



REVOLUTIONIZING STARTUP TACTICS WITH EMERGING TECHNOLOGIES

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Introduction

- To stay ahead in the competitive startup landscape.
- The role of emerging technologies in transforming traditional business strategies.

Background



Figure 1: Encompass Digital Transformation

Table 1: Different technology with application

Technology	Application
Artificial Intelligence (AI)	Customer service, product development, operational efficiency
Blockchain	Supply chain management, digital identity verification, Decentralized Finance (DeFi)
Internet of Things (IoT)	Smart cities, healthcare, agriculture, predictive analytics, real-time monitoring
Augmented Reality (AR)	Data visualization, employee training, consumer engagement, brand distinctiveness
Virtual Reality (VR)	Interactive gaming environments, virtual product demonstrations
Cybersecurity	Safeguarding resources, client information, reputation, ensuring data privacy

The Role of Emerging Technologies in Startups

The Role of Emerging Technologies

- **Content:**

- Definition and examples of emerging technologies (e.g., AI, IoT, blockchain, AR/VR).
- Importance of adopting these technologies for innovation and growth.

Literature Review

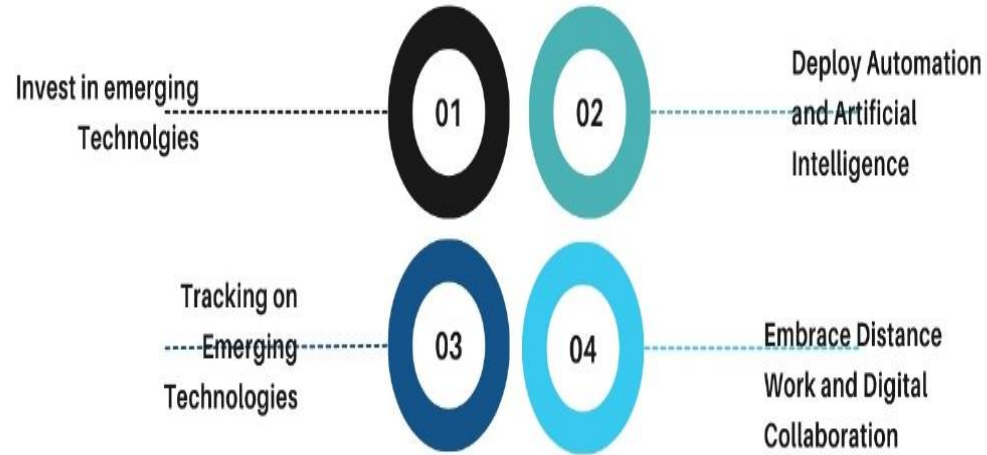


Figure 2: A cyclical process for investing in emerging technologies

Table 2: Features of Different Models

Key Point	Technology	Parameter	Description
Disruptive Innovation	Digital Platforms	Market Share	Disruptive innovation refers to the introduction of new technologies or business models that significantly alter the competitive landscape of an industry.
Business Model Innovation	E-commerce	Revenue Model	Business model innovation involves the creation of new ways to generate value and capture revenue.
Dynamic Capabilities	Cloud Computing	Agility	Dynamic capabilities refer to an organization's ability to adapt and respond to changing market conditions.
Ecosystem Dynamics	IoT	Interconnectivity	Ecosystem dynamics describe the interactions and interdependencies among various actors within a business ecosystem.
Stakeholder Engagement	Social media	Engagement	Stakeholder engagement involves building relationships and fostering dialogue with key stakeholders.
Financial Dependence	Fintech	Funding	Financial dependence refers to an organization's reliance on external sources of funding for growth and innovation.
Digital Transformation	Artificial Intelligence	Automation	Digital transformation involves leveraging digital technologies to streamline operations, enhance customer experiences, and drive innovation.
Open Innovation	Blockchain	Collaboration	Open innovation involves collaborating with external partners, customers, and communities to co-create value.
Platform Economy	Sharing Economy	Scalability	The platform economy refers to the exchange of goods, services, or information facilitated by digital platforms.
Data Analytics	Big Data	Insights	Data analytics involves extracting actionable insights from large and complex datasets.

Key Emerging Technologies

Key Technologies Transforming Startups

- **Content:**

- Artificial Intelligence and Machine Learning
- Internet of Things (IoT)
- Blockchain Technology
- Augmented Reality (AR) and Virtual Reality (VR)
- Brief explanation of each technology.

Objectives & Hypothesis

Five primary objectives

- Firstly, the development of artificial intelligence (AI)
- Secondly, blockchain technology to power applications such as supply chain management, digital identity verification, and Decentralized Finance (DeFi)
- Thirdly IoT (Internet of Things) - business owners can create networks, ecosystems of platforms, sensors, and devices
- Fourth Augmented Reality (AR) and Virtual Reality (VR) technologies
- Finally the digital realm, cybersecurity

Hypothesis

- Encouraging a culture of experimentation - '**test and learn**' approach, where hypotheses are quickly turned into minimum viable products (MVPs) for testing, and feedback is used to refine and improve the idea

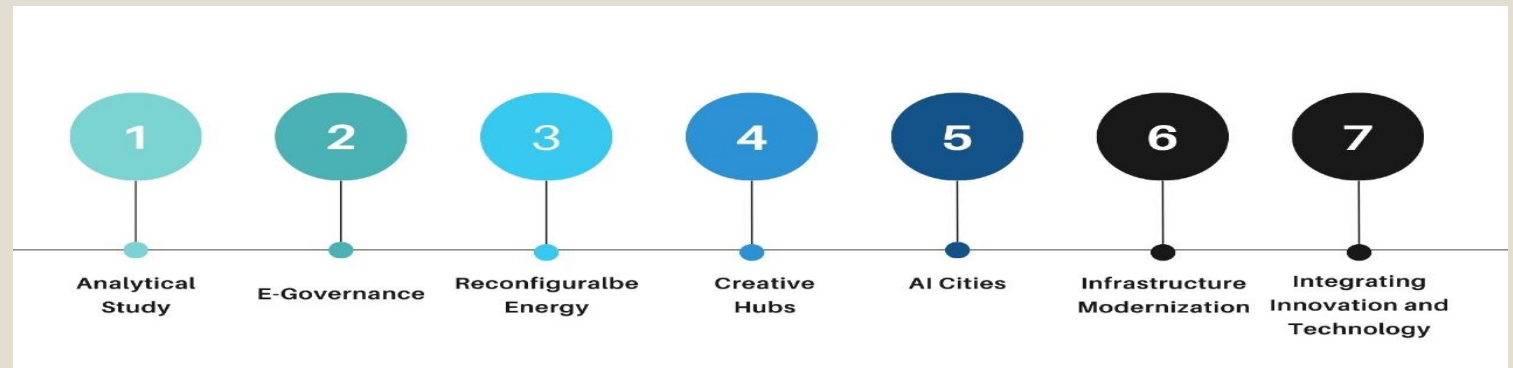


Figure 3: A timeline of infrastructure integration the seven pillars

Case Studies of Successful Implementations

Successful Implementations in Startups

- **Content:**

- Case study examples of startups that have successfully leveraged emerging technologies.
- Highlight specific outcomes and improvements achieved through technology adoption.

Top 10 Strategic IoT Technologies

S. No. 1: Artificial Intelligence (AI):

"Data is the fuel that powers the IoT and the organization's ability to derive meaning from it will define their long-term success."

S. No. 2: Social, Legal, and Ethical IoT:

These include ownership of data and the deductions made from it, algorithmic bias, privacy, and compliance with regulations such as the General Data Protection Regulation.

"Successful deployment of an IoT solution demands that it's not just technically effective but also socially acceptable."

S. No. 3: Infonomics and Data Broking:

The theory of infonomics takes the monetization of data further by seeing it as a strategic business asset to be recorded in the company accounts. By 2025, the buying and selling of IoT data will become an essential part of many IoT systems.

Top 10 Strategic IoT Technologies (cont'd)

S. No. 4: The Shift from Intelligent Edge to Intelligent Mesh:

The shift from centralized and cloud-to-edge architectures is well underway in the IoT space. These mesh architectures will enable more flexible, intelligent, and responsive IoT systems — although often at the cost of additional complexities.

S. No. 5: IoT Governance:

As the IoT continues to expand, the need for a governance framework that ensures appropriate behaviour in the creation, storage, use, and deletion of information related to IoT projects will become increasingly important.

S. No. 6: Sensor Innovation:

The sensor market will evolve continuously through 2025. New sensors will enable a wider range of situations and events to be detected.

Top 10 Strategic IoT Technologies(cont'd)

S. No. 7: Trusted Hardware and Operating System:

'.. by 2025, we expect to see the deployment of hardware and software combinations that together create more trustworthy and secure IoT systems...'

S. No. 8: Novel IoT User Experiences:

User experience is driven by 4 factors: new sensors, new algorithms, new experience architectures and context, and socially aware experiences.

S. No. 9: Silicon Chip Innovation:

By 2025, it's expected that new special-purpose chips will reduce the power consumption required to run IoT devices.

S. No. 10: New Wireless Networking Technologies for IoT:

IoT networking involves balancing a set of competing requirements. In particular, they should explore 5G, the forthcoming generation of low earth orbit satellites, and backscatter networks.

Findings & Conclusion

- Prioritizing customer-centric innovation
- Cutthroat business world of today, entrepreneurs need to embrace innovation and take advantage of major technological advances.

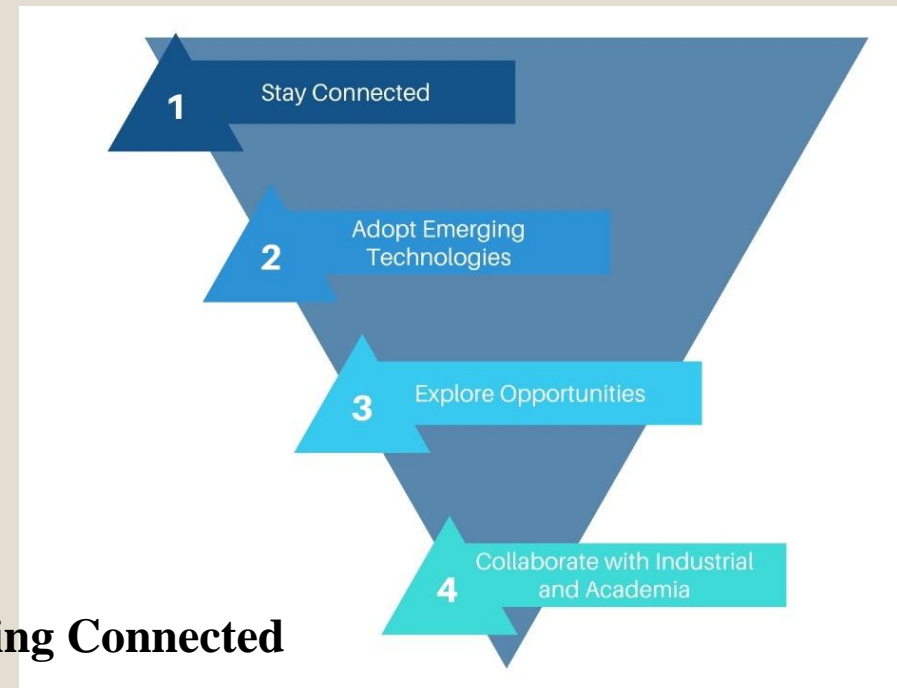


Figure 4: Steps to Staying Connected

Recommendation

- Startups will need to grapple with issues such as **data privacy and security**, **algorithmic bias**, and the **ethical implications of AI**.
- The core values of the startup mindset - **the passion to create**, **the courage to innovate**, and **the hunger to learn**.

Prediction is a key ingredient in decision-making under uncertainty. — Prediction Machines book.



IoT-AI

- IoT is provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.
- “Information is the oil of the 21st century, and analytics is the combustion engine.”

Introduction – cont'd

- IoT is a concept of connecting any device with an on and off switch to the Internet (and/or to each other).
- It is a giant network of connected "things" (which also includes people).
- The relationship will be between people-people, people-things, and things-things.

Why IOT-AI?

- Organizations in a *variety of industries* are using IoT to operate more efficiently, better understand customers to deliver enhanced customer service, improve decision-making and increase the value of the business.

IoT-AI ecosystem

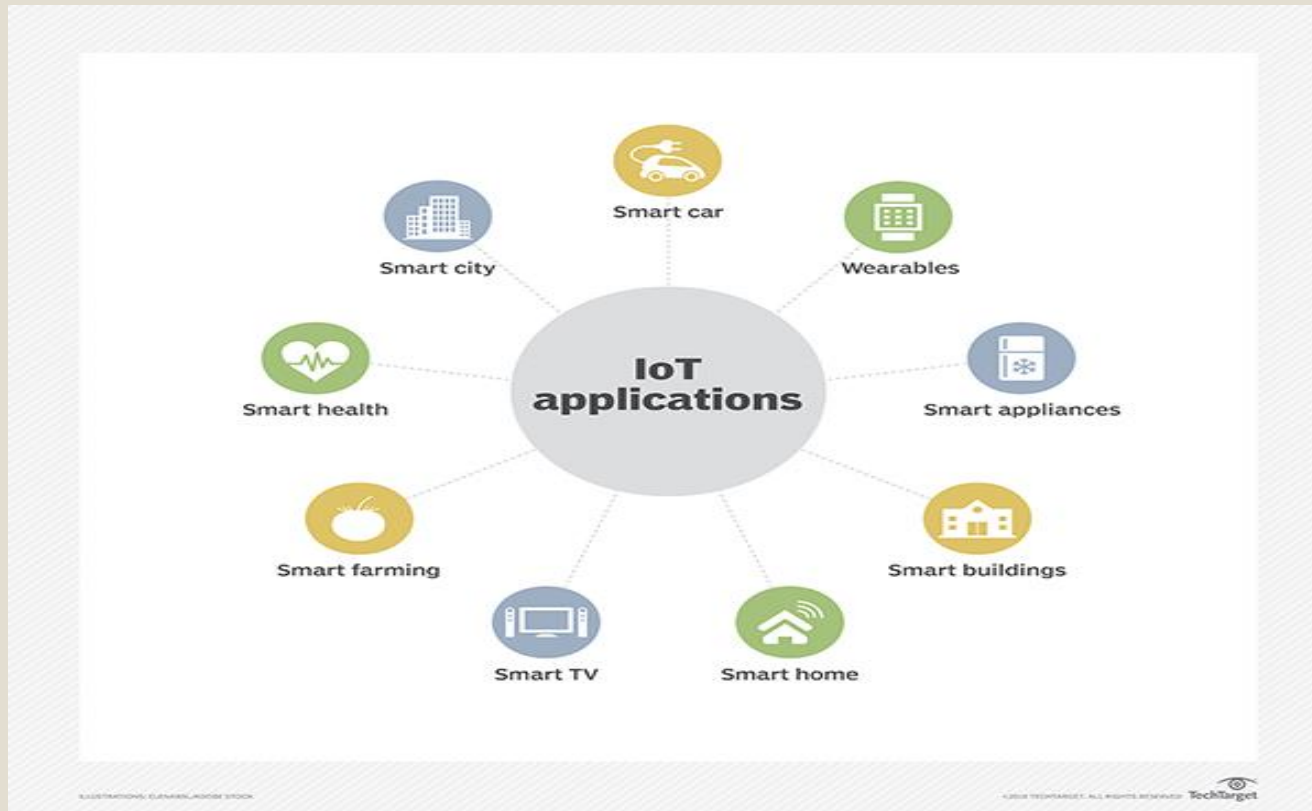
- An IoT-AI ecosystem consists of web-enabled smart devices that use embedded processors, sensors and communication hardware to collect, send and act on data they acquire from their environments.
- IoT-AI devices share the sensor data they collect by connecting to an IoT gateway or other edge device where data is either sent to the cloud to be analyzed or analyzed locally.

Benefits of AI in IoT

IoT offers a number of benefits to organizations, enabling them to:

1. Monitor their overall business processes;
2. Improve the customer experience;
3. Save time and money;
4. Enhance employee productivity;
5. Integrate and adapt business models;
6. Make better business decisions; and
7. Generate more revenue.

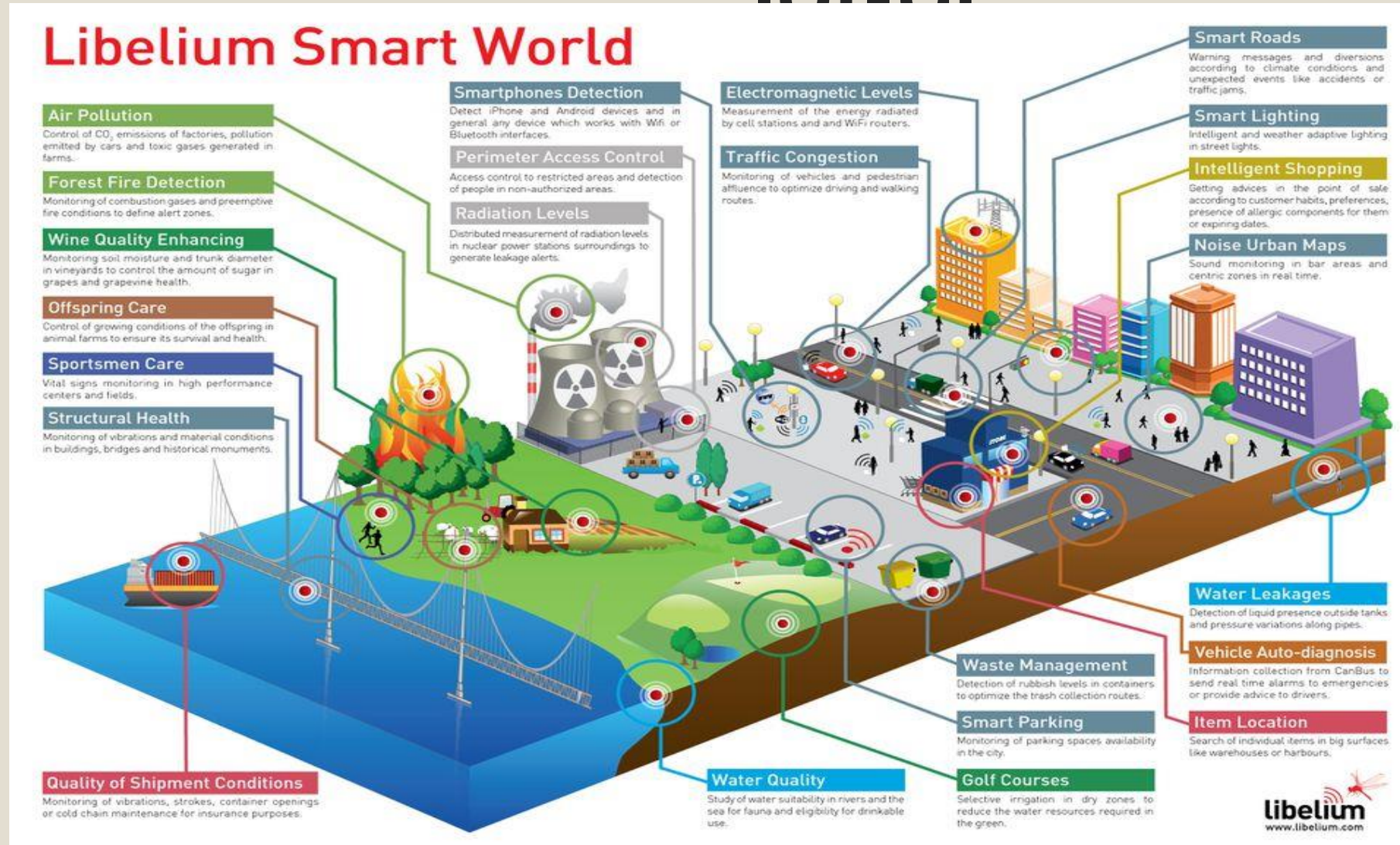
Consumer and enterprise IoT applications



Source:

<https://internetofthingsagenda.techtarget.com/definition/Internet-of-Things-IoT>

The smart world of the future – using IoT-ai



Source:
<https://www.forbes.com/sites/jacobmorgan/2014/05/13/simple-explanation-internet-things-that-anyone-can-understand/#ef2433f1d091>

Thank You