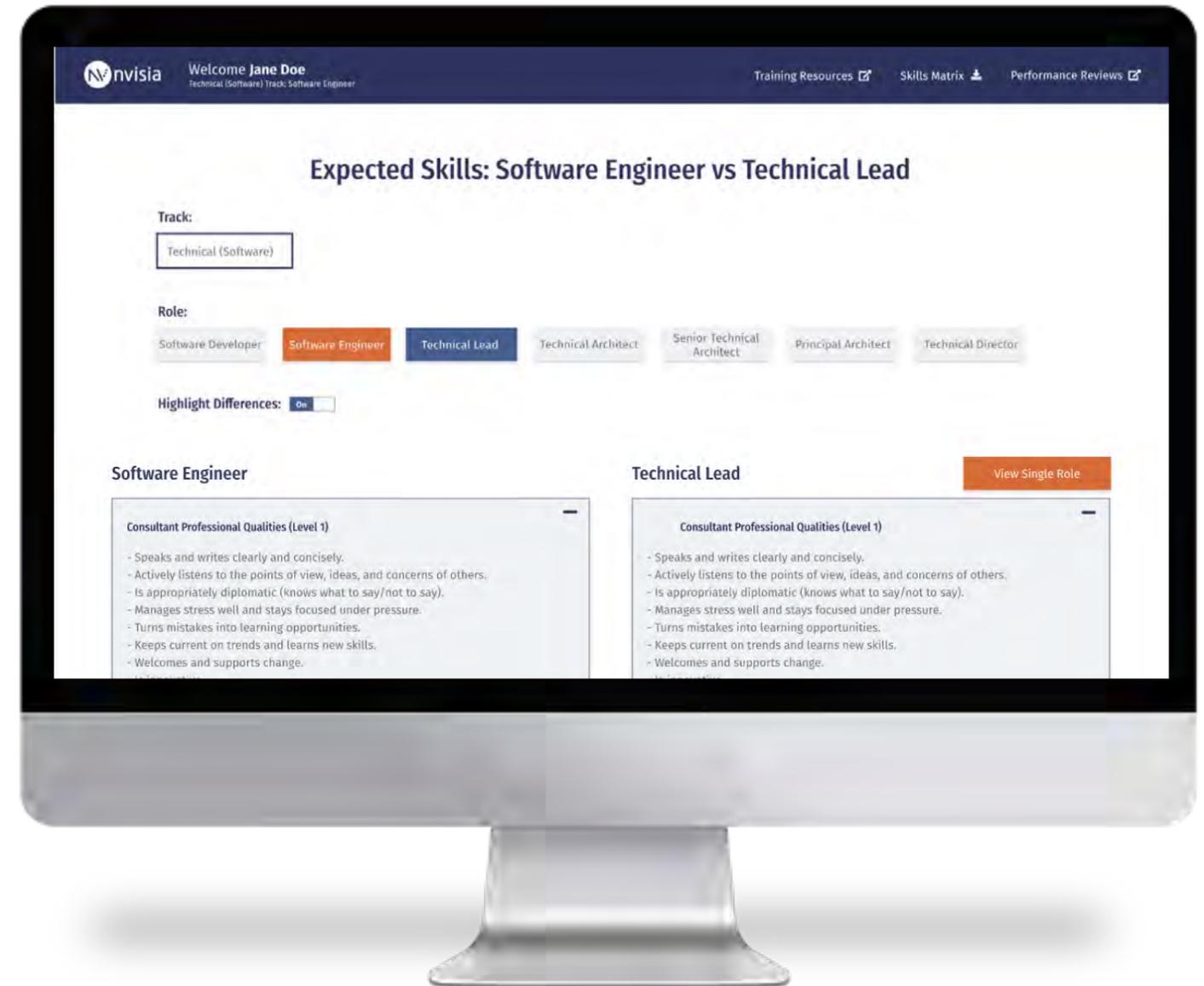
# Mentoring is part of every engagement.

Here are some of the ways we include your team and **prepare them to own the product long-term.**

Agile collaboration

Preparing the infrastructure and patterns to follow

Pair programming and mentoring

Design sessions

Training customized to your reference architecture

Architectural documentation

Conclusion