Neurony
Develop Serenity

What is product discovery

NEURONY INSIGHTS

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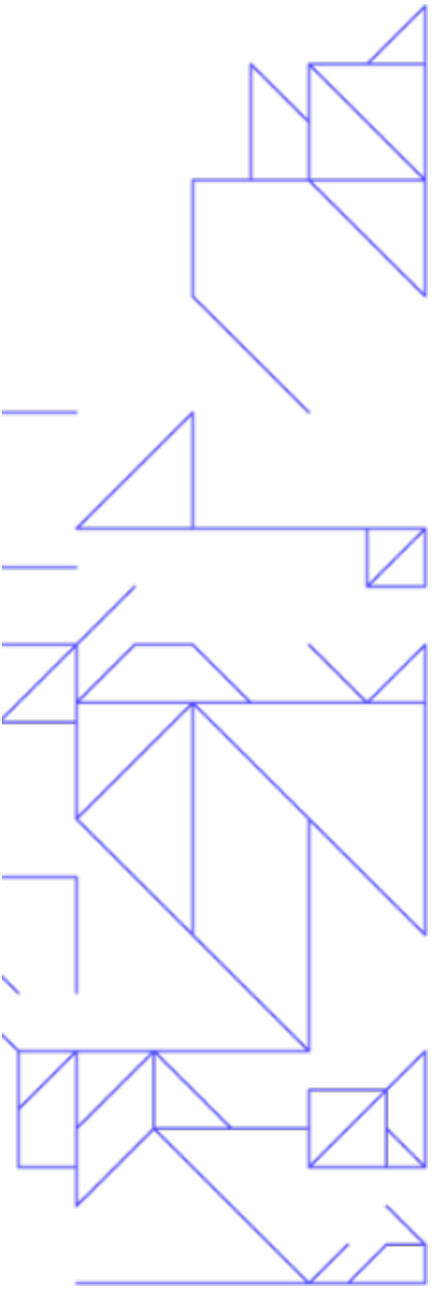
CHAPTER I

What is Product Discovery

1.1 Intro to New Product Development



New Product Development – NPD – refers to the entire array of processes a company might employ to transform an idea into a marketable product.

Several conceptual models have been developed over the years to help ease the Product Development process. Some of these are[1]:

- **IDEO** – the Innovation Design Engineering Organization's approach, that we'll describe in more detail shortly;
- **BAH** (Booz, Allen and Hamilton) – a line up of seven steps that became the foundation for most (if not all) of the other models;
- **Stage-gate** – also known as phase-gate or waterfall process – a method of dividing each of the development processes into isolated stages, and separating them by managerial decisions;
- **Lean Start-up** – a method based on short development cycles and iterative, experimental products, designed to give startups a better chance to succeed;
- **Exploratory product development** (ExPD) – a model characterized by flexibility, suitable for unstable and unpredictable markets.

Even though each model features unique traits, the core activities are generally the same:

- **Product Strategy;**
- **Idea Generation;**
- **Idea Selection (Screening);**
- **Concept Testing – adding details to the selected idea(s)**
- **Business Analysis;**
- **Product Development;**
- **Market Testing;**
- **Commercialization[2].**

1.2 What the market understands by Product Discovery

In the context of the above, the general market approach to Product Discovery is that it precedes Product Development entirely. In fact, the first core activity in NPD – Product Strategy – should be based on Product Discovery[3].

Product Discovery is commonly defined as the process through which a potential problem, need, or opportunity is correctly identified and transformed into a potential solution.

It implies actions such as:

- **Researching user/customer problems/ needs/wants;**
- **Proposing solutions;**
- **Prototyping;**
- **Validating ideas;**
- **Refining results.**

Colloquially, one could say that the market sees Product Discovery as measuring twice, in order to cut once (Product Development).

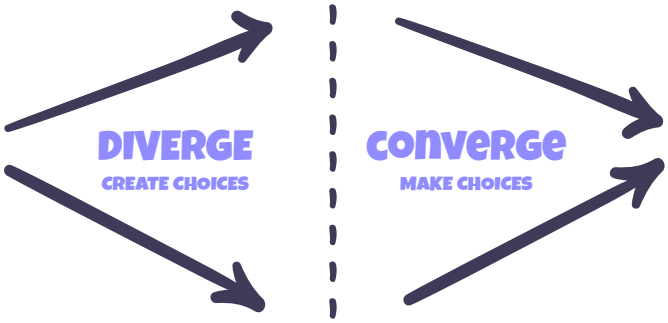
2.FRAMEWORK SPOTLIGHT DESIGN THINKING BY IDEO

The term design thinking was passed down from designer to designer and from thinker to thinker since as early as the 1950s. David M. Kelley, founder of IDEO, was both a student and a teacher in a Stanford University program named Product Design.

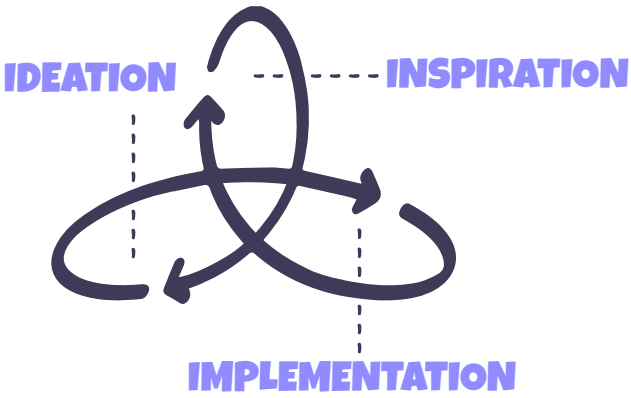
Kelley merged three different design companies to create IDEO – the Innovation Design Engineering Organization.

> *Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.*
>
> ***– Tim Brown, Executive Chair of IDEO[4]***

Whereas human-centered design is an approach to problem solving, **design thinking** is a human-centered approach to innovation. It supports and encourages the creation of multiple ideas, without fear of failure, in order to stimulate creativity and generate a pool of choices.



The main three activities in design thinking are: **inspiration, ideation, implementation**. All three are interconnected and they each generate and boost one another.



3.WHY OUR PRODUCT DISCOVERY PROCESS IS NOT NEW PRODUCT DEVELOPMENT

It's important to understand the distinction between what the market sees as Product Discovery and how Neurony defines it, for two reasons:

a. **It clarifies what the result of the Neurony Product Discovery Process is;**
b. **It reinforces the exceptional value and uniqueness of the Neurony Product Discovery service.**

Neurony defines its Product Discovery Process with the help of two main characteristics:

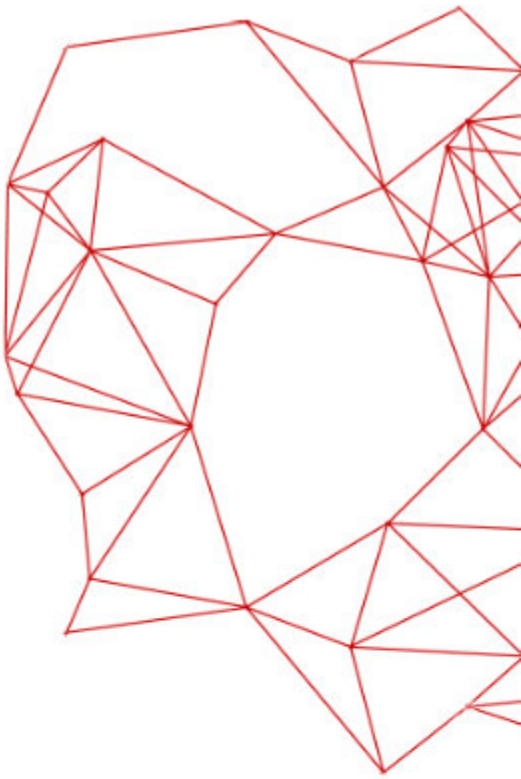
a. **It assumes a clear idea/ solution to a problem has been identified**. Contrary to the common accepted definition of Product Discovery, Neurony starts this process after the most relevant idea has been selected. What this means is that Neurony's Product Discovery service helps clients explore and understand their chosen idea in great detail. The envisioned product is stripped down to its core and each moving part is thoroughly analyzed.
b. **Its objective is to prepare the idea for software development and design, not to find it**. In short, it's execution-focused rather than ideation-focused.

This is why Neurony's Product Discovery Process is not equal to New Product Development. NPD represents the entire set of activities (from strategy and ideation to commercialization), whereas Neurony's **Product Discovery** is an independent process, focused on preparing an idea for development. It is also self-sufficient, which means that its results are commitment-free (the client can use the generated data as they see fit).

CHAPTER II

About Our Process

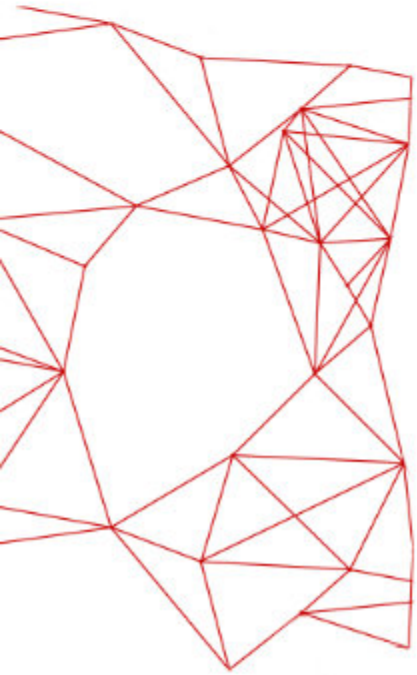
1.CORE PHASES



Neurony's Product Discovery Process features several core phases; some require client input, and some only client feedback. For example, for the **initial brief**, Neurony's Business Analyst (BA) will request information from the client regarding users, stakeholders, constraints, budgets etc. However, steps such as **creating user flows** and writing epic user stories fall entirely in the responsibility of the BA.

Other process components, such as creating Data Model, designing the interface (UX), writing the Tech Stack Recommendations document, the Acceptance Criteria, designing the mockups and wireframes are also to be created by the Neurony team. Revisions, set after essential stages, are essential and frequent.

1.1 Inputs



There are three types of inputs required during the Discovery Process:

a. **Documents;**

b. **Resources;**

c. **Methodologies.**

Documents are to be provided either by the client (e.g. market research, branding guidelines etc.), or by the Neurony team (e.g. templates and samples meant to offer explanations and validation criteria).

Resources come down to manpower (time and skills) and technology (software to be used)

Methodologies used by Neurony in the Discovery Process include Domain Driven Design, Agile, and User-Centric design.

1.2 Output

The entirety of the Product Discovery Process output consists of **documents**.

Coming in various shapes and sizes, these can be text documents, diagrams, spreadsheets, wireframes, and mockups. They contain meeting reports, user stories, user flows, the database structure, and so on.

1.3. Objectives

The process aims to improve budget estimation accuracy, bind milestones and deliverables to clear evaluation criteria, make handovers easier, and serve as the basis for a Request for Proposal when needed. Thorough Product Discovery leads to a better User Experience, lower production costs, and fewer bugs because it gives everyone involved in the building of the product a voice: the client, the Project Manager(s), the Lead Developer & Tester, the Interface Designer. Its outputs, as specified earlier, form the blueprint for all of the product's moving parts.

1.4. Roles involved

Each of the following roles involved in the Product Discovery Process has distinct assigned tasks and responsibilities:

- **Business Analyst – BA** – formulates the initial client brief, creates user flows and writes epic user stories, designs the rough mockups and wireframes; also aids in defining the functional model, and scoping out the data model;
- **Account Manager - AM** – assesses and highlights client wants and needs that are not necessarily project-specific and manages interactions between key stakeholders and team members
- **Project Manager – PM** – supports the AM & BA with redacting materials and offers feedback on tactical decisions
- **Lead Developer – LD** – provides feedback on user stories and acceptance criteria together with the PM, formulates tech stack suggestions;
- **UX Designer – UXD** – provides feedback on wireframes
- **Domain Expert – DE** – they are most often someone on the client's side and have a deep understanding of the market and the target audience.

With the exception of the Business Analyst and Account Manager, all other team members are involved in the Discovery Process on a per-request basis; they amend or reinforce decisions.

2.1 Methodologies

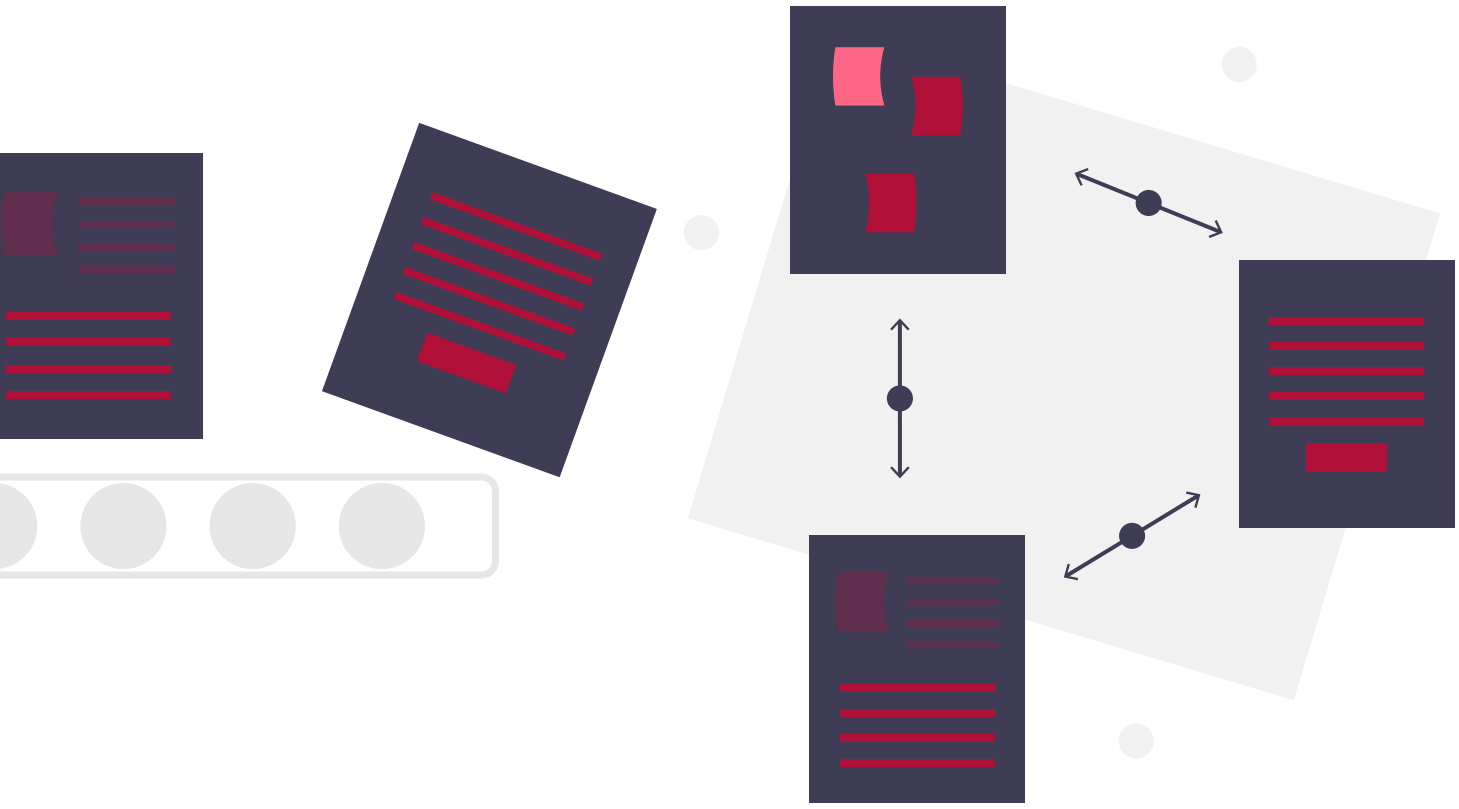
Where most New Product Development methodologies fall short is in handling the Principal-Agent problem. Most are great when the team behind the idea is the team that implements it. None work well when you have two sides: one that handles ideation, the other development/ design. So we picked bits and pieces from multiple methodologies and processes or frameworks in order to bridge the gap between pure ideation and product planning.

From UX Design we borrowed concepts such as User Personas, Information Architecture, Design Principles, Error Types and Mental Models.

From Problem Solving we appropriated interrogation techniques (Root Cause Analysis, 5 Whys, Maieutics).

These cover the data gathering parts of the Product Discovery Process.

When it comes to generating conclusions and documents, the UX concepts are supplemented with with Domain & Business Logic elements from Domain Driven Design, Epic User Stories & Acceptance Criteria from Agile and Work Breakdown Structure from Project Management (as defined by the Project Management Institute).



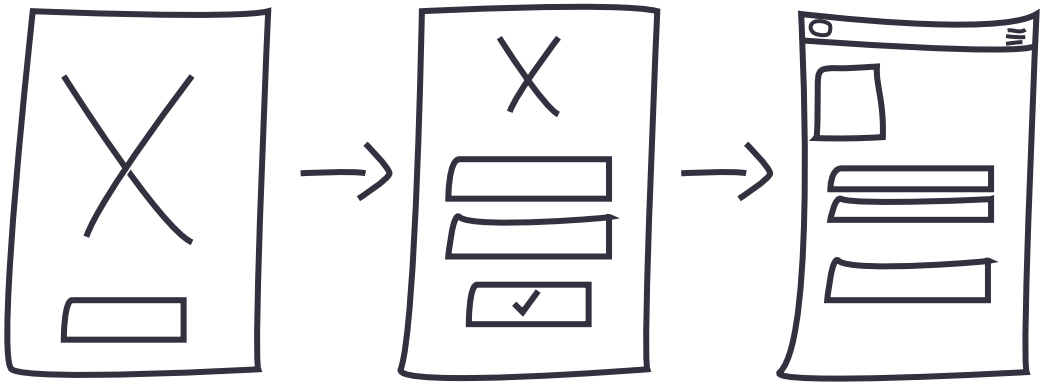
2.2 Tools

We try to use as few tools as possible. The process is designed to work with pen and paper or even a whiteboard. The format of the output is less important than the content itself. For User Personas – representations of customers, meant to help with market segmented strategies – we use simple Excel/ Google Sheets templates.

If the product is complex enough that it requires User Flows, we rely on Lucidchart[5], but xmind is a suitable alternative sometimes.

To create clear cut mockups in the first part of the Discovery Process, we use tools such as Balsamiq[6], UXPin[7], Sketch[8], and others.

Balsamiq is our product of choice because it's fast to prototype in and makes it easy to transfer hand sketches to digital mockups.



3.1 Wireframes

Wireframes are visual representations of User Stories & features. Their purpose is to describe general functionality and user flow. They offer little in terms of design & UI, but do paint a clear picture of what information the product's screens contain and how this information should be structured. A wireframe is a starting stage in the product's visual design cycle and can vary in complexity.

To learn more about our Wireframes, you can request access to our Wireframe Process Overview brochure. Just drop us an email at **hello@neurony.ro.**

3.2 User Stories & Acceptance Criteria

User Stories are sentences that describe how the user of a product interacts with it. They also show what they get from that interaction.

A very common format for stories is:

> As a **{{type of user/ persona}}** I want to **{{perform action/ have ability}}** in order to **{{goal}}.**

Acceptance Criteria are a list of requirements for the user story to be considered properly implemented in the finished product. Read more about this in our blog article – How we use User Stories & Acceptance Criteria[9].

3.3 Tech Stack Recommendations

The Lead Developer in each project is responsible for putting together the Tech Stack Recommendations document. The LD will make suggestions according to the project specifications, components, and constraints. The document has a less stable structure than the others, because its purpose is to serve as a starting point, not a constraint; the TSR document is a distillation of the Lead Developer's experience and does not replace careful planning. Tech Stack Recommendations are provided only if they can have a powerful impact on the product.

CHAPTER III

Benefits of going through Product Discovery

Our Product Discovery process is the result of over 17 years of work, client feedback, and mistakes. During this phase we define what a product will look like, what features it will have, and how it serves its future clients. A thorough Product Discovery process translates into multiple benefits. We've selected seven of them and described them below.

1.ENSURE PREDICTABILITY

Our Product Discovery process is the result of over 17 years of work, client feedback, and mistakes. During this phase we define what a product will look like, what features it will have, and how it serves its future clients. A thorough Product Discovery process translates into multiple benefits. We've selected seven of them and described them below.

2.INCREASE BUDGET CONTROL

Scope creep[10] is the unintentional derailing from the project's objectives, after it has already begun. It can be incredibly damaging to the entire project, and it has to be avoided at all costs. By defining a crystal clear scope of the project during the Discovery Process, the likelihood of a scope creep decreases tremendously.

Fun fact: scope creep is also known as the kitchen sink syndrome (from the "everything but the kitchen sink" idiom[11]), because it usually happens when so many features are thrown into the project, that the kitchen sink is the only thing missing.

3.IMPROVE THE QUALITY OF THE FINISHED PRODUCT

The Product Discovery Process results in a comprehensive representation of how the product will function. This helps single out any blind spots or vulnerabilities that the product might have and fix them before:

- **Development** – which would imply additional costs and precious time lost;
- **It reaches the customers** – a product that the audience perceives as faulty or incomplete from the start can seriously damage the brand, and can be very difficult to salvage.

4.REDUCE INFORMATION ASYMMETRY & SET EXPECTATIONS

Setting the correct expectations is vital in building a successful client-supplier relationship. It removes any potential misunderstandings that can very easily lead to discontent or frustration. Knowing precisely what to expect (on the client side) and what to deliver (on the supplier side) promotes a healthy collaboration and a successful project.

There are 3 instances when clarity (or lack thereof) can make or break a project. Our Product Discovery Process offers a structured and replicable way of:

Describing the problem & the domain

Defining objectives & milestones

Managing Project Handovers

Describing the problem & the domain

The Domain Expert is a precious resource that's not always available. To ensure everyone involved knows enough about the market and problem, the DE's input is meticulously recorded and translated into deliverables. These can later be (re)used whenever the team onboards another member, but they also serve as evaluation criteria for the project.

Defining objectives & milestones

Having a clear understanding of what the project objectives are supports a fine calibration of timelines and milestones. It also brings both client and supplier on the same page regarding what the results need to be, and the timeframe in which these will be delivered.

Managing Project Handovers

The task of transferring a project from one team to another, from one company to another, is seen as a heavy burden by most people, both on the client and on the supplier side. Everyone does things differently, has particular ways of working, and follows distinctive procedures. That creates disparities and confusion.

Neurony's Discovery Process is designed to generate an all-encompassing, self-contained, straightforward output, that anyone is able to understand and resume if necessary.

If you want to see the process in action (or need more information on it), we can happily walk you through it in a 30-minute meeting.

SOURCES

[1] *https://en.wikipedia.org/wiki/New_product_development#Models*

[2] *https://en.wikipedia.org/wiki/New_product_development#Models*

[3] *https://herbig.co/product-discovery/#tab-con-17*

[4] *https://designthinking.ideo.com/*

[5] *https://www.lucidchart.com/*

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[7] *https://www.uxpin.com/*

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[9] *https://www.neurony.ro/blog/how-we-use-user-stories-acceptance-criteria*

[10] *https://en.wikipedia.org/wiki/Scope_creep*

[11] *https://dictionary.cambridge.org/dictionary/english/everything-but-the-kitchen-sink*

About Neurony

Neurony is a development agency based in Bucharest, Romania, with over 17 years of experience in the IT industry. Its main area of activity is web and custom software development. Working hand in glove with the development team is a strong, experienced marketing team. They make sure that every Neurony-made product is SEO-friendly and market-ready.

For 2 years in a row, Neurony was featured as a B2B Industry Leader in Eastern Europe on Clutch, top B2B ratings and reviews platform.

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