

# A study on the success of startups in industry 4.0 framework

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### Abstract:

Entrepreneurship speaks about one's risk taking ability, creation of a structure and handling of a business in the dynamic world. In India there is immense scope for growth of entrepreneurship and start-ups. Start-up is conversion of a good business idea into effective business model and application of business skills in order to convert the same into a profitable business. Start-ups are always looking for huge growth potential and success but an entrepreneur has to face immense challenges to convert the business idea into profit making business. Industry 4.0 provides a platform for the start-ups to face challenges by catering to the various customer needs and provides the scope to grow rapidly and successfully. This research paper reflects the scope for growth of start-ups with regards to industry 4.0 and also throws a light on the various successful start-ups in industry 4.0 framework.

**Keywords:** Start-ups, Entrepreneurship, Industry 4.0, Success.

## 1. Introduction:

### 1.1 Startups

Entrepreneurship is the trending activity, which creates a lot of enthusiasm among youngsters and talented people to showcase their business skills and build their own brands. However to begin with the idea of startup and be a successful entrepreneur, it is very much necessary to have the required platform to align and reach out to the customer's requirements. Any business idea to become successful requires entrepreneurial skills to explore business opportunities, procure required resources, diligent planning and implementation. Along with these, one needs to view challenges involved in the selected business venture. The word 'Start-up' itself means newly initiated business idea aims at establishing new market or products that matches the current business trends. A startup can be a newly formed company that works on new business model or restructure an existing model. Start-up management is nothing but working out a business idea in tune with the current trends in business line.

## 1.2 Industry 4.0

Industry 4.0 signifies current trend of automation and data exchange in manufacturing technologies. It includes cyber-physical systems, the Internet of things, cloud computing and cognitive computing. Industry 4.0 is commonly referred to as the fourth industrial revolution. This revolution focuses merely on autonomous systems fuelled by data and machine learning.

## 1.3 Start-ups in industry 4.0 framework

Conversion of an innovative business idea while attempting to tap maximum profit potential involves huge effort as well as the required platform that caters to the needs of current trends in business. A start-up is always considered to be having full growth potential but at the same time it bears risk of complete failure without proper planning and focus. Start-ups in India are on the up swing with the benefits rendered by industry 4.0 in terms of the following benefits:

- Improved productivity
- Reduced cost
- Collaborative working
- High customer affinity
- Scope for innovation
- Better efficiency

## 2. Research Methodology

This research paper attempts to study the available literature and information and it is based on the secondary data, which has been pooled through books, websites, newspapers, research papers etc. After observation and analysis, the researcher is providing a light on the successful start-ups in industry 4.0 framework.

## 3. Objectives:

The study is based on following objectives:

- 1) To understand the success rates of startups.
- 2) To examine the scope of startups with regards to industry 4.0.
- 3) To suggest the opportunities available for startups in industry 4.0 framework.

## 4. Review of Literature:

- Aditi Narayanan, September 6, 2017: Zinnov opines that by 2020, the industrial IoT segment will become so extensive that it will spread to include almost every segment, be it business, technology or even agriculture.. With startups entering niche technology areas, bigger organizations need to work briskly, and not just remain consumers but also become

creators and innovators to remain relevant contenders. The dominance of startups is expected to grow as industrial IoT startups by a forecast which revealed that the CAGR will grow by 30-35% by 2020, thereby providing dreadful competition to the inhabitants

- Helmuth Ludwig, May 1, 2018: The manufacturing world and the digital world are converging to digitally plan and implement the lifecycle of products and production processes.
- Vishnu Murali, May 1, 2018: Following are the benefits of industry 4.0.
  - Integration of systems and department functions
  - Seamless data transfer between various stake holders
  - IoT and cloud integration
  - The edge computing has provided service companies with data management security and transmission.
  - 3D printing has enabled customised products (Eli Tidhar)
- Eli Tidhar, Aug 1, 2018: Following are the three horizons of industry 4.0.
  - Process Optimization
  - Process flow and quality
  - New business models

Regardless of the horizon in which implementation of a business model falls, industry 4.0 can have a strong impact and can be a booster to several performance indicators.

- Dragan Vuksanovic, Singidunum University: Industry 4.0 is the revolution which helps companies to produce cost effective products and provide qualitative services. It contributes simple application, optimised processes, need based installation and high degree of scalability. The market demand for the products made with out-dated technology will totally come down and production processes will shut down. Thus it is high time for the start-ups to upgrade on the technology and automation.
- Grand Thornton report: Industry 4.0 revolution will be much faster and different from previous ones in view of high networking and global supply chains. This will also enable information to flow not only from manufacturer to product, but between producers, products and, most importantly customers. The ability to utilise the advantages of the industry and embracing trained workforce and sound manufacturing systems lies in the hands of start-ups who are reaching towards the road of success.

## 5. Scope and benefits of industry 4.0:

- Savings in inventory cost
- Accelerated production line
- Increase in labour productivity
- Increased ability to predict outcomes
- Optimization of operations and predictive maintenance

## The scope of the leading industry 4.0 Start ups companies:

### ➤ 3D Scanner in High Demand

The Berlin-based startup company called bots pot which is about four years is already a market leader for photogrammetric 3D-scanner technology. Customers from various streams – including car manufacturers, electricity firms, and healthcare organizations are struggling to get their hands on “Opta One”. 64 photo sensors that is a part of the sensor automatically align themselves to the object and the cameras then tilt to the required angle and zoom in. In this manner, the scanner captures extremely high-resolution image data for the 3D printer in the blink of an eye.

### ➤ A Hot Solution

VEN-TEC Solutions have introduced a mobile powder-coating system. Melted polymer particles are applied to a pre-heated surface, combining to form a thermoplastic polymer coating. This process is suitable for a number of products, including battery compartments, concrete water tanks, industrial flooring, piping, and wind turbines.

### ➤ A Live View of the Delivery Chain

VIRTENIO offers a one-stop solution for monitoring – complete with sensor cube, GPRS gateway, and web analytics solutions.

### ➤ B2B Buying Made Easy

Fabrikado has offered digital communication to metal component manufacturing, simplifying the entire procurement process. Companies upload their CAD drawing for a component to the online B2B platform.

## List of successful companies in industry 4.0

Company	Domain
Microsoft, GE	Industrial IoT
<a href="#">Uptake</a>	Analytics
<b>NVidia</b>	Microchipa
<b>HMS</b>	Connectivity Hardware
<b>Accenture</b>	Systems Integrators
<b>Cognex</b>	Connected Machine Vision
<b>Upskill</b>	Augmented and virtual reality

## 6. Conclusion:

The reflection on the scope of start-ups in the research paper in view of the industry 4.0 confirms that there is an ocean of opportunity for start-ups to take a leap of faith and plunge to industry 4.0 revolution. The start-ups can look forward to explore opportunities in industry 4.0 and can focus to make new designs or customer oriented approach rather than conventional designs. As industry 4.0 progresses, there will be more scope for qualitative and actionable data collection technology. Hence start-ups can successfully meet up to the customer expectations speedily and qualitatively. Robotics, Simulation, Industrial IoT Platforms (IIoT), and Artificial Intelligence alike have a massive influence and moulds the future of factories. All of these emerging technologies develop swiftly offering early-movers willing to co-innovate with emerging startups the opportunity to gain a competitive advantage.

Industry 4.0 is new industrial revolution of the 21st century, which enables companies to create “smarter” products and services by reducing costs and increasing efficiency, where the human factor is crucial for the application and the work is based on the existing literature in the area.

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