

How Design Thinking works?

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- IIM Visakhapatnam

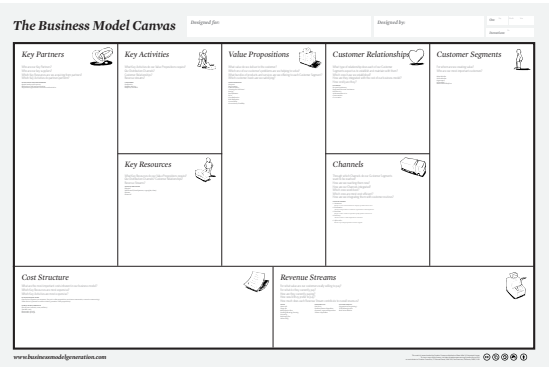
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Agenda

- Your Ideas
- Business Model Canvas
- Case Study 1 - Ather Energy
- Case Study 2- GE Healthcare

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Business Model Canvas



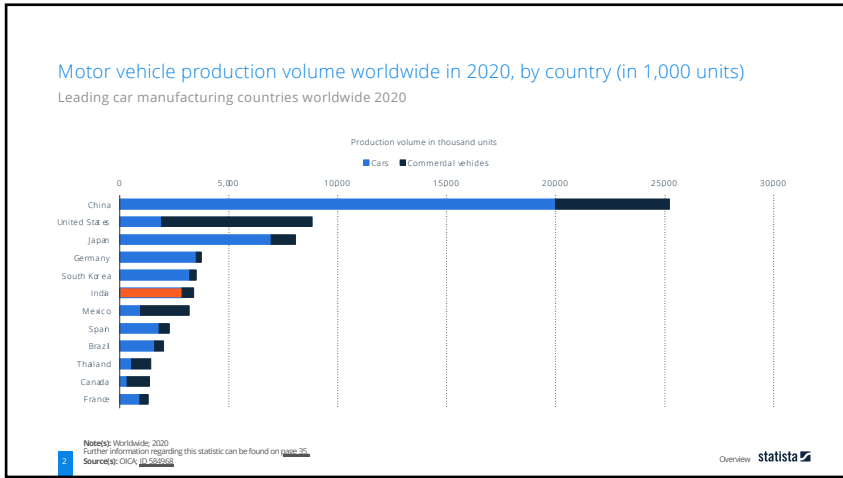
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
	Key Resources		Channels	
Cost Structure		Revenue Streams		

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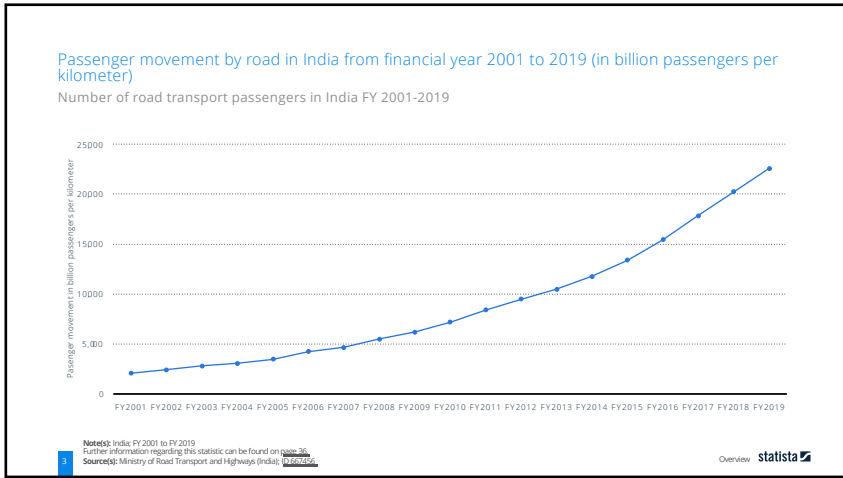
Case Study 1

Ather Energy

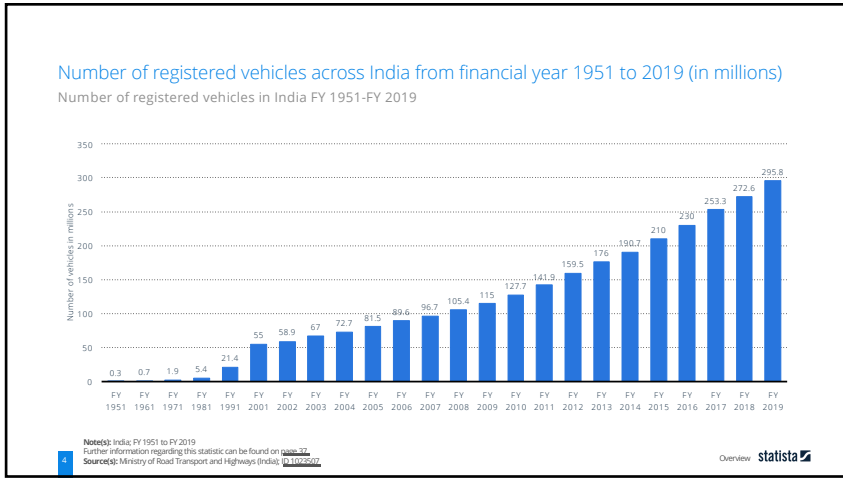
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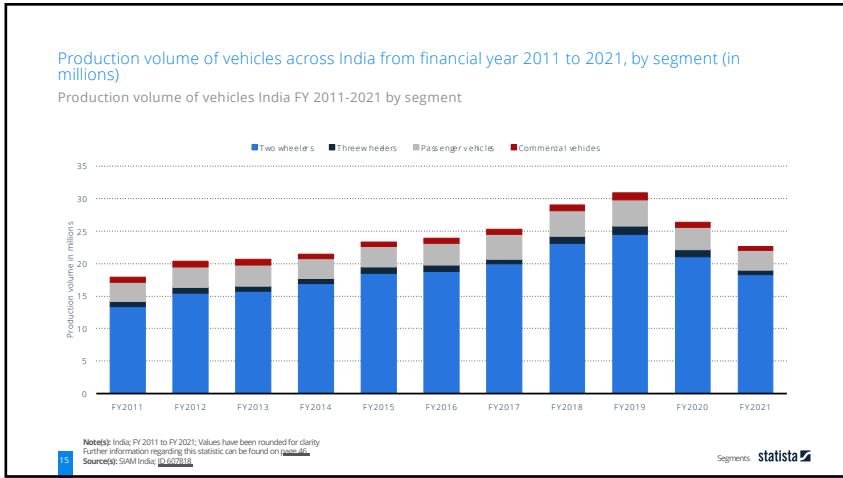
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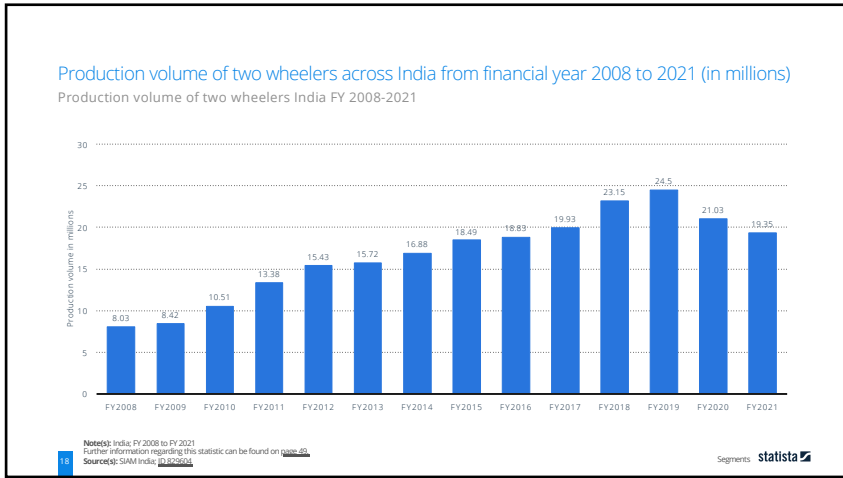
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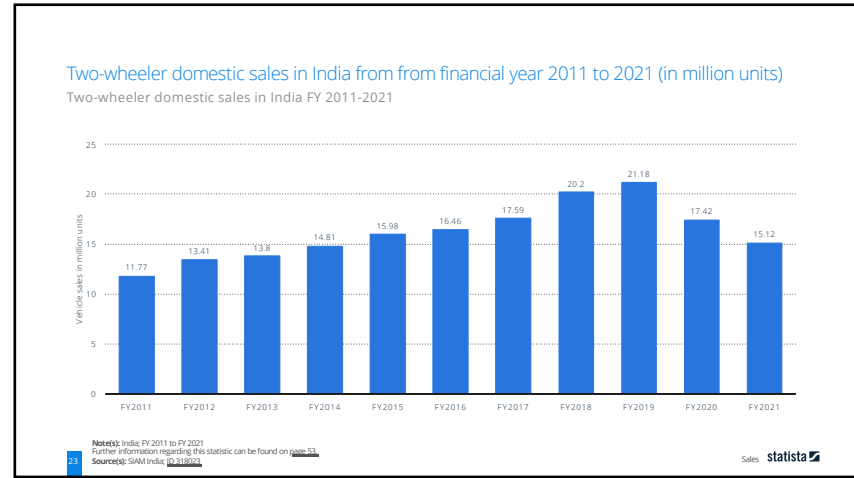
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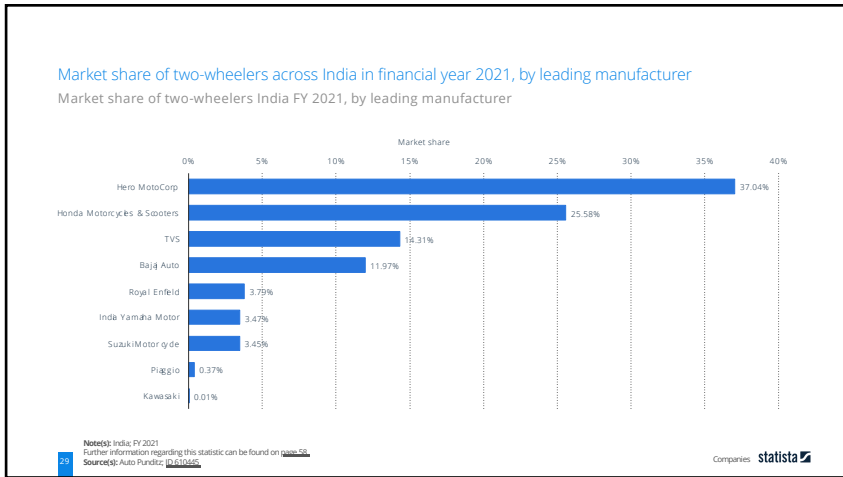
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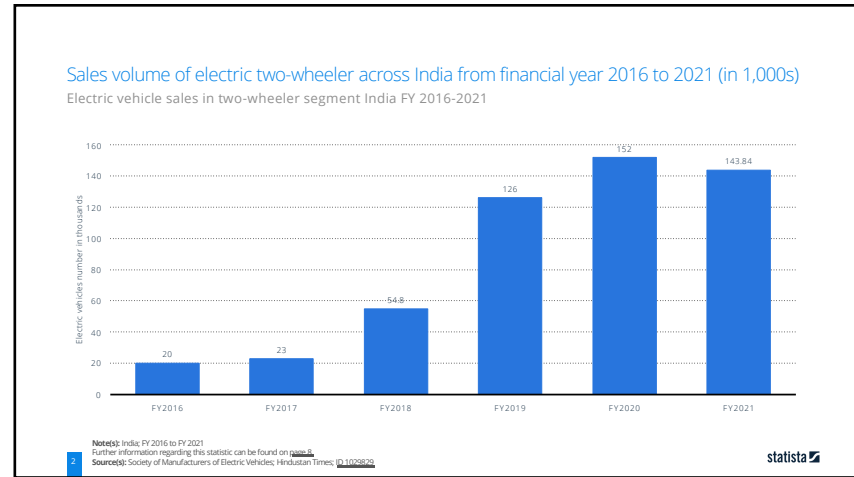
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Govt Policies for EV

- The EV30@30 campaign designed by EVI (Electric vehicle initiative - a multi-government policy forum)
- NEMMP 2020 (National Electric Mobility Mission Plan)
 - Sales of 6 Mn EVs by 2020
- FAME-2016 (Faster Adoption and Manufacturing of Electric Vehicles)

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Existing Players

- **Electrotherm** - YoBykes (2006) turnover 350 Mn 0.1 Mn customers
- **Okinawa Autotech Pvt Ltd** - Ridge e-Scooter
- **Hero Electric** - 10 offerings in High Speed and Economy series
- **Twenty Two Motors** - Flow (2017)



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Ather Energy

- Tarun Mehta
- Swapnil Jain



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Ather Energy

- **Pain Points**
- Poor battery performance, low power, low pickup, high charging time, low comfort
- **EV that could compete with ICE**
- Li-Ion battery instead of lead acid battery, digital dashboard, connected vehicle

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Ather Energy

- **Rapid Prototyping**

Rule of Pi

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Ather Energy

- First commercial launch at Surge 2016 - a technology conference
 - 72 kmph, range 60 km, 90kg weight, 14NM torque, 1Lakh
- **Target customer** - a person riding a Activa looking for an upgrade, a person having a 4-wheeler wanting to shift, not price conscious but quality conscious, technology enthusiasts
 - Not about brand differentiation but category creation
 - Target of 5000 to 10,000 vehicle sales per year
- Development of charging stations at every 2km of a city, close to cafes, malls, cinema, offices

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Ather Energy

- **Problem:** Battery Pack Failure of lead acid batteries; low power, low speed electric vehicles with very high charging time and very low riding comfort
- **Solution:** Lithium-ion battery packs for more power and low failure rates; integrated solution to limit downtime during charging & improved performance
- **Key Metrics:** Development of key technical systems; Roll-out of first working prototype; Commercial launch; Org building;
- **Unique Value Proposition:** Indian start-up working on a new electric vehicle significantly different than existing vehicles in power and riding experience
- **Customer segments:** Tech enthusiasts specifically interested in auto-tech, electric vehicles and connected vehicles

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Case Study 2

GE Healthcare

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56% of India's population lacks the means for a minimum acceptable standard of living

- ❖ 680 million Indians are deprived of eight basic needs: food, energy, housing, drinking water, sanitation, health care, education and social security
- ❖ The empowerment line calculates the level of consumption required to meet these needs
- ❖ Unique challenges and opportunities for companies operating in this landscape

Empowerment Gap¹
INR 332,000 crore (\$69 billion)²

Poverty gap¹
INR 50,000 crore (\$10 billion)²

Empowerment Line
1,336

Below Empowerment Line
56% (680 million people)

Official poverty line
574

Below poverty line
22% (267 million people)

Consumption of \$27 per capita per month

Consumption of \$18 per capita per month

Percentile of population (%)

Source: "From Poverty to Empowerment: India's Imperative for Jobs, Growth, and Effective Basic Services." McKinsey Global Institute, February 2014

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800,000 neonatal deaths in a two-speed healthcare system

Poverty Action Lab <http://bit.ly/1HBMmTr>

www.surestandata.com <http://bit.ly/1K6hP7Y>

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More than one India with unique needs

- ❖ 100 million population
- ❖ 400,000 doctors
- ❖ Private hospitals and clinics
- ❖ University hospitals

Tier I

- ❖ 250 million population
- ❖ 150,000 doctors
- ❖ Private clinics
- ❖ District and sub-district hospitals

Tier II & III

- ❖ 850 M Population
- ❖ 50,000 Doctors for 638,000 villages
- ❖ Neighborhood clinics
- ❖ SC, PHC and CHC
- ❖ Hospitals funded by NGOs

Rural

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Urban and rural India

Population cluster sizes are changing steadily

Share of population of 6 clusters	Per cent			CAGR, 2010-22 (P)
	1.1 billion	1.2 billion	1.4 ¹ billion	
Rural poor	54.2	44.7	36.1	-0.5
Rural middle-class	23.6	24.9	25.2	1.4
Rural rich	2.4	7.3	2.6	1.5
Urban poor	6.5	2.4	2.1	-3.1
Urban middle-class	13.7	17.8	21.9	3.1
Urban rich	1.5	2.9	6.2	6.5

1 Population projection from UN, World population prospects, 2010 revisions
SOURCE: NSSO Consumer Expenditure survey—2005-06 and 2009-10; UN, Department of Economic and social affairs, World population prospects, 2010 revisions; McKinsey analysis

Source: "India Healthcare: Inspiring Possibilities, Challenging Journey," McKinsey Global Institute, December 2012

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The unique challenges of *low-resource business customers*

LOW-RESOURCE REALITY	IMPACT ON CUSTOMER	IMPLICATIONS FOR MANUFACTURER
Unreliable electricity supply, heat and dust	Frequent product breakdowns	Robust product, able to withstand extreme voltage fluctuations
Lack of space, uneven floor surfaces	Equipment is not used	Light, compact and movable structure
Shortage of skilled operators	User is intimidated, equipment is not used, frequent breakdowns	Compact and simple system that is easy to set up and operate
Limited operating and maintenance budget	Equipment is not used, frequent breakdowns	Low total cost of ownership: low electricity consumption, no consumables, very few parts that require replacement
Limited or no resources for servicing	Functioning equipment is overutilized; high idle time for non-functioning equipment	Product does not break down, easy to service, free service
Vast areas with poor infrastructure	Facility is not served	Minimize number of required customer interactions, use alternative sales channels and partner with local stakeholders (distributors, government, NGOs)

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WHO are GE's competitors in Tier I, II and III? In rural India?



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Affordability: How low?



← Panda \$12,000
← Giraffe \$10,000



← Lullaby \$3,000



← Indian manufacturer \$300
← Light bulb \$0.5



Image source: Company website. Giraffe and Lullaby are trademarks of General Electric Company. Prices are estimates.

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Should GE go after this market? Should it stretch to serve low-resource business customers?



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Should GE Healthcare India serve *low-resource business customers?*

IN FAVOR OF DEVELOPING A NEW INFANT WARMER	AGAINST DEVELOPING A NEW INFANT WARMER
The potential is huge. The size of this market, including the "high bulb holders" segment, is unlimited.	It is not core to what the company does. GE Healthcare manufactures products for customers who want the best medical technology and are able to pay a premium. Its business model is not fit to serve these customer groups.
Timing is favorable. Government has a firm intention to boost investment and tackle the infant mortality problem.	The profits will be extremely low. The new product has to cost significantly less than its predecessor (LW), and serving these customers will further eat into its profit margin.
Opportunity cost. If GE Healthcare does not develop this market, someone else will. First movers will enjoy high profits, access to customer information and technological leadership, among other things.	GE cannot develop the right product for these customers. The complex reality in rural India requires a fundamentally different solution, which GE is not able to provide.
Corporate social responsibility. GE has to do something about this big social problem.	It is not GE's job to solve this problem. If the company does this for every major social problem it will go bankrupt!

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Lullaby Warmer Prime

Lullaby Warmer Prime

Designed for clinical excellence, caregiver comfort, and extreme reliability



Image source: Company sources. Lullaby is a trademark of General Electric Company.

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Lullaby Warmer Prime

An investment for today and tomorrow

Remarkably strong for enduring operation

Our warmer has been designed to operate in tough conditions. Our reusable probe is made with Kevlar[®]—the same material used in bulletproof vests! Add to that a design with only two moving parts for long lasting reliability.

Resilient in tough electrical conditions

Our warmer has been designed to operate without a voltage stabilizer and can withstand voltage fluctuations up to 390VP

Designed for your conditions

Our warmer's compact footprint makes it an ideal choice for today's busy care units. It's also lightweight and mobile with large wheels to tackle uneven surfaces.

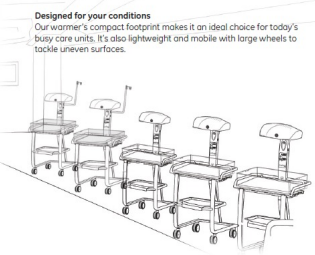


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All the best!

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