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ENT 614

Product Roadmap

Lecture 10



In the previous
lecture

New Product Development (Part Two)

Topics covered :

- What Is a Product Development Process?
- ❖ Product Definition
- ❖ Prototyping
- ❖ Initial Design
- ❖ Validation & Testing
- ❖ Commercialization



Product roadmap

- **What Is a Product Roadmap?**
- **Why Use a Product Roadmap?**
- **What Are the Parts of a Product Roadmap?**
- **How to Create a Product Roadmap?**
- **What Are the Different Types of Product Roadmaps?**
- **What Are the Best Practices for Great Roadmaps?**
- **What Is the Now-Next-Later Approach in Product Roadmap?**
- **Product Roadmap vs. Technology Roadmap**

What is a Product roadmap?

- A product roadmap is a high-level visual summary that maps out the vision of your product offering over time.
- Moreover, it is a shared source of truth that outlines the vision, direction, priorities, and progress

a product roadmap is the significant efforts and necessities required to meet your overall business objectives. It is the timeline for implementing features and requirements. As product teams have shifted gears to the **remote work** environment, the need for roadmaps has grown exponentially to ensure that proper team alignment is achieved.

Product roadmap

- What Are Product Roadmap Milestones?
- Product managers must decode a 'milestone' for your product and the organization. Milestones refer to goals or dates achieved by your product team.
- Some examples of a milestone are conferences, releases, and so on.

What Is Product Roadmap Voting?

Why to use the product roadmap?

The most considerable benefit of building a product roadmap is forcing conversations about where you **will invest your time and resources and** why.

Connecting your **product strategy to implementation** drives alignment. It keeps everyone focused on the work that helps you achieve your vision more efficiently.

The beauty of a product roadmap lies in its **visual aspect**. It allows you to communicate the product's direction to internal teams and external stakeholders.

Everything you do as a product manager, impacts other groups in the organization. That is why the best product roadmaps include cross-functional teams and factors during initial creation

Product roadmap

Imagine that:

- With a cross-functional roadmap in place, **marketing** will create more impactful campaigns.
- **Sales** can set better customer expectations.
- **IT** can improve the overall technical infrastructure.
- Therefore, you should constantly update good product roadmaps. They are a way to keep everyone informed about the product's goals and encourage collaboration between key stakeholders and various teams

What To Include in the Product Roadmap?

The requirements

Understanding your customer's requests is essential to include in your product roadmap. Having a conversation with your sales and customer support teams helps you understand these needs and build on them.

Vision

A vision is something you desire the product to achieve. Setting this vision at the very beginning of the product roadmap is critical. You can always go ahead and change it as and when necessary. But putting it right in the beginning will help you answer your product questions.

What To Include in the Product Roadmap?

Strategy

Strategy includes how the product you are about to build will help grow the business and meet the vision. Informing this strategy to the teams and the stakeholders (internal and external) can go a long way. After this, it is a smooth transition to build a product roadmap around this strategy and follow it to reach the end goal.

Plan

Product planning is a must when building a product roadmap. This way, you know how to meet the vision. Setting timelines is helpful but leave some space for flexibility.

What To Include in the Product Roadmap?

Tracking the progress with markers

Timelines can be complicated to follow. Hence, dividing them using the markers helps you and your team measure the progress effectively.

Measuring using the metrics

Inform the team of what metrics you will use to measure the performances. And make sure that everyone is on the same page with the metrics

What are the Parts of a Product Roadmap?

- **Timeline**

- ✓ Any good roadmap needs to have some timetable.
- ✓ It does not mean these dates serve as a deadline for the features. Instead, it is a way to rank the relative importance of the features.
- ✓ Some standard timeline methods include:
 - ✓ Now, Next, Later: This release schedule is applicable when you have features not tied to a specific release.
 - ✓ June, July, August: This release schedule is practical when features are released every month.
 - ✓ Q1, Q2, Q3: This release schedule is helpful when you are planning long-term goals for your organization.
 - ✓ Release 1, Release 2, Release 3: This release schedule is valid when the time between releases varies

What are the Parts of a Product Roadmap?

- **Features**
 - Features are the smaller parts of a product you are thinking of releasing in a specific period.
 - Features can be both high-level or detailed.
 - A good plan is to create a high-level feature and specify what sub-features you will need to add to make it work

What are the Parts of a Product Roadmap?

- **Goals**
- These are why you are implementing various features in your product.
- Goals help stakeholders understand the purpose behind the decisions that you are making. That keeps the entire organization aligned.
- Examples include Increasing user retention, increasing sales, or improving communication.

How To Create a Product Roadmap?

- Define The Why

- Review and Manage Ideas

- Define Requirements

Once we've figured out the "why" and the "what," next up is the "how."

- Prioritize Your Product's Strategic Themes And Organize Into Releases

Be Flexible

Tailor Your Roadmaps as per Your Audience



Remember that

- You must remember that the roadmap is a strategic document.
- The strategic objectives shared with your executives will be distinct from those you share with the marketing and development team.
- If executive stakeholders look at your roadmap and ask, “Show us what you’re planning.” They don’t care about the nuances of your every feature. They want a broad timeline of what’s going to increase market share.
- On the other hand, meeting with your developers will focus on the nuances of the features and how you want them to build them. You also discuss the expected time frame, the day-to-day tasks required, and the prioritization.

What Are the Different Types of Product Roadmaps?

➤ Delivery-focused Roadmaps

- These are roadmaps with very detailed timelines and are best for engineering and User Experience (UX) teams. They help understand the specifics of a feature they are trying to implement.
- They excel in communication status of development, communication goals of a feature, and understanding dependencies that various features may have.
- An excellent example of a delivery-focused roadmap is the kanban roadmap.
- This roadmap brings various initiatives together to find the progress and what you should complete.
- This roadmap is handy for engineering, UX, and product teams as it allows them to plan without having hard deadlines

What Are the Different Types of Product Roadmaps?

➤ Customer-focused Roadmaps

- Customer-focused product roadmaps help focus on the features that customers want.
- This roadmap is also handy for customer-facing teams like marketing and sales. It allows them to share what is coming next for your product with users.
- A popular example of a customer-focused roadmap is the releases roadmap. This roadmap shares when customers can expect certain features that they want in the product.
- It is useful when planning milestones and determining the future of the product

What Are the Different Types of Product Roadmaps?

➤ Company Leadership Roadmaps

- These roadmaps help give executives and stakeholders a high-level view and understanding of the product.
- They show the direction of the product and how you are using time and other resources.
- The summaries provided by these roadmaps are critical in keeping important stakeholders aligned with your product vision.
- An example of a company leadership roadmap is the timeline roadmap. A timeline roadmap helps communicate your product strategy and the product's plans for a specific time.

What Are the Best Practices for Great Roadmaps?

- You will never complete your product roadmap.
- It's constantly changing and shifting, so you need to ensure its editing and navigation consistency.
- Detail is important, but only include those that are necessary.
- Keep the roadmap focused on the immediate short-term, but always watch how this relates to your overall vision. Don't lose sight of your NorthStar.
- Ensure every stakeholder has access to the roadmap and regularly checks it.
- Align your team and prioritize features consistently to ensure everyone is on the same page.

Product roadmap

What Is the **Now-Next-Later** Approach in Product Roadmap?

The now-next-later roadmap is an approach also referred to as the **NNL** product roadmap. Here, you divide the roadmap into three categories.

These are what the team is working on currently, what is on the product roadmap next, and what work you will undertake afterward.

Product Roadmap vs. Technology Roadmap

Who Is It Built For?

The **technology roadmap** is made for internal purposes. The engineers and the operations team build it to outline the plan to deliver specific features.

On the other hand, you build the **product roadmap** for external purposes. Using this roadmap, product managers inform the target audience that they're creating this product to solve their problems.

It is mandatory for the PMs to use the best product management software available in the market to create roadmaps, build teams effectively and collect the customers' needs

Product Roadmap vs. Technology Roadmap

Who Is It Built For?

What Is the Focus?

The focus in the **technology roadmap** is on how the technology will grow to accommodate the needs of the product roadmap.

The **product roadmap** focuses on what features to build and how to solve customer needs and benefit them.

Product Roadmap vs. Technology Roadmap

Who Is It Built For?

What Is the Focus?



Deliverables

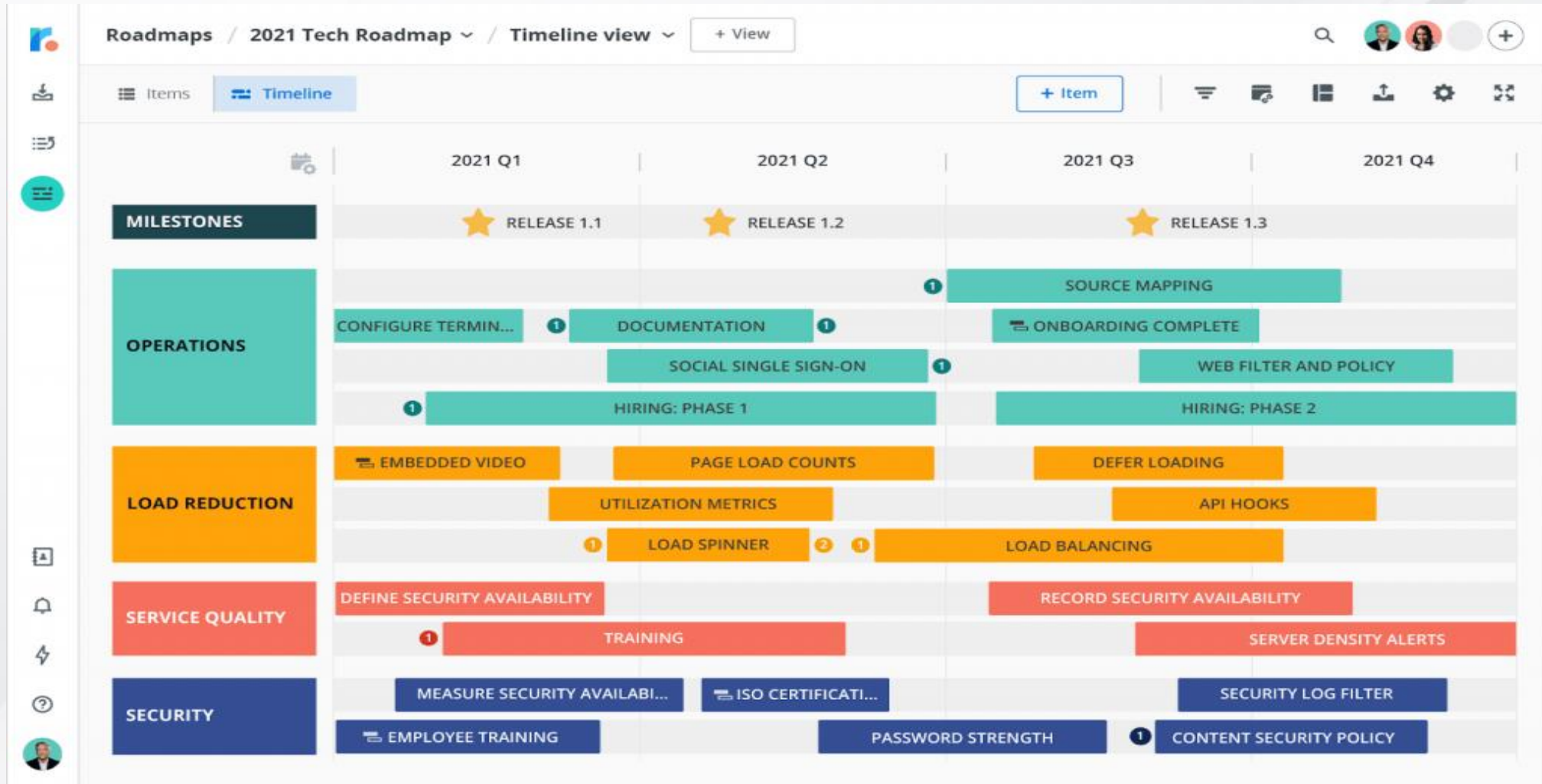
In the **technology roadmap**, everything is specific. You set the deadlines because the other teams are dependent on the technology you build.

A technology product roadmap example: The sales and marketing team will start their work only after the feature building side is complete.

Product roadmaps are not rigid in timelines, and they are flexible in approach. But that does not mean there is no set deadline.

Product managers use these roadmaps to let the audience know that they will deliver certain features in some time.

Product Roadmap example



Business Model Canvas

Business Model:

Describes the rationale of how an organization creates, delivers, and captures value

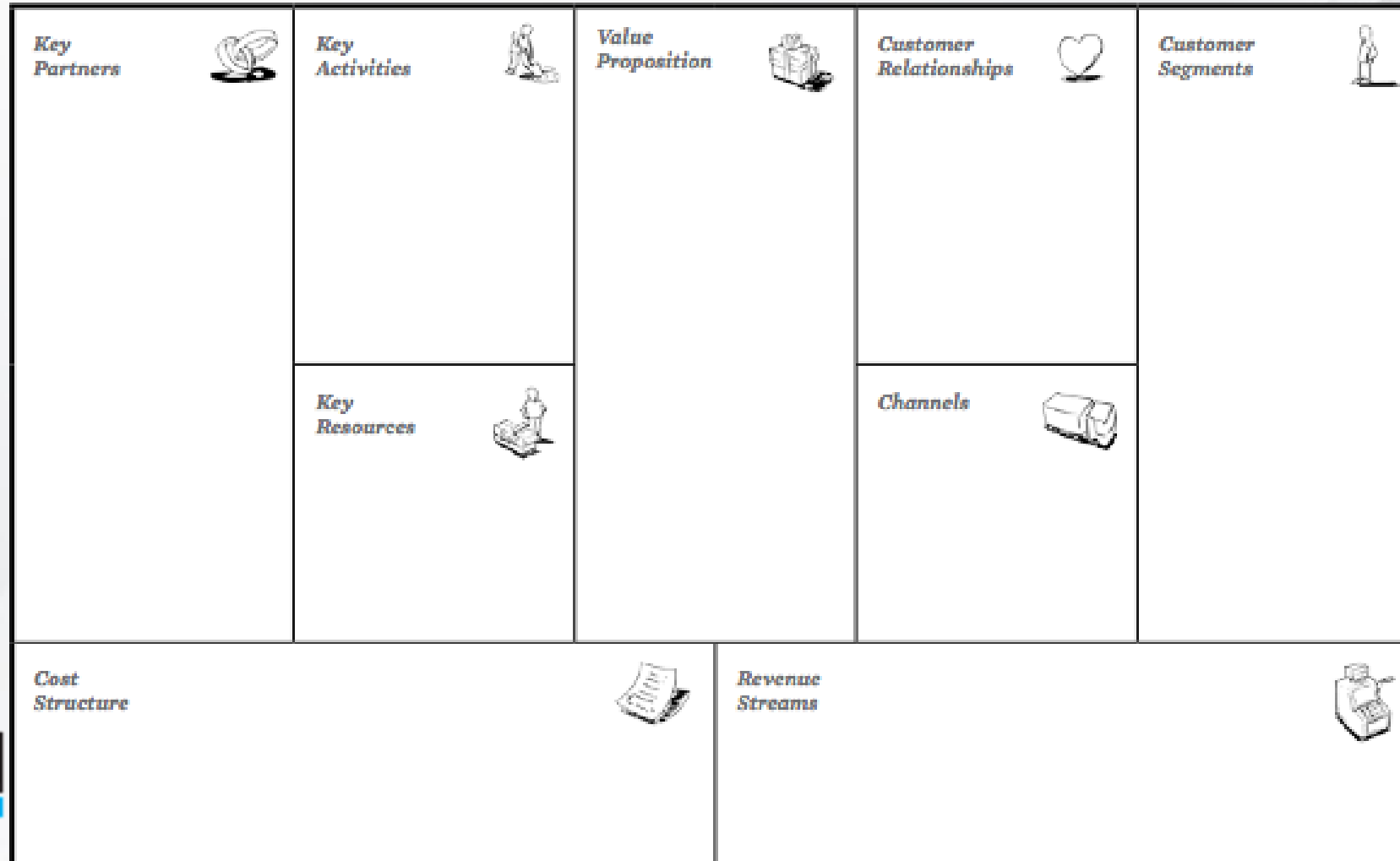
*“There is not a single Business Model
There are a lot of opportunities and
options, we just have to discover them all”*

Tim O'Reilly

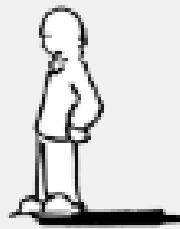


- Learn 9 Elements of Business Model Canvas
- Understand “painting” the Canvas
- Apply Business Model Canvas to Senior Design Project
- Identify “starting points” for Venture Capital Funding
- Initiate “hands-on” experience - Homework

Business Model Canvas



Business Model - 9 Building Blocks



CS

1 Customer Segments

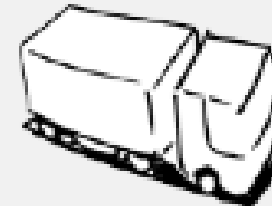
An organization serves one or several Customer Segments.



VP

2 Value Propositions

It seeks to solve customer problems and satisfy customer needs with value propositions.



CH

3 Channels

Value propositions are delivered to customers through communication, distribution, and sales Channels.



CR

4 Customer Relationships

Customer relationships are established and maintained with each Customer Segment.

Business Model - 9 Building Blocks



R\$
5 Revenue Streams

Revenue streams result from value propositions successfully offered to customers.



KR
6 Key Resources

Key resources are the assets required to offer and deliver the previously described elements...



KA
7 Key Activities

...by performing a number of Key Activities.



KP
8 Key Partnerships

Some activities are outsourced and some resources are acquired outside the enterprise.



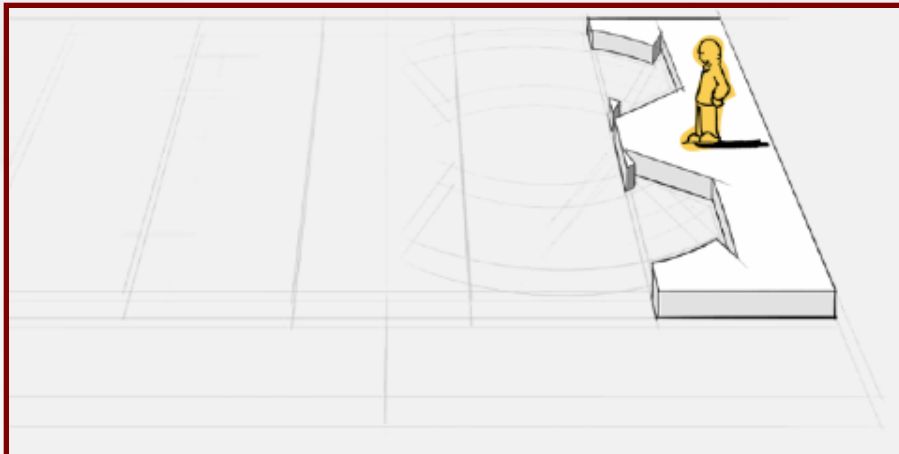
C\$
9 Cost Structure

The business model elements result in the cost structure.

Customer Segmentation Building Block

Defines a group of people, or organizations, an enterprise aims to reach and serve

- Customers are heart of Plan
- Group Customers into distinct segments with common needs & behaviors



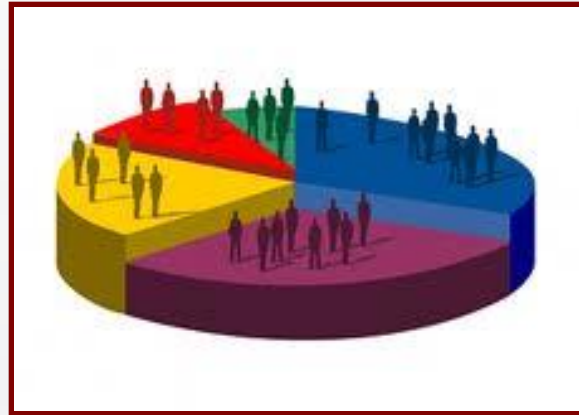
Separate segments if:

- Need a distinct product
- Utilize different Channels
- Require special Relationships
- Have different profitabilities
- Pay for unique aspects

Types of Customer Segments

Mass Market

Don't distinguish
Segments



Diversified

Serves unrelated
Segments

Niche Market

Specific Segments

Segmented

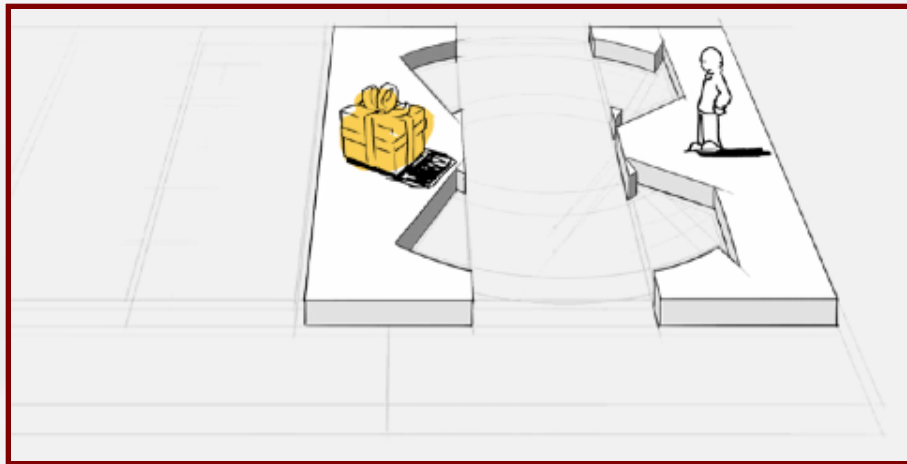
Distinguish between
segments with
different needs

Multi-Sided

Interdependent
Segments

Value Proposition Building Block

Describes the bundle of products and services that create value for a specific Customer Segment



- Reason why Customers buy from one company over another
- Solves a Customer Problem, or satisfies a set of Needs

Value Proposition Elements

Design

Difficult to measure,
but important in
Fashion & Consumer
Electronics



Performance

Common way to
create value

PC sector relied on
powerful machines,
but has limits



Customization

Tailoring products &
services to specific
Customers

Enables customized
products & economy
of scale

More Value Proposition Elements

“Getting the Job Done”

Create value by helping Customer get jobs done

Price

Low-price has implications for rest of Business Model

Risk Reduction

Customers value risk reduction

Brand / Status

Customers value use and display of a brand

Cost Reduction

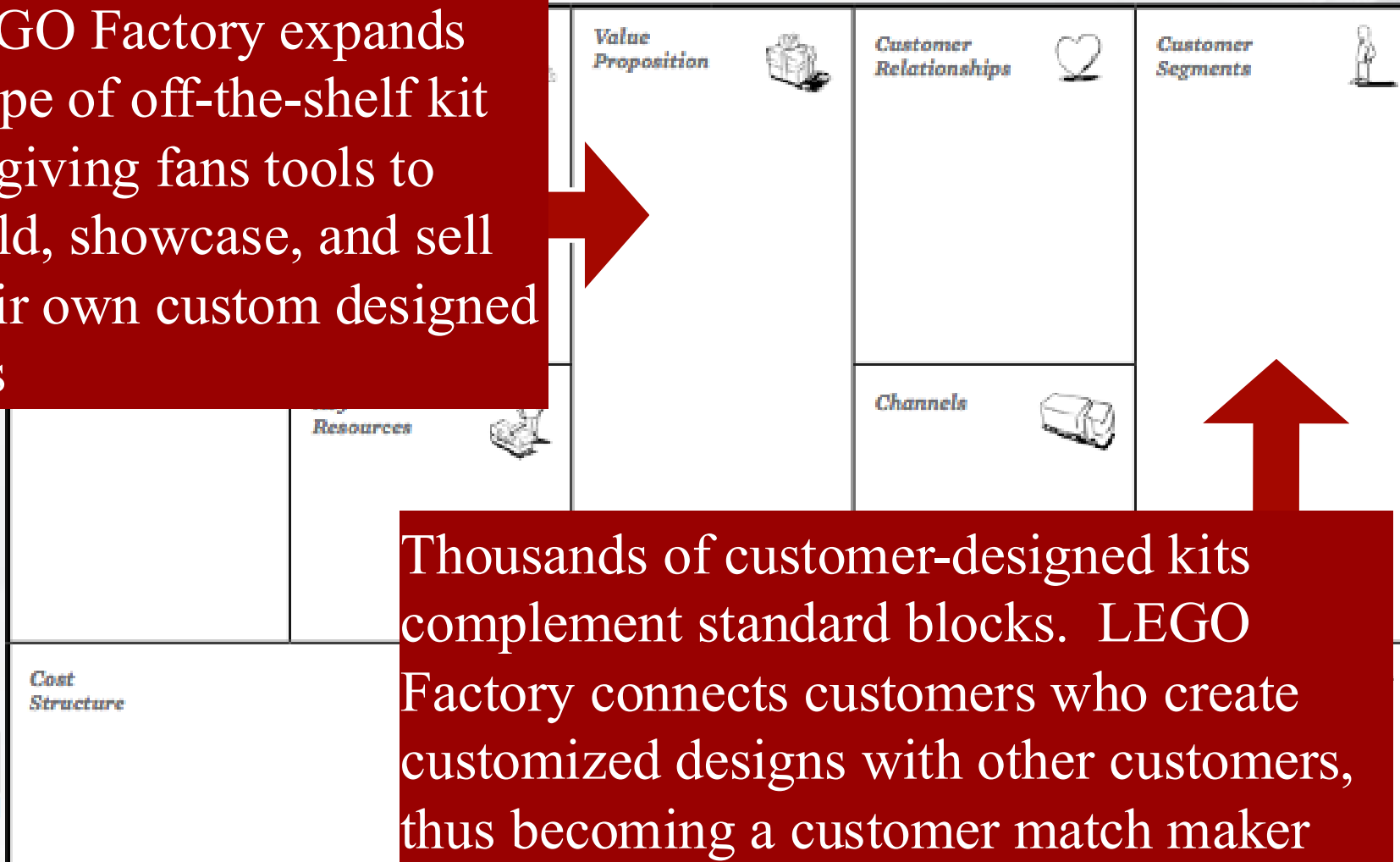
Important way to create value

Accessibility

Provide offering to Customers who lack access

Ex: Lego Factory Value Proposition & Segments

LEGO Factory expands scope of off-the-shelf kit by giving fans tools to build, showcase, and sell their own custom designed kits



Thousands of customer-designed kits complement standard blocks. LEGO Factory connects customers who create customized designs with other customers, thus becoming a customer match maker

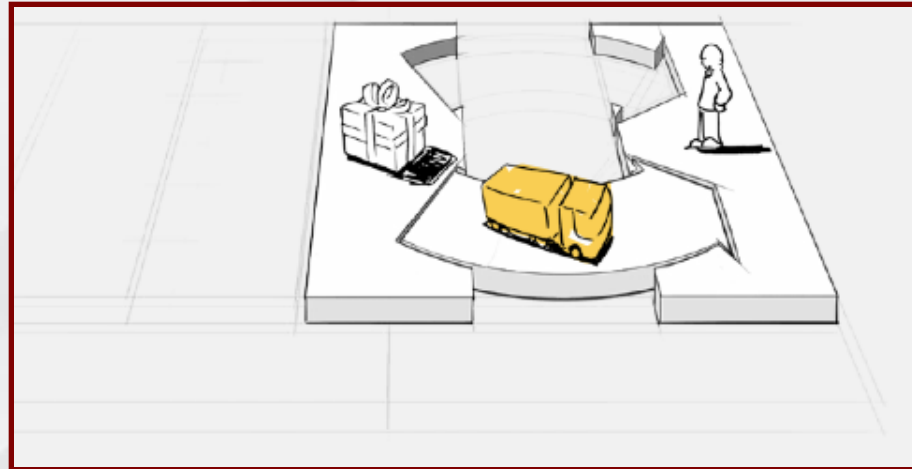
Channels Building Block

Describes how a company communicates with & reaches its Customers to deliver a Value Proposition

- Customer Interface: Communication, Distribution, & Sales
- Customer touch points, & important in their experience

Channels provide:

- Product awareness
- Allow Customers to purchase
- Provide post-purchase support



Channel Types and Phases

Channels have 5 distinct phases. Each Channel can cover some or all of these phases

<i>Awareness</i>	<i>Evaluation</i>	<i>Purchase</i>	<i>Delivery</i>	<i>After Sales</i>
Raise awareness about company & offerings	Assist Customers evaluate Value Proposition	Allow Customers to purchase products & services	Deliver Value Proposition to Customers	Provide post-purchase support

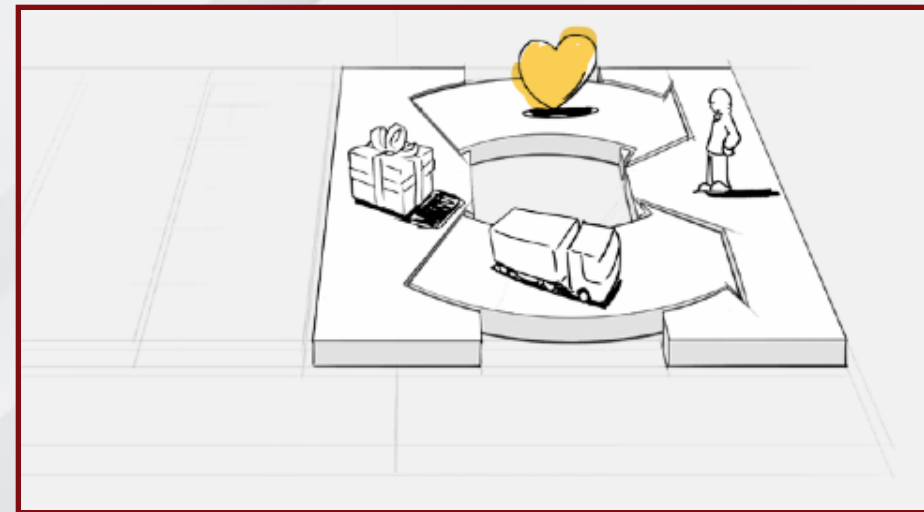
Customer Relationship Building Block

Describes the types of relationship a company establishes with specific Customer Segments

Must clarify desired relationship with each Customer Segment

Relationship Motivations:

- Acquisition
- Retention
- Boost Sales (upselling)



Customer Relationship Categories

Personal Assistance

- Direct access for help

Dedicated Personal Assistance

- Customer specific Representative
- Intimate relationship

Self-Service

- No direct Customer relationship
- Provides self-help

Communities

- User community aides connections between members

Automated Services

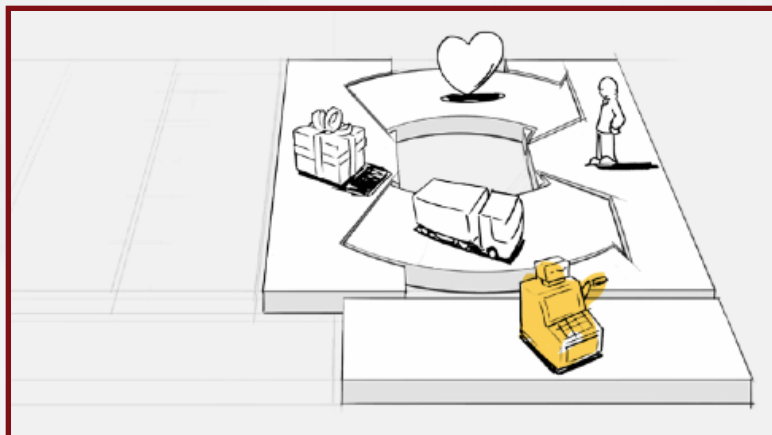
- Sophisticated form of self-service

Co-Creation

- Beyond traditional relationship to co-create value.

Revenue Streams Building Block

*Represents cash a company generates from each Customer Segment
(Revenue - Cost = Earnings)*



- “Arteries” of the Business
- Must ask....”What is each Customer Segment willing to pay?”
- Each Stream has different pricing:
List, bargaining, market dependent,
volume dependent, etc
- Types of Revenue Streams:
Transaction & Recurring

Ways to Generate Revenue Streams

Asset Sale

- Physical product sale

Subscription Fee

- Sell continuous access to service

Licensing

- Grant to use IP
- Common in media industry

Usage Fee

- Service use fee

Lending / Renting / Leasing

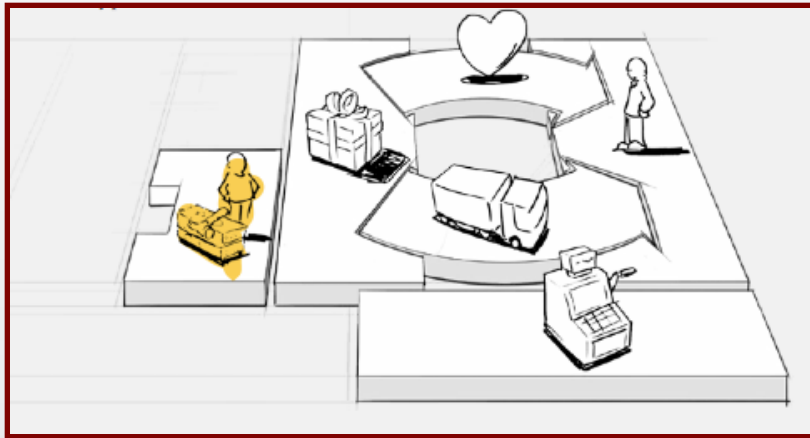
- Temporary grant of right to use asset for fixed time

Brokerage Fees

- Intermediation services performed on behalf of two or more parties

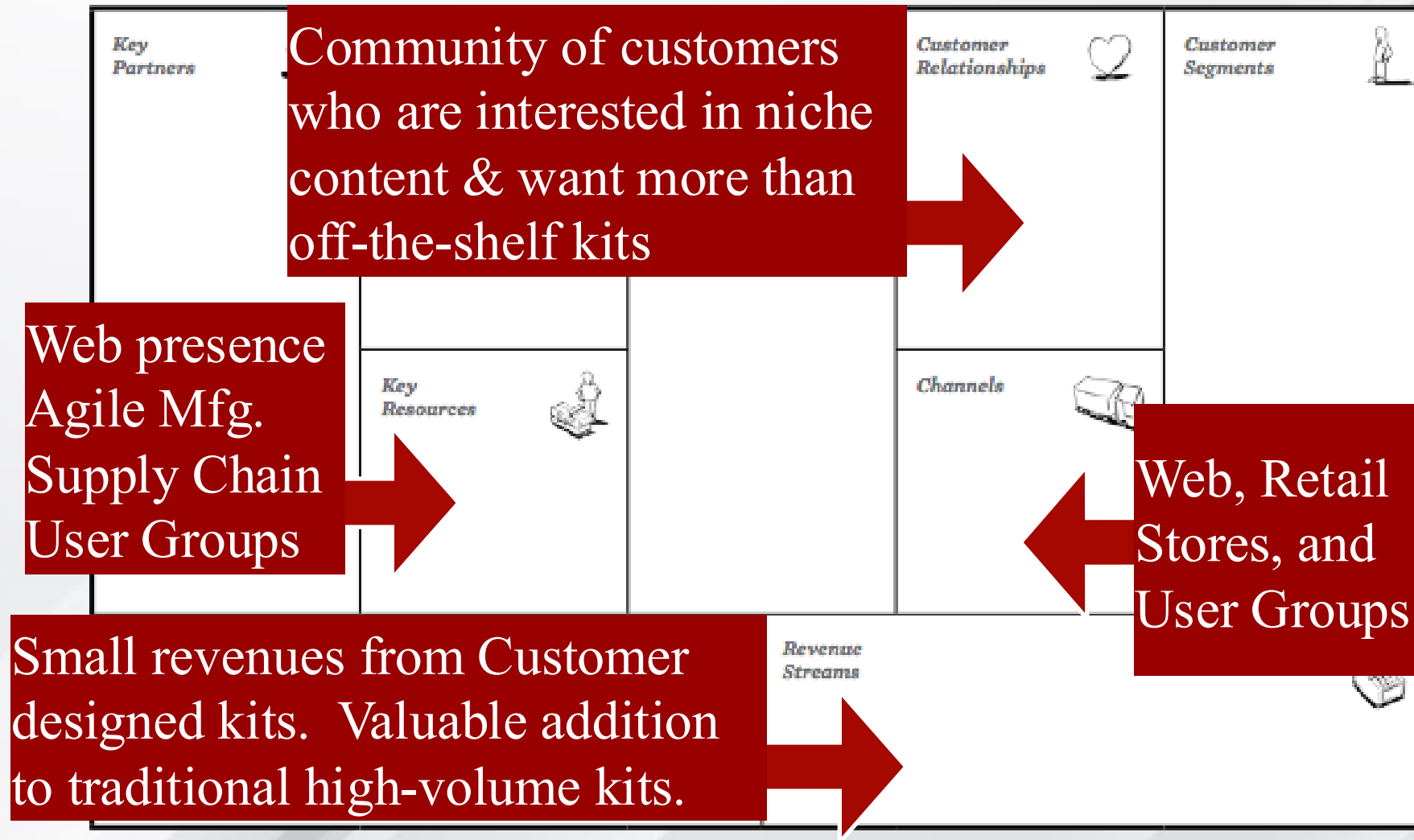
Key Resources Building Block

Describes most important assets required to make business model work



- Enables production reach markets, & earn revenue
- Required resources are dependent on selected Business Model
- Resources may be physical, financial, intellectual, or human
- Resources may be owned, leased or acquired

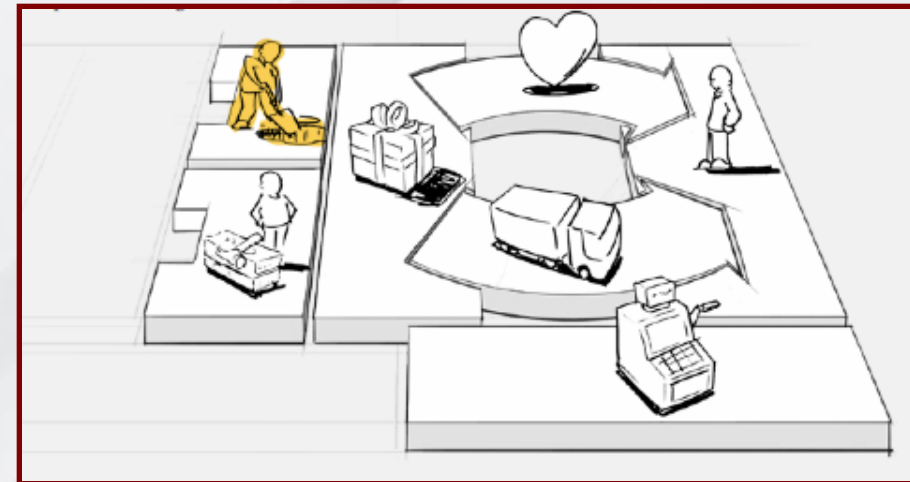
Ex: LEGO Relationships, Channels, Resources, & Revenue



Key Activities Building Block

Describes most important things a company must do to make its Business Model work

Required to create and offer a Value Proposition, reach markets, maintain Customer Relationships, and earn Revenue



Key Activities Catalog

Production

- Design, mfg., & deliver product in quantity or superior quality
- Dominates mfg. Business Models

Problem Solving

- Develop new solutions
- Dominates knowledge management Business Models

Platform / Network

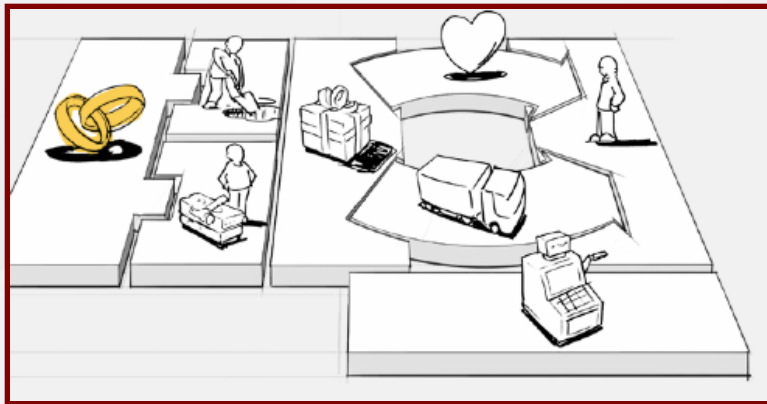
- Networks, matchmaking, software and brands can serve as platforms

Key Partnerships Building Block

Describes network of suppliers and partners that make the Business Model work

Types of partnerships:

1. Strategic alliances between non-competitors
2. Strategic alliance between competitors
3. Joint Ventures to develop new business
4. Buyer-Supplier to assure reliable supply



Partnership Motivations

Optimization & Economy of Scale

- Most basic form of partnership
- Often results in outsourcing

Reduction of Risk & Uncertainty

- Competitors form strategic alliance in one area while competing in another

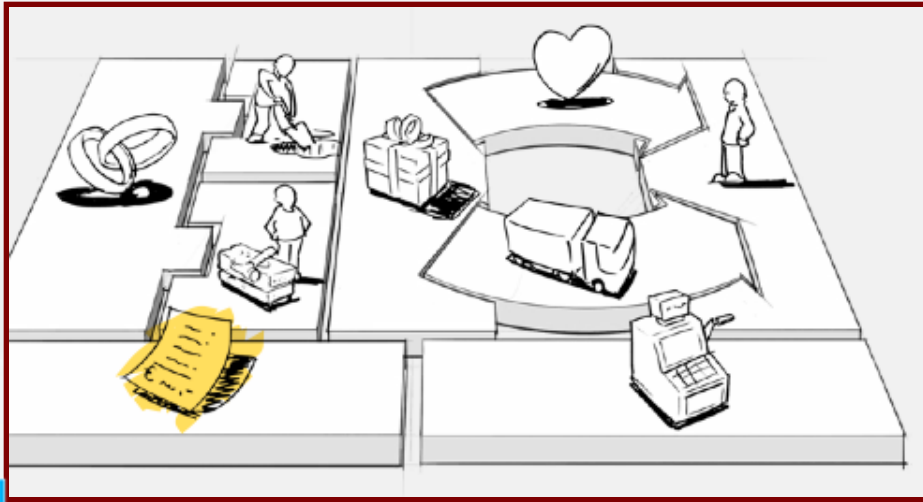


Acquisition of Particular Resources & Activities

- Extend capabilities by relying on others to furnish part of the required resources / activities

Cost Structure Building Block

Describes all costs incurred to operate a Business Model



- Create & deliver value, maintain Customer relationships, & generate revenue all incur cost
- Easily calculated after defining: Key Resources, Key Activities, & Key Partnerships

Cost vs. Value Driven Models

Cost Driven:

Low Cost Value Proposition, automation, & outsourcing

Fixed Cost

Same cost
regardless of
volume

Variable Cost

Cost vary in
proportion with
volume

Scale Economy

Cost / unit drops
as volume
increases

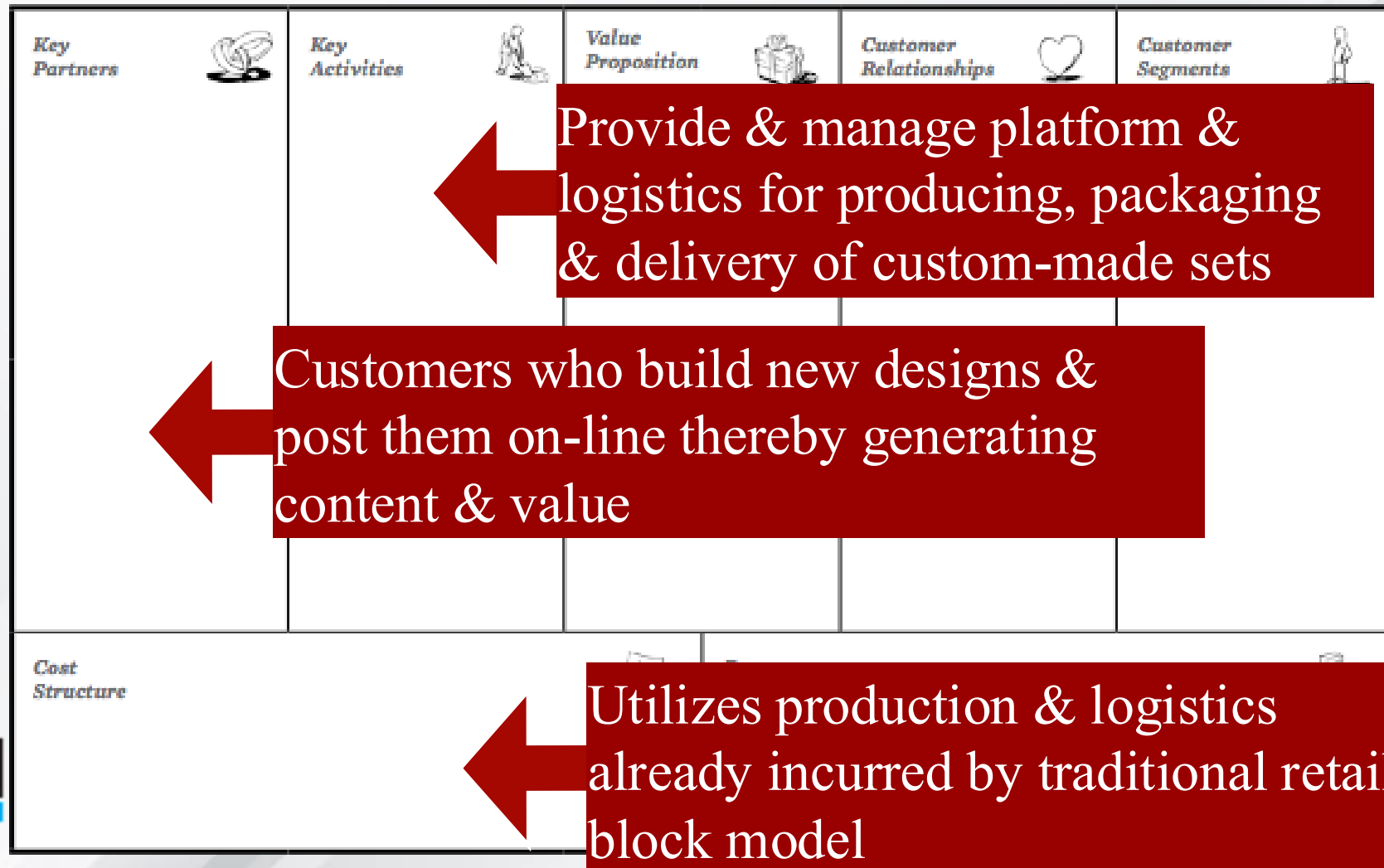
Scope Economy

Same mktg &
dist. support
many products

Value Driven:

Focused on value creation, not cost. Premium Value Propositions and personalized service

Ex: LEGO Factory **Key Activities, Partners, & Cost Structure**



Final LEGO Factory Business Model Canvas

Key Partners  Customers who build new designs & post them on-line thereby generating content & value.	Key Activities  Provide & manage platform & logistics for producing, packaging & delivery of custom made sets. Key Resources  WEb presence, Agile Mfg., Supply Chain, User Groups	Value Proposition  LEGO Factory expands scope of off-the-shelf kit by giving fans tools to build, showcase and sell their own customers designed kits.	Customer Relationships  Community of customers who are interested in niche content & want more than off-the-shelf kits. Channels  Web, Retail Stores, and User Groups	Customer Segments  Thousands of customer designed kits complement standard blocks. LEGO Factory connects customers who create customized designs with other customers, thus becoming a customer match maker
Cost Structure  Utilizes production & logistics already in place by traditional retail block model		Revenue Streams  Small revenues from Customer designed kits. Valuable addition to traditional high-volume kits.		

AI Revolution in Product Analysis & Development

From Traditional Product Development → AI-Augmented Lifecycle

Traditional Model:

Linear stages (Discovery → Design → Development → Testing → Launch)

Human-driven decisions

Time-intensive iterations

AI-Augmented Model (2025+):

- Data-driven, iterative, and partially autonomous
- Continuous feedback loops
- Human + AI co-creation

According to McKinsey, AI integration enables teams to focus on **higher-value strategic work instead of routine tasks**

Top AI Tools in Product Development

- ChatGPT → Ideation, research, product specs
- GitHub Copilot → Code generation & development
- Midjourney → Concept & visual design
- Figma AI → UI/UX prototyping
- Notion AI → Documentation & workflows

AI REVOLUTION IN PRODUCT ANALYSIS & DEVELOPEMENT

How Artificial Intelligence is Redefining Product Development Across the Entire Lifecycle



AI is transforming the entire Product Analysis & Development Lifecycle, enabling faster, smarter, and more innovative product creation.

- Speed:** Compresses time-to-market, from months to days
- Precision:** Answers the right product to build with higher accuracy
- Innovation:** Generates creative, data-driven product ideas

AI-POWERED PRODUCT LIFECYCLE



TOP TOOLS & RESOURCES



Emerging Research: Google DeepMind Gemini, OpenAI, MIT, Stanford

RECENT REFERENCES

- McKinsey:** How AI is proving to be a game changer for software product development with its rapid prototyping and design capabilities: mckinsey.com.
- Forbes:** Generative AI is dramatically increasing the volume and quality of design and marketing content. www.forbes.com/ai-insights/motifor/openai-syrrmation/: <https://>
- Microsoft:** AI's impact is significantly cutting time-to-market and increasing product's market fit: itnpa/microsoft.com/all-in-product-design/
- N-IX:** AI can enable a 20-40% reduction in new-product development timelines. n-ix.com.

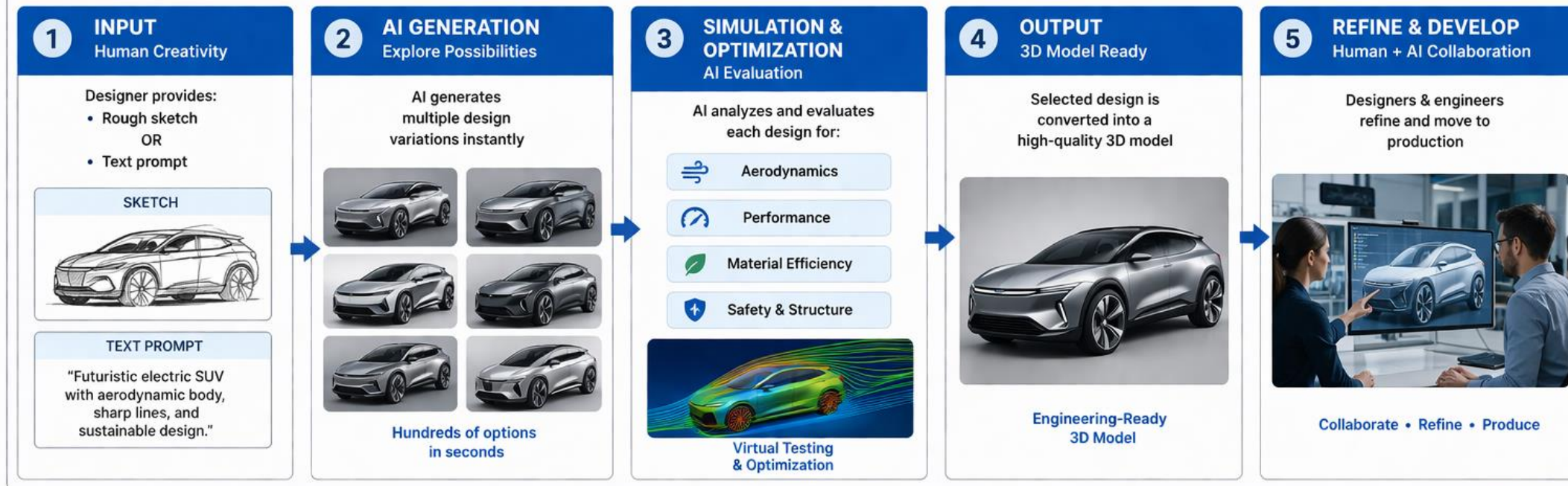
GM AI DESIGN CASE

FROM SKETCH TO 3D MODEL – IN LESS THAN A DAY



How Generative AI is Revolutionizing Automotive Design

AI-AUGMENTED DESIGN WORKFLOW



IMPACT

SPEED

Months → < 1 Day
90%+ Faster

EXPLORATION

2-3 Options → 100s
4x+ More Ideas

COST

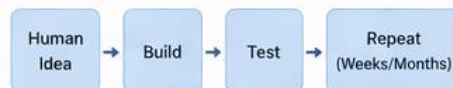
Fewer Prototypes,
Lower Costs

INNOVATION

More Creative,
Non-Obvious Designs

FROM TRADITIONAL → AI-AUGMENTED

TRADITIONAL MODEL



NEW AI MODEL



"AI didn't just accelerate design at GM — it *changed the economics of innovation itself.*"



KEY TAKEAWAY

AI allows GM to explore more ideas, reduce risk, and increase the probability of innovation.

A roadmap is a savior, and building a product roadmap will make the process more disciplined.

This lecture has shown what a product roadmap is and has given steps to build it.

You can use product roadmaps even if you are a product manager or a team member.

This product roadmap will save time and give you a sure shot at success.

***Innovative Business Models
make the most money***

Product roadmap

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- **Business model Canvas**



Thank You