

Imagine that you are in 2030 and the world is progressing at a rapid pace.

Identify a potential problem in this world and solve it using an innovative product of the future.

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- What do you think will be a 2030 problem and why do you think so?
- Who will you solve for first and why?
- What part of the problem will you solve for first and how will you solve it using the tech of tomorrow?
- Comment on the feasibility of your solution by 2030.
- How will you measure the success of your product and what are the potential pitfalls in your solution?

THE PROBLEM with aging population on the rise and new technologies emerging, the digital divide is expanding

What's happening?



The world is being transformed at a rapid pace, As more and more young people are eager to adopt new technologies.



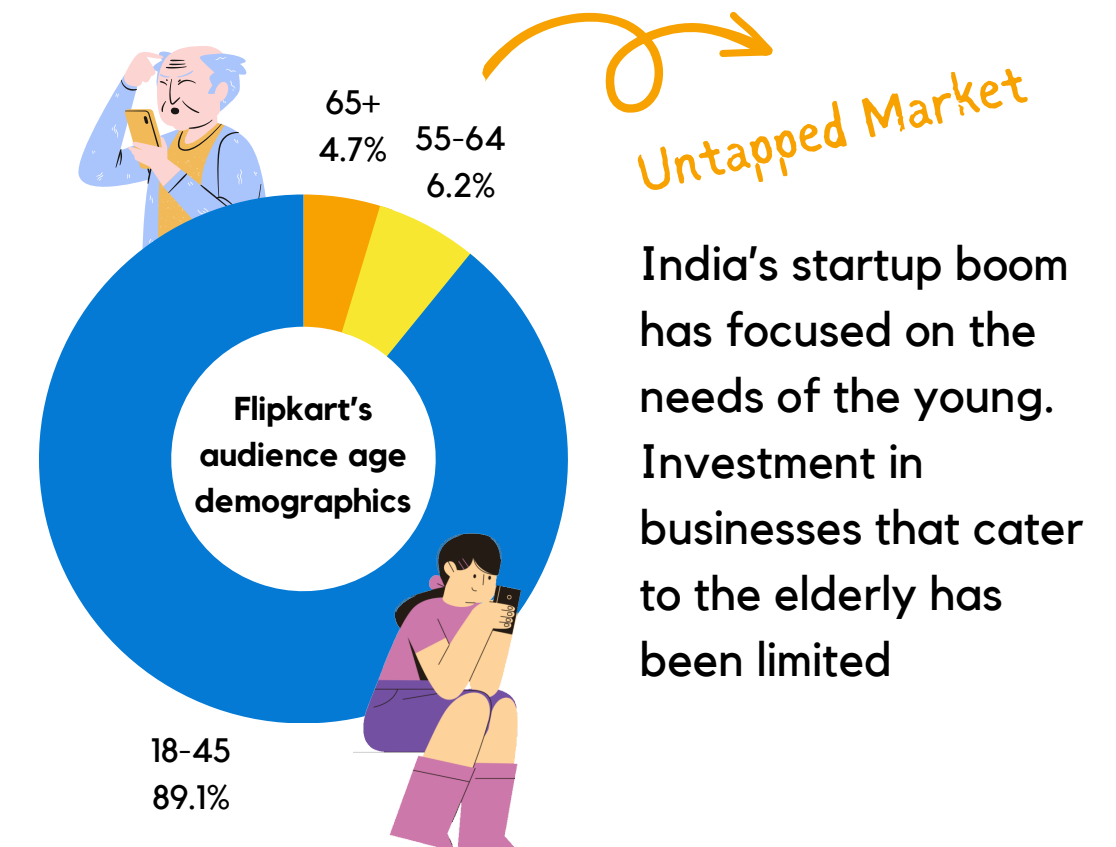
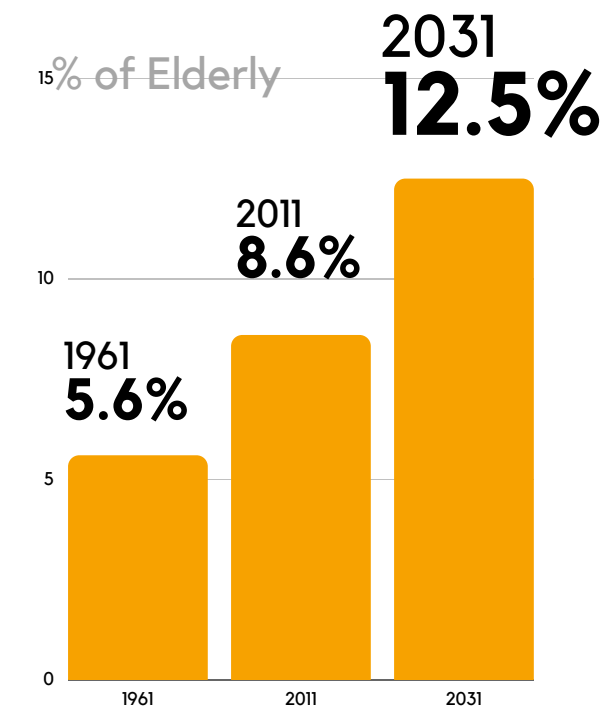
However, elderly population is often ignored when designing these new technologies making many digital products inaccessible for them



But, with life expectancy on the rise and the increasing youth-old ratio, the population of age above 65+ is expected to increase to 200 million in 2030



Increasing loneliness among elderly in India, with this condition being worse in urban regions, due to generation gap and lack of connection to the world



Why this problem?

By 2030, we're expecting a shift of elderly population moving from rural to Urban of more than **30 million** which will make it much easier to ship products, and provide services to them.

With the growing imbalance in young-age ratio, it is important to **help senior citizens to be independent** through giving accessible technology catered to them

How India is now the most populous but a gradually ageing nation

INDIA TODAY

With 1.43 billion people, India has surpassed China, but is losing the demographic advantage as its elderly population will nearly double to 192 million by 2030

The digital divide worsens for seniors

A survey carried out before the Covid-19 lockdown of 1,580 elderly persons across cities in eight states shows that 60% elders felt their children do not have

Over 65% elderly feel lonely amid rising adoption of tech among youth: Survey

1 min read • 23 Jul 2022, 12:24 PM IST

Priyanka Sharma

Japan's ageing population poses urgent risk to society, says PM

The Guardian

UNDERSTANDING THE USER

Physical and emotional Disadvantages faced by the elderly in accessing new tech

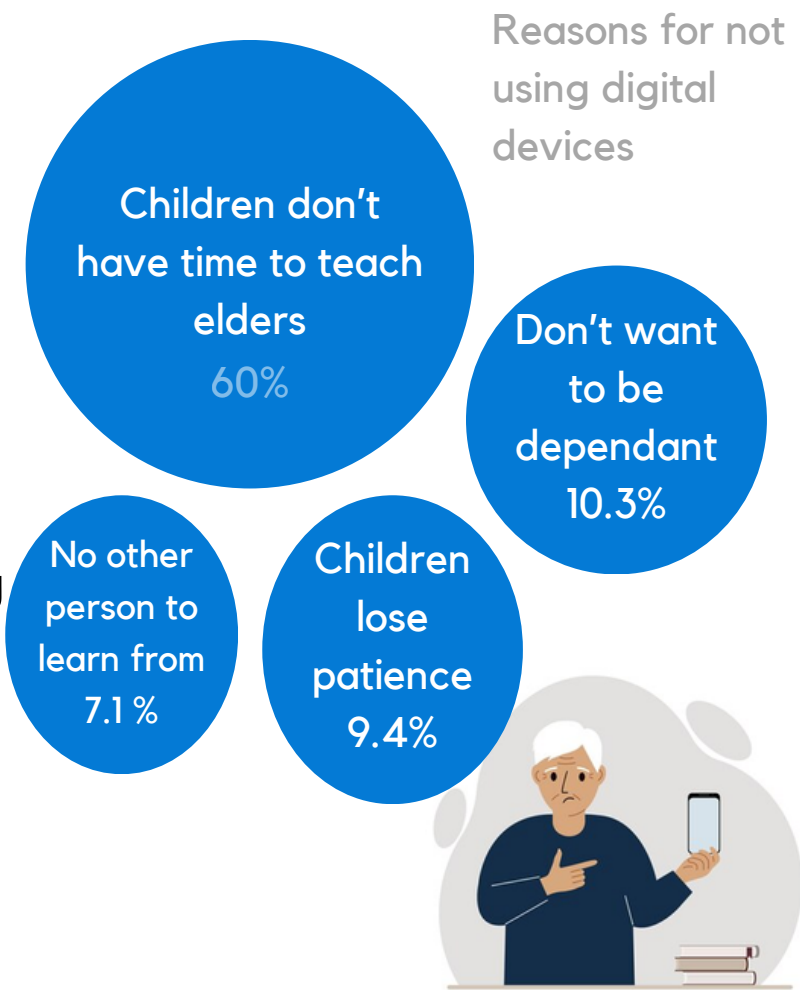
Why the digital divide?

The **fear and reluctance to adopt new technologies** might persist among the elderly.

Lack of Familiarity and Aversion digital technology, as they did not grow up with it makes intimidating for them.

The **digital content predominantly caters to the younger population**, leaving the elderly without engaging and relevant online experiences.

Gen Z prefers online communication, Millennials avoid phone calls but whereas boomers **prefer phone calls or in-person interactions**





Health related issues

Over **30%** of the elderly had distance vision loss and over 50% had near vision impairment. This makes smartphone apps with complex user interface difficult to use

Precise touch gestures and small buttons **require good fine motor skills** impacting those with **arthritis and mobility issues**

646k fatal falls occur each year in the world, the majority by adults older than 65 years (WHO, 2018) which is second reason for unintentional injury death.

VR is the future, but recent studies show people over 50 are more prone to **VR motion sickness**.

 <div>Mr. Patel, 68<p>A retired old man, their son's family, in a comfortable and peaceful Urban residential area.</p></div>	<p><i>Mr. Patel has basic knowledge of smartphone and computers and just uses his smartphone for voice calls, songs and entertainment. He has never used his phone for any other task without external guidance.</i></p>	<div>Challenges</div> <ul style="list-style-type: none">• Often struggles with advanced applications• Has fear of braking device, cannot use device to full potential• Hesitant to engage in e-commerce due to concerns about payment security
 <div>Mrs. Rupa, 79<p>Recently widowed, lives alone in a different city from her daughter's family</p></div>	<p><i>Limited mobility compounds her sense of isolation. Although she tries to stay connected through her smartphone, she struggles with its usage. Her solace comes from listening to bhajans on her Old Saregama Carvaan.</i></p>	<ul style="list-style-type: none">• Struggles a lot with using smartphone• isolated due to their inability to connect with their children and grandchildren digitally.• Has reduced dexterity and mobility

The true measure of any society can be found in how it treats its most vulnerable members – Mahatma Gandhi

GOAL Integrating technology in the lives of elderly population for better accessibility and independence

What do the elders need?

Basic Requirements

A familiar and intuitive device which is **easy to understand and use**

Technology to **augment support** and **enable autonomy** to take care of their health

Emotional requirements

Effective connectivity with friends and family members for their emotional welfare

Prosper a **healthy living environment** keeping in touch with the community and leading to **increased quality of life**

Brainstorming Solutions



Simple and **intuitive interface** with large, easy-to-read text and buttons.



Support for **Multiple Languages** with regional languages and **dialects** to cater to diverse linguistic backgrounds.



Voice-activated controls to allow users to interact with the device naturally, especially for those with limited mobility or vision impairments



Include **emergency response** functionalities, allowing users to call for help or alert caregivers in case of emergencies.



Integrate **video calling** features to facilitate virtual communication with family and friends.



Design the assistant to respond to **emotions and cues, displaying empathy** and understanding to provide emotional support.

💡 SOLUTION

Flipkart 

Saathi

social bot for elder care



AI Enabled Emotional Support Bot

Combining speech, face, space recognition with artificial intelligence to create a humanoid response

Provides medication reminders, schedules appointments, and creates to-do lists.

Learns about his owners over time and performs autonomous tasks and interacts with people

Help older people cope with emotions and reduce stress.



Impact of Social bots

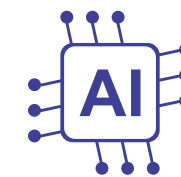
TOKYO REPORT

Japan's Robot Revolution in Senior Care

Being cared for by robots is becoming the method of choice among elderly residents.

In the fiscal year 2021, the medical and nursing care robot market in Japan was estimated at approximately 14.2 billion Japanese yen. The market was forecast to reach around 37.6 billion yen by fiscal 2027, an increase of more than 23 billion yen in six years.

Areas of focus



Better AI

This progress includes **natural language processing**, **emotional recognition**, and human-machine interaction technologies.



Emotional Intelligence

Progress in in reading true emotions and understanding them is essential for creating emotionally responsive robots



Ethical and Social guidelines

Striking a balance between helpful assistance and intrusion will be a significant challenge.

Benefits for stakeholders

Caregivers and Family Members:

- **Peace of mind** knowing their loved ones have **company** when they are not present
- **Facilitates communication and connection** between family members where physical distance separates them.

Businesses (E-commerce, Retail, Customer Service, etc.)

- Provides personalized product recommendations and customer support leading to **increased sales and customer loyalty**.
- Enables market expansion by catering to by previously ignored **demographics** and needs

Overall Society

- Addresses societal challenges, such as **loneliness in the elderly** population and accessibility issues for **individuals with disabilities**, contributing to overall **social well-being**.

Feasibility in 2030



Low-cost models

If costs continue to decrease, it would be more feasible for both individuals and institutions to adopt these technologies.



Openness to technology

Acceptance of technology, especially among the elderly population, and cultural attitudes towards robots and AI can significantly impact feasibility.



Connection to rural India

Improvements in connectivity, especially in rural areas, are essential for the successful implementation of any technology-based solution.

Opportunities for flipkart



Brand Differentiation:

Flipkart can set itself apart from Indian competitors by using cutting edge emotional AI technology showing their top priority towards inclusivity and customer experience.



Social Commerce Integration:

Emotional robots could allow users sharing shopping experiences with friends and followers which drives social engagement, user-generated content, and viral marketing.

Potential in other domains



Healthcare

- Emotional robots can offer companionship and emotional support, especially for long-term care patients
- They can also assist therapists in providing cognitive and behavioral therapies for patients with anxiety, depression, or trauma.



Education

Emotional robots can assist children with special needs, providing customized educational and emotional support.



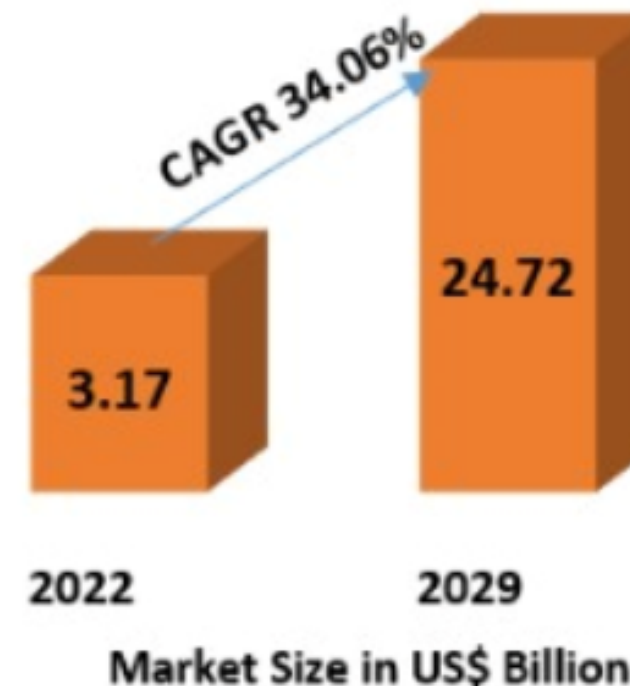
Human Resource

Emotional robots can assist employees with workplace-related issues, offer stress management techniques, and provide resources for work-life balance.

Industry Growth

The market value of Social robots has grown exponentially with new advances of AI especially predicting INDIA as a high value market

Many top companies have heavily invested in the field of social robots. Flipkart should also take the lead in developing the future of human robot interaction.



SUCCESS METRICS

User engagement

- DAU & MAU
- Number of voice commands per day
- Average session duration per week/user
- Number of integrated action per day

User retention

- Number of session duration per week/user

User satisfaction

- Feedback at the end of the day
- Task success rate
- Speech recognition accuracy

Pitfalls		Workaround
Cost	Developing and maintaining sophisticated emotional robots can be expensive which might limit the access to wealthy individuals creating disparities in elderly care	<ul style="list-style-type: none">Invest in research and development to create more affordable emotional robots without compromising quality.Explore public-private partnerships to subsidize costs and make the technology more accessible.
Privacy and data security	Emotional robots collect data to personalize interactions. Ensuring the security of this data is crucial to prevent privacy breaches, identity theft, or unauthorized access to sensitive information.	<ul style="list-style-type: none">Implement robust data encryption and cybersecurity protocols to safeguard user data.Clearly communicate privacy policies and data usage to seniors and their families, ensuring informed consent.
Cognitive and Sensory Limitation	Some elderly individuals might have cognitive or sensory impairments that make it difficult for them to interact effectively with emotional robots, limiting the technology's effectiveness for this population.	<ul style="list-style-type: none">Design emotional robots with simple interfaces and large, easy-to-read displays for seniors with cognitive impairments.Incorporate voice commands and natural language processing to cater to individuals with limited motor skills or visual impairments.
Resistance to New technology	Seniors inherent resistance and lack of trust on new technologies can also adversely affect customer acquisition	<ul style="list-style-type: none">Target the campaign towards the current generation as customers, to buy this product to better take care of their loved ones and stay connected with them