Entrepreneurship Essentials

Lean Startups

- Product adoption curve
- Crossing the chasm
- How change is accelerating.
- Traditional linear process and lean process of product development
- What is minimum viable product?
- How to make minimum viable product?
- Example of minimum viable product

Sum of monthly investment (₹)	Expected rate of return (%)	Period(months)	Returns (₹ crore)
25000 p.m.	12	480	29.71
25000 p.m.	11	480	21.7
25000 p.m.	10	480	15.94
25000 p.m.	12	420	16.24
25000 p.m.	11	420	12.43
25000 p.m.	10	420	9.57
25000 p.m.	12	360	8.82
25000 p.m.	11	360	7.08
25000 p.m.	10	360	5.7
25000 p.m.	12	300	4.74
25000 p.m.	11	300	3.98
25000 p.m.	10	300	3.34
20000 p.m.	12	480	23.76
20000 p.m.	11	480	17.36
20000 p.m.	10	480	12.75

Adventuresome, usually highly educated, inquisitive, innovative mind, risk takers.

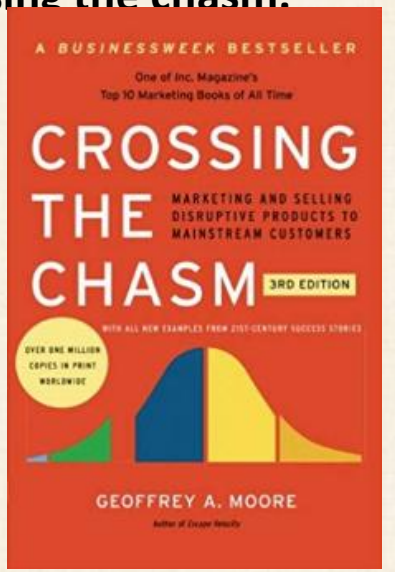
Leaders in respective segment, educated and knowledgeable, ok with risk.

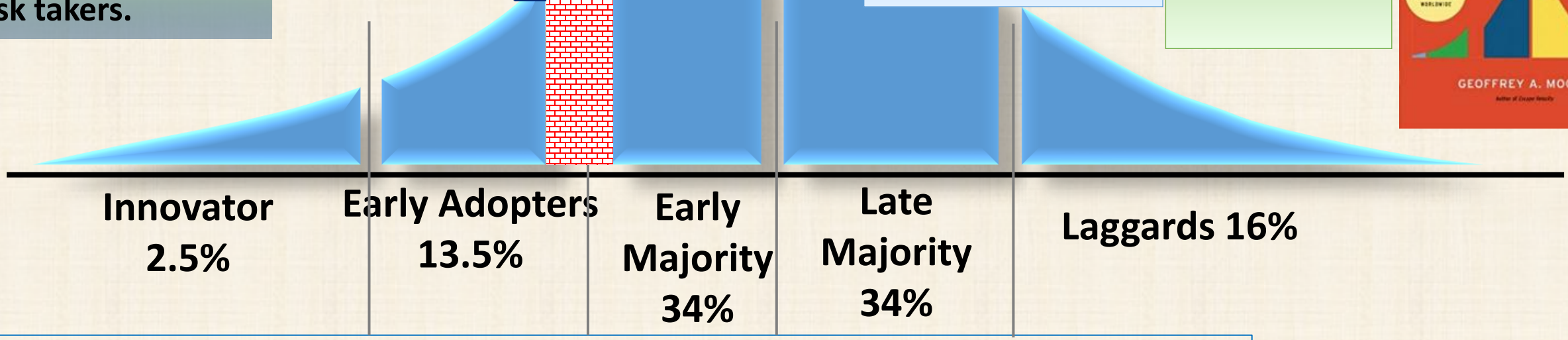
Socially active, take calculated risk, need a lot of validation to trust a new product.

Look for validation and revalidation, concerned for value for money. Averse to new experiment.

Complacent, averse to try lesser known product, risk averse.

Geofrey Moore: Crossing the chasm.





Product Adoption Curve
Types of consumers from new product adoption perspective

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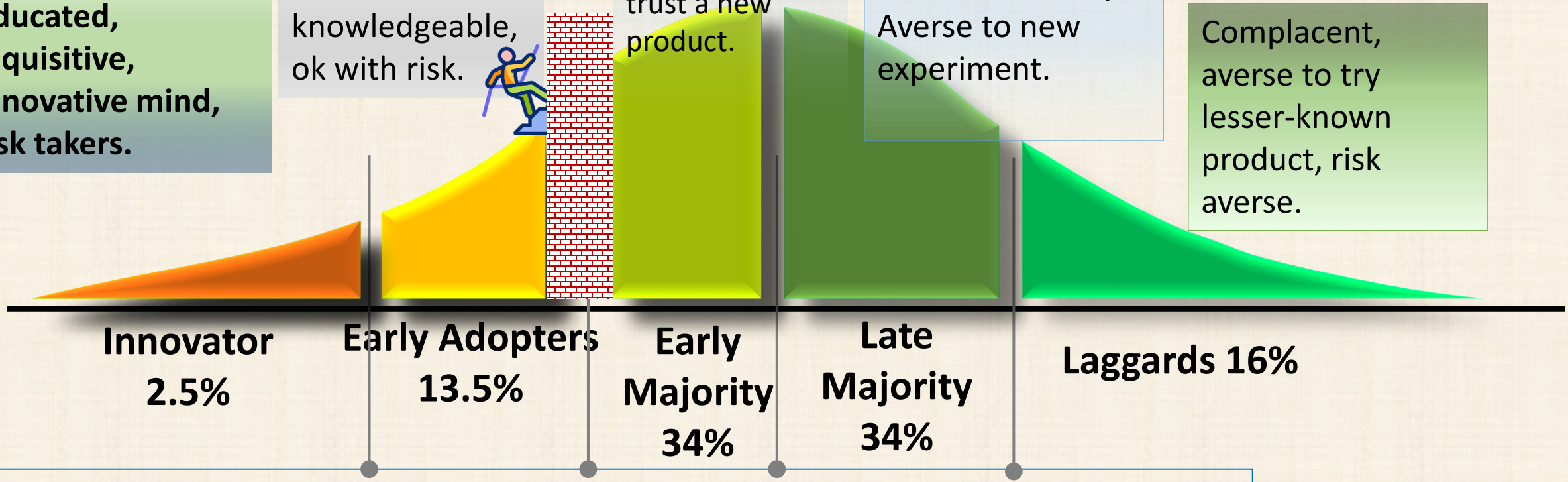
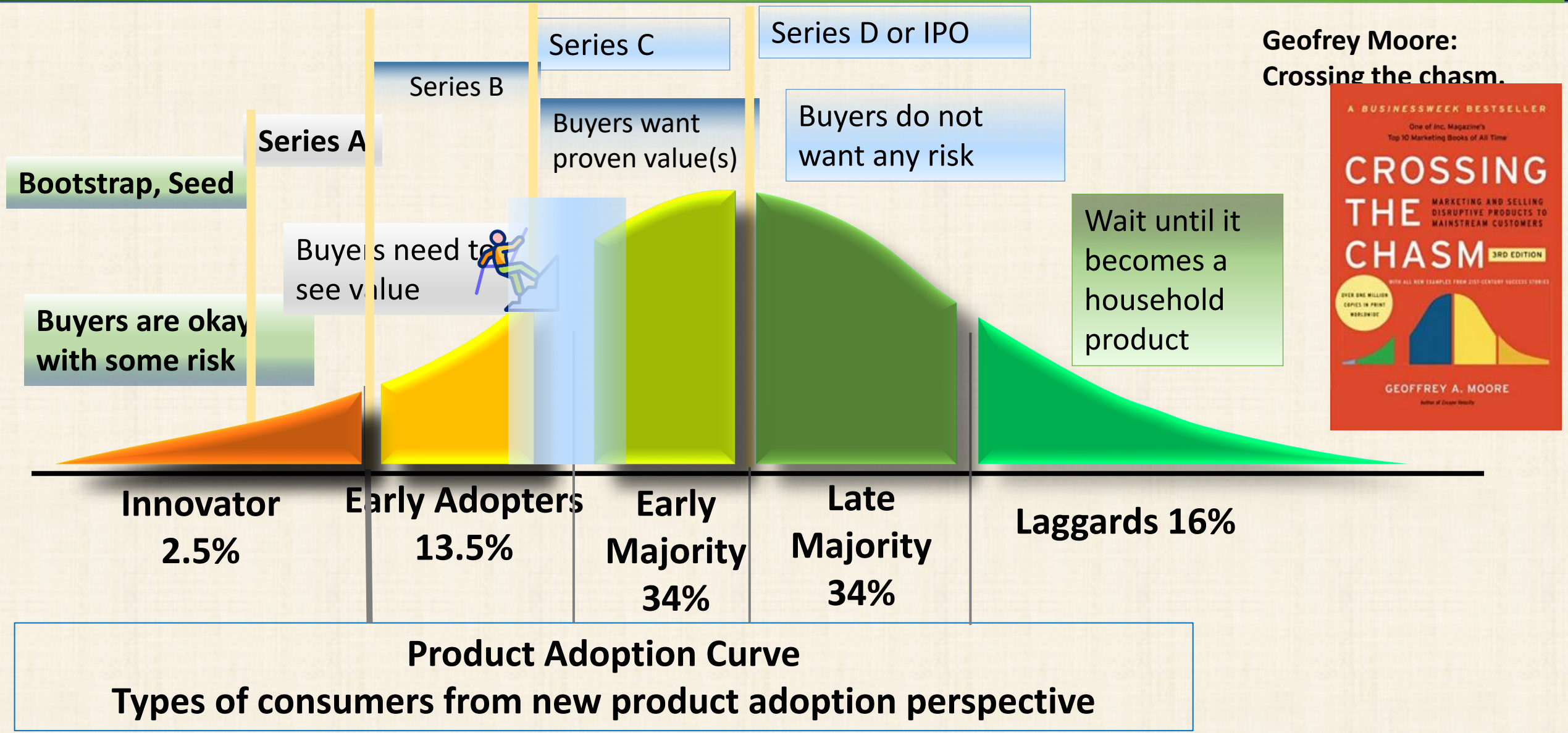
Moore, G. A., & McKenna, R. (1999). Crossing the chasm.



Product Adoption Curve

Types of consumers from new product adoption perspective

The theory posits that the rate and extent of adoption are influenced by the characteristics of the innovation, the social system, and the communication channels used to promote the innovation.



Product Adoption Curve
Types of consumers from new product adoption perspective

Geofrey Moore: Crossing the chasm.

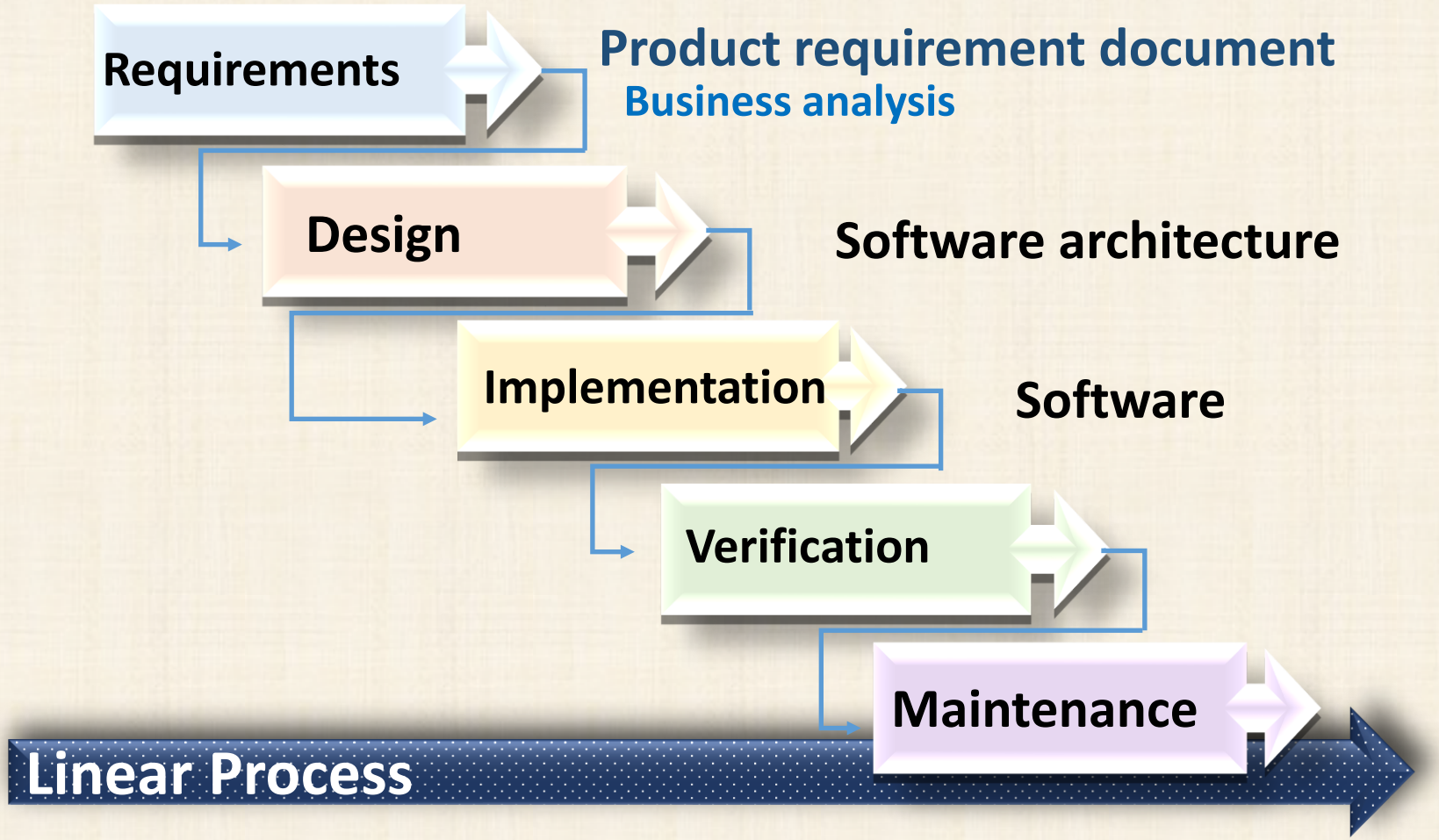
Crossing the Chasm

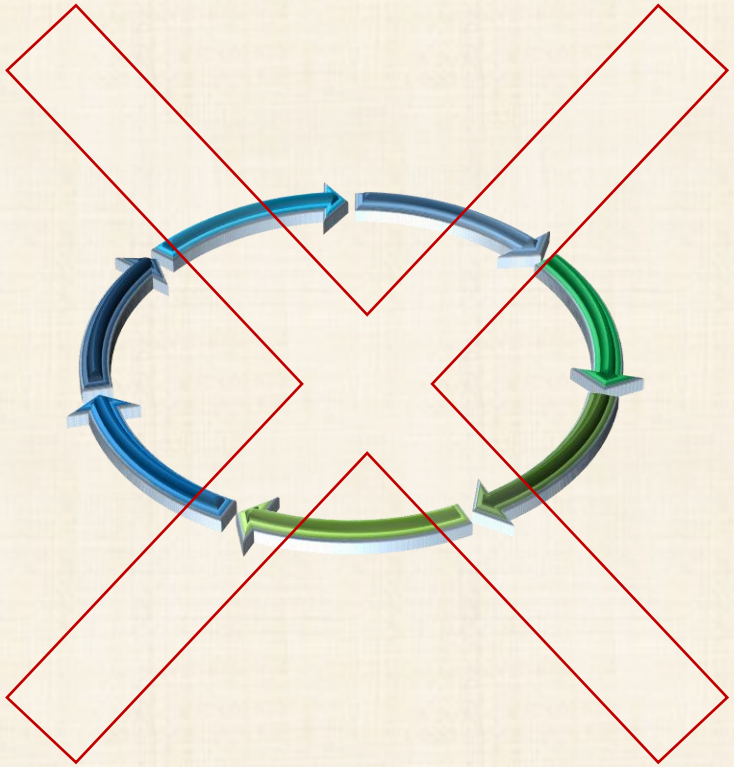
- Moore's concept is about diffusion of innovation and is essential element of tech entrepreneurship.
- Early adopters of a product are mostly technology enthusiasts and visionaries and the early majority are the pragmatists. The stimulation does not work for them. So, there exists a chasm.
- Visionaries and pragmatists have different expectations.

Techniques to successfully cross the "chasm”:

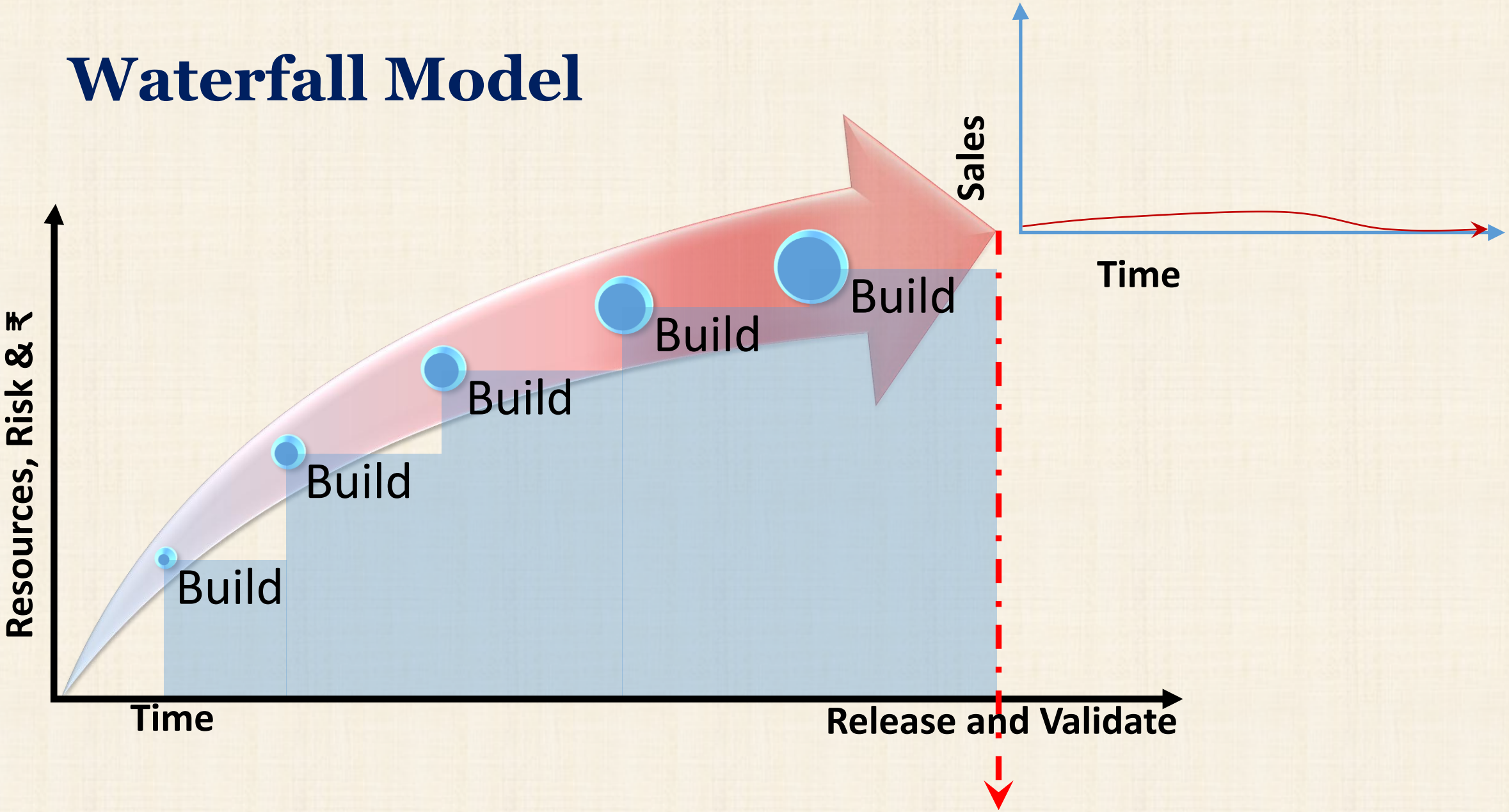
- Plan the growth much ahead, prepare to put in place the required infrastructure including manpower, deep understanding of the product concept, position, build marketing strategy, choose the most appropriate distribution channel and price attractively.

Waterfall Approach of Product Development

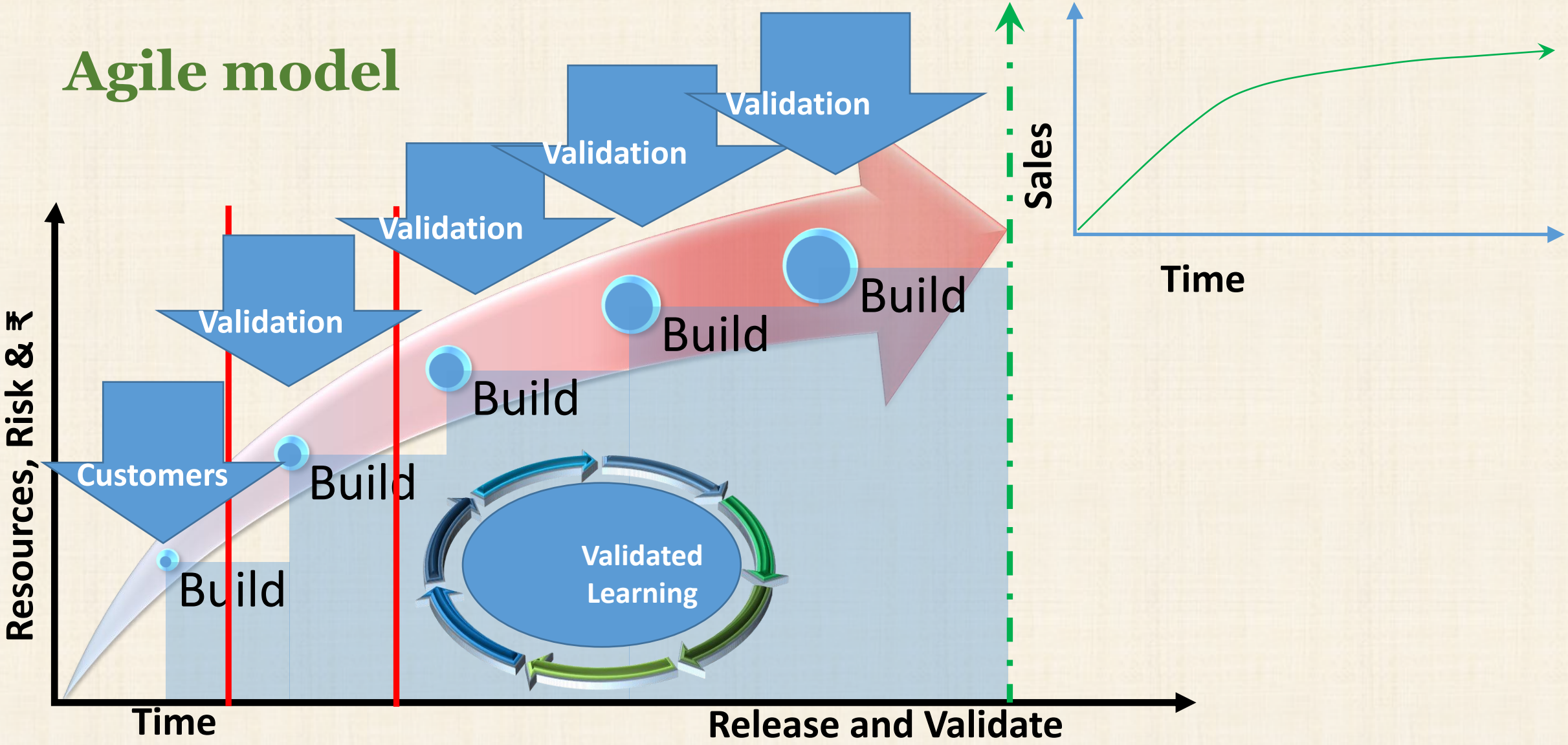




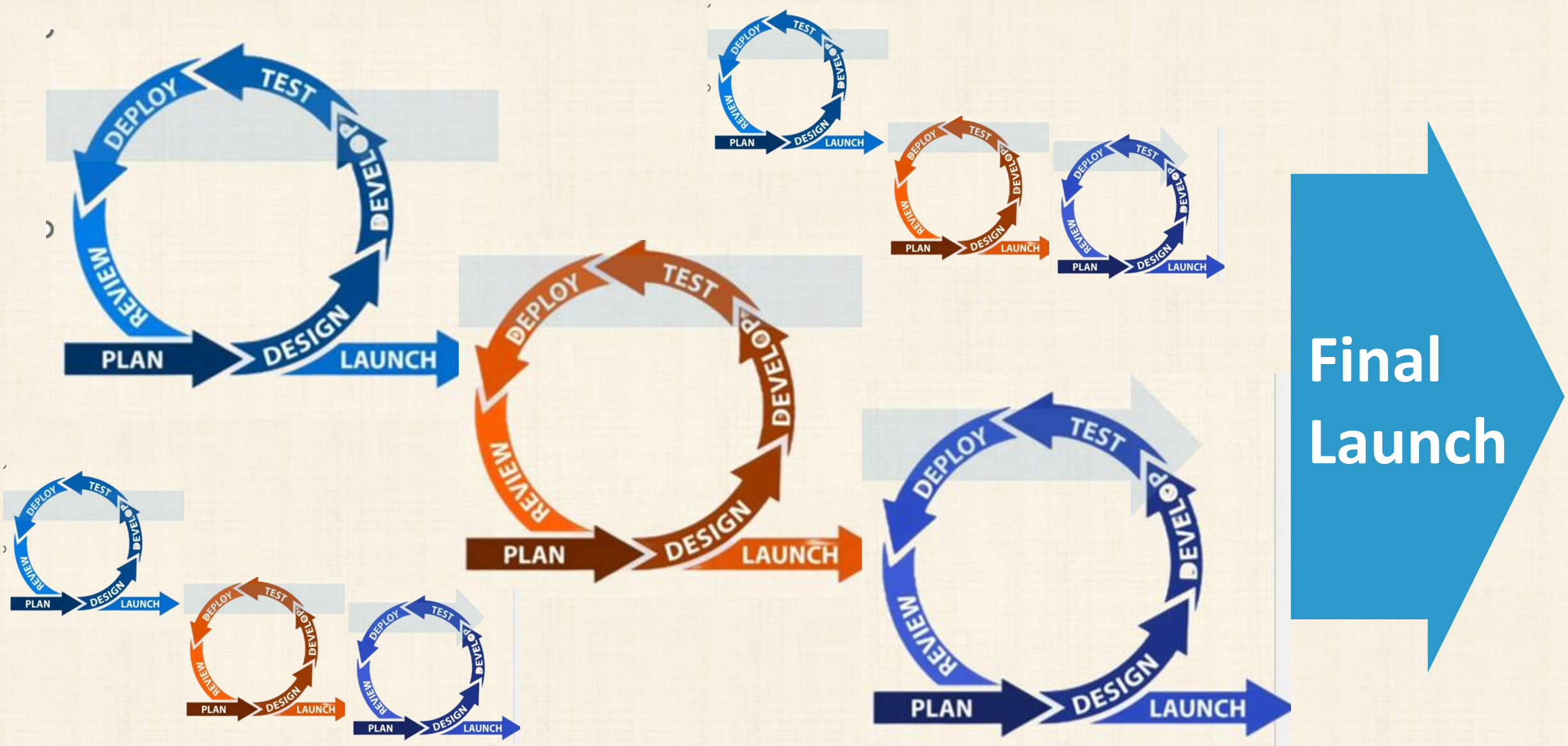
Waterfall Model



Agile model

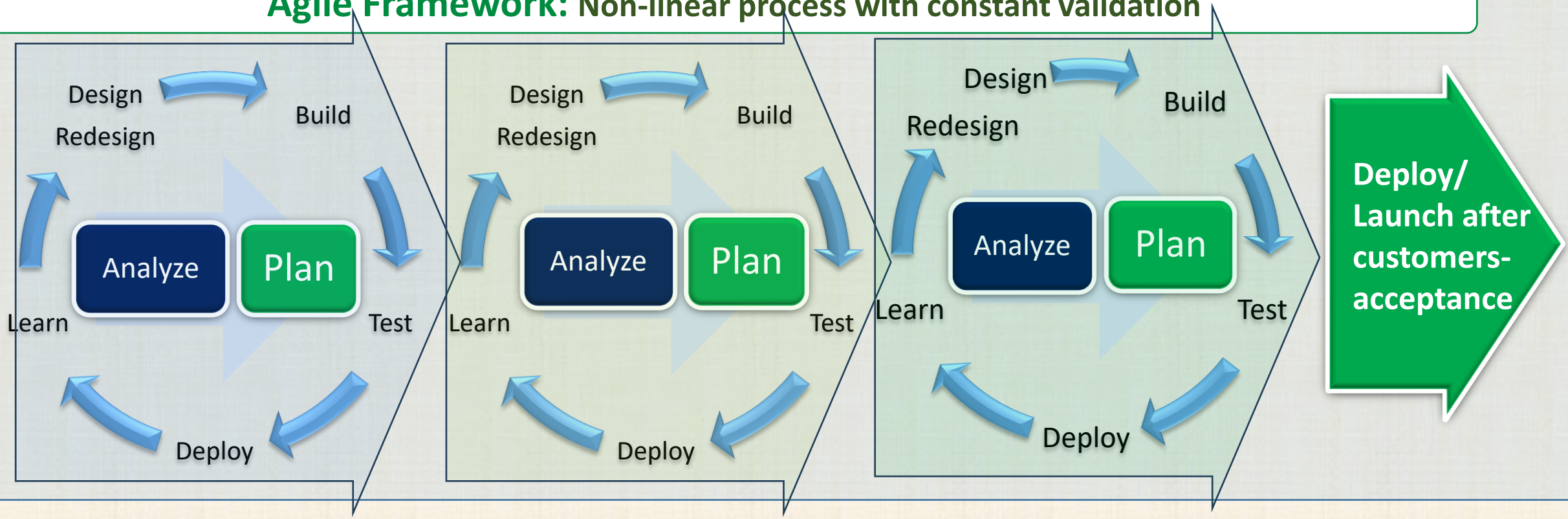

Validation
Validation
Validation
Validation
Customers
Build
Build
Build
Build
Build
Validated Learning
Resources, Risk & ₹
Time
Release and Validate
Sales
Time

Agile System (Build-Measure-Test Validated Learning)



Waterfall Method: Linear process of product development

Agile Framework: Non-linear process with constant validation



Agile System (build, measure, learn cycle)

An enabling factor in an agile manufacturer is that it allows the marketers, the production personnel and the designers to share a common source of information so that any correction in product can originate from the design itself.

A small initial problems may have larger downstream effects. It is a general proposition of manufacturing that the cost of correcting quality issues increases as the problem moves downstream.

It is cheaper to correct quality problems at the earliest possible point in the process.

An agile system is a flexible and iterative approach to project management and product development. It prioritizes collaboration, customer feedback, and adaptability to deliver high-quality results. Key characteristics of an agile system include:

1. **Iterative Development:** Agile systems break down projects into small, manageable increments or iterations. Teams work on these iterations, allowing for continuous improvement and adjustment.
2. **Collaboration:** Agile emphasizes close collaboration among cross-functional teams, including developers, designers, and stakeholders. Frequent communication helps address issues promptly.
3. **Customer-Centric:** Agile places a strong focus on customer satisfaction and involvement. Customer feedback is regularly sought and incorporated into the development process.
4. **Adaptability:** Agile systems are adaptable to changing requirements, allowing teams to respond quickly to new information, shifting priorities, and evolving customer needs.
5. **Transparency:** The progress of work, challenges, and successes are made transparent to all team members and stakeholders. This transparency fosters trust and accountability.
6. **Empowerment:** Agile teams are often self-organizing and empowered to make decisions, which enhances productivity and innovation.
7. **Short Iterations:** Work is divided into short timeframes called iterations or sprints (typically 2-4 weeks). This allows for regular inspection and adaptation.
8. **Minimal Documentation:** Agile values working software or product over extensive documentation, although documentation is still important for clarity.

Single Component Drip Emitter in operation

Three components, 5 gm of plastic, cost ₹5 to ₹12

0.95 gm plastic, cost roughly ₹0.25

Made of wood. Completely biodegradable

An Example

Lean and Agile

- Lean recommends elimination of waste of all kinds of resources and waste is defined as the use of that part of resources, which does not add incremental value to customers.
- Agile ensures quick and economical response from customers on their needs.
- Applying both Lean and Agile can ensure better success of business.

Lean Startup

- Eric Reis seems to have combined the idea of elimination of wastes in lean manufacturing with the validated learning of Agile method and expounded the Lean startup process.

How to Validate?

- Validation is assessing the possible product-market-fit through user testing.
- Validation is early test of your hypothesis.
- The process, when done early, helps to make faster, informed, and de-risked decisions.
- For validation of early prototype, develop Minimum Viable Product (MVP).

Creating the MVP

- Identify the most critical feature of your product or service that would help the customers decide about your value proposition.
- You need to understand the user stories – their pain point.
- Suppose you are planning to prepare contents for school kids that would engage them in hands-on learning. The user story is that "The school does not have the infrastructure to demonstrate practical experiments for wholesome understanding of many topics."
- One can design and develop a full course and give that to students. But what if the students don't appreciate it?
- Alternately -
- Prepare one module and evaluate its power to engage kids by asking them to use it.

Hypothetical Example

- You prepare a few tools using which students can learn a small topic.
- Present it to a batch of students, check their response, and evaluate levels of learning (ease) and retention.
- Decide on further course of action based on the data.
- You can postpone the huge investment to create content and make informed decisions.

The Lean Startup – by Eric Ries
The five key constituents

01 **Lean thinking:** shrinking batch sizes, just-in-time inventory & production management, and acceleration of cycle times.

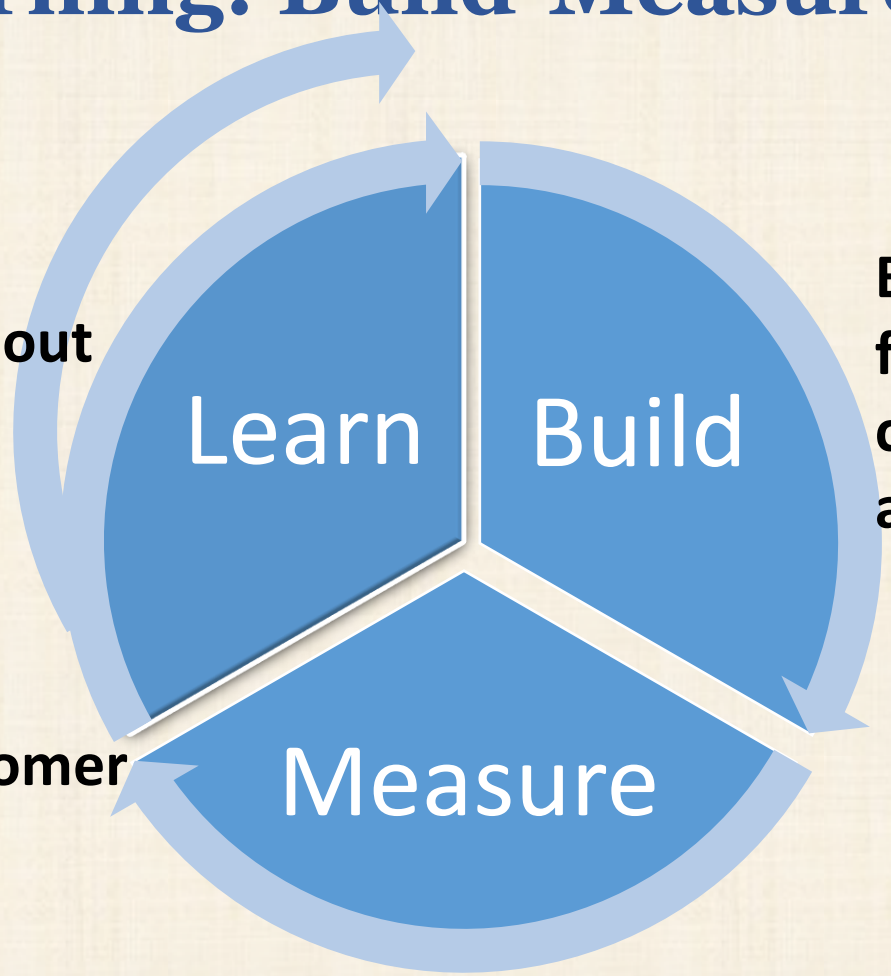
02 **Measure the progress:** through validated learning.

03 **Productivity:** Make things that people like and pay profitable price and do it fast and economic way.

04 **Build-measure-learn feedback loop:** instead of building based on lot of assumptions, keep adjusting with a steering wheel called build-measure-learn. Through this process we can learn if and when to make a sharp turn – a pivot.

05 **Charge early** – a paying customer is a real validation of the hypothesis and it helps the most critical element: the cash flow.

Validated Learning: Build-Measure-Learn Cycle



Test your hypothesis about product-market-fit.
Pivot or persevere

Build with minimum key features so that customers can comprehend usefulness and comfort.

Analyze data on customer feedback.

Usability.

Experience.

Performance for each feature.

The Lean Startup – by Eric Ries

- Learn
- Experiment with two hypothesis
  - Value hypothesis
  - Growth hypothesis
- Leap-of-faith assumptions
- Steer
  - Minimizing the total time
  - Minimum Viable Product
  - Learning milestones

The Lean Startup – by Eric Ries

- We must always ask: what if the user doesn't care about the design in the same way we do?

- Pivot and Preserve resources and time.
- Pivot – course correction based on learning. Pivot early if you must. Vanity metrics prevent pivoting.
- Preserve resources
- Charge early

Useful Metrics

- Actionable - when cause and effect is clearly understood and leads to effective decision making.
- Accessible - Understandable and measurable.
- Auditable - meaningful to understand real performance, employees get insight of the output of their efforts.

Ideally speaking, each corporate, department, and section objective should be:

SMART objective or criteria

- **Specific** – get specific data on what to accomplish, which resources, why is it important, who are involved.
- **Measurable** – can you express the requirement in numerical value for all team members to clearly understand.
- **Assignable** – You may need to improve multiple things. Who should do what will make the process seamless.
- **Realistic** – Given available resources, try to be realistic of the goal. Else pivot.
- **Time-bound** – set a goal when the result(s) must be achieved.

- The Lean Startup process is a way to test your hypothesis continuously, to adapt and adjust before it's too late.
- It is a scientific approach to creating and managing successful startups in an age when companies need to innovate too rapidly.

Lean and Agile Process

- The Lean Startup process builds on the principles of lean manufacturing (minimizing waste) and the Agile methodology (validated learning).
- It emphasizes additional practices like "charging early" and eliminating non-value-added features based on customer feedback.
- Lean manufacturing focuses on reducing waste in all forms while consistently delivering better value to customers.
- In the Agile process, execution progresses through validated learning and adapts to uncertainty, ensuring flexibility and continuous improvements.
- Agile contrasts sharply with traditional linear models, such as the waterfall model, which follow a fixed and sequential approach.

MVP

- A key premise behind the idea of MVP is that you produce a product with essential features, say a landing page with minimum features or a product with no aesthetics, that your customer can use and give you feedback.
- Sometimes, just watching people using a product reveals much more reliable information than asking people what they would do.

Charge Early

- Start with a prototype of essential but minimum features.
- Try charging customers early, preferably from day one.
- Some early cash inflow goes a long way.
- If customers are paying for the MVP, that is the real validation.

Example

After limited success in multiple startups, Nick Swinmurn wanted to start a business of online shoe selling. He was driven by his own frustration of not finding a suitable pair of shoes in couple of stores he visited.

People did not believe - customers would buy shoes without trial.

- But Nick believed that people do not see what he can see.
- His hypothesis was - people have limited choices when they visit a store.
- His 'leap of faith' was - given a chance to choose from thousands of designs, most people would not mind buying online.
- Instead of putting in place huge logistics, hiring people, buying huge number of shoes to display on his portal to start his business, Nick decided to pilot his idea through an MVP.
- And he had a unique plan.

- https://unsplash.com/s/photos/background for images
- **Ries, E. (2011). The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses. Crown Books.**
- Book Summary: The Lean Startup By Eric Ries
- Kander, Diana. *All in Startup: Launching a New Idea when Everything is on the Line*. John Wiley & Sons, 2014.
- http://info.boardofinnovation.com/hubfs/Validation%20Guide%20compressed.pdf
- Various Wikipedia pages
- Moore, G. A., & McKenna, R. (1999). Crossing the chasm.

Thank you

The Lean Startup – by Eric Ries

01 | **Innovation factory: Use lean startup technique and continuously create disruptive innovations.**

02 | **Culture and systems: Empower people to think out of the box without risk and innovate at the speed of the experimentation system.**

Transform your venture into an innovation factory by empowering people to think out of the box and inculcating a culture of lean startups

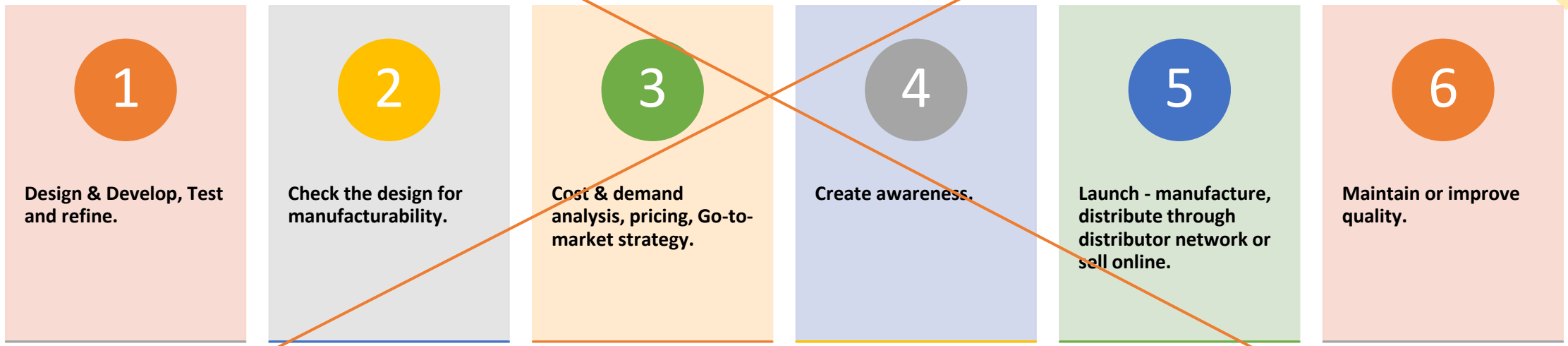
Traditional Process of Product Development

- Epiphany, serendipity, eureka or just a problem.
- Identify product to be developed based on market survey.
- Frequently, the problem is faced by the entrepreneurs. Phanindra Sama of redBus. Burr to Velcro. Sticky notes.
- Tilak Mehta identified a pain from his own experience and has created a ₹100 crore venture.
- Ideation and idea screening based on technical feasibility and market potential. Only a few ideas would eventually emerge as a marketable product.

Tilak Mehta: Paper n parcel

- Tilak's company has achieved a staggering turnover of over Rs 100 crore in 2021.
- As of 2021, his net worth stands at an impressive Rs 65 crore.
- His MONTHLY income in 2021 was Rs 2 crore.
- He is expanding across India.

Traditional Process of Product Development … cont'd.



Developing a New Product

The strategy is to understand the pain, the product/service, the competition, and to create value proposition by evolving solution that serves the customer better than that of the competitors.

The longer it takes for the product to reach to the customers the longer is the time to know whether the product is acceptable by the customers or not.

The Lean Startup – by Eric Ries

- How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses