



drishti

Policy Watch: Robotics and Automation in India

 drishtias.com/printpdf/policy-watch-robotics-and-automation-in-india



[Watch Video At:](#)

<https://youtu.be/q6SP1qbulnc>

The **All India Council for Robotics and Automation (AICRA)** has announced the launch of a new initiative the '**Tech Startup Program**'. It will act as incubation environment for startups and other early stage adopters working on **Robotics and Robotics Process Automation (RPA)** in India.

RPA is a **technology capability** that allows the streamlining of operations in the enterprises. It also allows them to automate their mundane and tedious processes thereby **enabling users to enhance their productivity** through higher value adding tasks.

All India Council for Robotics and Automation

- It is a **not-for-profit organization** established in **2014**.
- It sets up **standards in robotics & automation and education industry**, helping organizations and professionals to solve difficult technical problems, while enhancing their leadership and personal career capabilities.
- It is engaged in various activities and has launched several programs to **promote and build an ecosystem for robotics and automation in India**.

Important Highlights of the Tech Startup Program

- Recently, AICRA in one of its **B2C (Business-to-Consumer) Events** in **Technoxian 2019**, has launched the Tech Startup Program which aims to give milage to all new companies and newcomers wishing for technological innovations.
- Tech Startup Program provides help with these basic necessities for a startup-
 - **Administrative Support:** It has created a system which has lots of members at different vertical levels like corporate members, educationist members, B2C members enabling startups to connect to the direct target group.
 - **Financial Support:** It has collaborated with lot of venture capitalists to help startups with the fundraising. Apart from this, there can be different levels of understandings between AICRA and the companies in which AICRA can be a stakeholder of a company or give loans to it, opening up multiple options.
 - **Technological Support:** It provides technological guidance and support to startups with the help of domain experts and industry partner companies which provide all kinds of technology and infrastructure knowledge and support.
- It **helps the innovators with pre-fundraising issues** like-
 - **Doing away with the misconceptions** and **helping newcomers realise their ideas** and the stage of it.
 - **Identifying the potential** of the idea.
 - **Checking technological, documentation or regulatory requirements** and **finding solutions**.
 - **Materialising the idea for utilisation and commercialisation**.

Technoxian

- It is an **edutech expo** organised by **AICRA**.
- It provides a **global opportunity** to participate in different competitions related to innovation, robotics, automation, and many other fascinating challenge-based engineering competitions.

Difference between RPA and the Traditional Automation

- **Programmed machinery** executes the work in a **static way without responding or adapting** to the changing environment.

- RPA, on the other hand are **adaptive** to the changing environment and are very **efficient, increase productivity and are safe** to work with.

Lifestyle of the RPA Technology

- It is **not a defined system** and is yet **evolving** in nature.
- **New and emerging ideas like artificial learning, deep learning or better operating systems can be added to it** after a few years of progress to improve the performance further.

RPA: Here to help people or annihilate their jobs?

- Introduction of new technologies and automation create **new opportunities and jobs for various people instead of resulting in job losses.**
- Innovation is the need of the time and it helps in **improving productivity, optimising the process** and also helps in **safe working.**
- Robotics and automation **diversify the understanding of the technology**, give an idea about the overall improvement in process requirements.
- It gives and **increases the technologically enhanced knowledge** instead of basic knowledge.

How will RPA streamline the education system?

- It will help students **understand the technology and then deliver education** with the help of it.
- AICRA is **supporting and associating with colleges** especially engineering colleges, providing them with content and making labs for them where they can learn and innovate some product, process or service so that companies can **save the training time and efforts after introducing automation.**
- Few engineering colleges and universities have already **started teaching Artificial Intelligence, Machine Learning and Deep Science etc.**
- AICRA has launched another concept called **Global Innovation Centre (GIC)** so in India **five innovation centres** would be set up. First one has been set up in **Bangalore.**
- The concept of GIC will be to **set up full fledged labs** within college or university premises wherein selected set of **students and faculty will be working together** to innovate and develop new products.
- Later on, **similar products can be commercialised** so there will be an acceleration as well.
- Educationists and the industries have to come on the same platform to **bring synergy and abridge the market gap.**

Global Innovation Centre

- **DTF Ventures, the Indian Venture Developer and Aggregator** has collaborated with **AICRA** to **create, promote and sustain Technology Based Innovation Center** in India.
- This Innovation Center will comprise of **Innovation Lab, Incubation Center and Accelerator** and lay down innovation as an enabler for inclusive growth and entrepreneurial excellence with special emphasis on ethical business management practices for the students and entrepreneurs of the country.

What are the growth prospects of RPA in India?

- India has **just started adopting** the RPA at this stage. Few **manufacturing** industries, parts of the **automotive** industry and **pharmaceutical** companies have adopted the automation.
- Automation is coming up **largely in consumers manufacturing** now because it needs high level of production and efficiency as manually managing the huge amounts of machinery is not easy.
- To meet the market requirement companies need to have **high speed up and optimized processes** at their manufacturing sites.
- RPA helps the manufacturing units to **increase their productivity by almost 30-40% without reducing the manpower** which is trained to work with automated processes.
- The **fast Electric Vehicle charging system is being developed in India** with the help of automation. Most of the Electric Vehicle charging systems are very slow and limited to two and three wheelers only which decrease the demand of electric vehicles.

Example

- **Tata and Mahindra** have introduced **fast charging four wheelers** but they take upto 3-4 hours to charge. However, it needs to be reduced to 30-40 minutes to make it attractive and usable for customers.
- The whole charging system has been automated. Indian technicians have introduced the **patented super cooling system for batteries** which will sense the cooling and temperature of the batteries and guide the charging duration and charging current. The entire process has been automatised with the full charging time of 60-65 minutes. A **prototype** has been tested and tried which will be commercialised after it is validated post testing period.

Funding Sources

- Recently, the Finance minister of india has announced that **Corporate Social Responsibility (CSR) funds can be used to set up incubation centres and GICs.**

- AICRA has a different model in which it **collaborates with large companies which have huge and unused stocks available**. Indian institutes can **buy targeted products** from such companies and **pay back in EMIs (product based financing)** instead of straight away paying the money upfront.
- So in a low cost model, more GICs and other concepts like it can be set up with the **help from CSR funds** and **collaborative approach towards the resourceful companies**.

Challenges with RPA

- **Lack of awareness:** In India, people hardly know about RPA. The terms **Artificial Intelligence (AI)** and **Machine Learning (ML)** are rarely used and it is in initial phase wherever it is used with **minimum knowledge** about it.
- **Lack of experts: Technological institutes lack experts** who can deliver on the technology.
- **Lack of institutionalised efforts: Education system** also does not have RPA technology and even the professors and teachers are not aware about the systems.
AICRA recently tied up with UiPath, one of the leading companies worldwide, to find ways to make the technology available to the Indian educationists for content development and then delivering the material to the students to prepare them for the future jobs in RPA.
- **Fear of job loss:** A change in manufacturing cycle or the manufacturing environment of industries always faces **a huge resistance from the employees** because of the fear of getting replaced which happens also, sometimes.

UiPath: It was founded in **2005 in Bucharest, Romania** with the **goal to produce automation libraries**.

Solutions

- Before RPA is implemented, there should be **educational in-house programs to educate the technical teams** and other employees.
- **Making employees aware about the importance of RPA** for their betterment and improvement in manufacturing cycle and to also make them comfortable about the technological processes.
- RPA can be utilised by **focusing on the process of building up automation** with the help of the people. **Once it is implemented** in one of the systems, the gaps from **other systems can be filled** for future requirements.
- RPA is **not limited to one particular industry** but can be utilised across the industries.

Way Forward

- Automation is the need of the hour to **enhance efficiency, productivity and optimization** across industries and sectors.
- An ecosystem which provides for knowledge and information, funding, technological and legal support by a team which is fully dedicated to it, covering all the aspects is needed to further fuel the growth in the entrepreneurship spirit and the startups.
- As India is already making some progress in the technological field and a lot of **international and multinational companies are looking to invest and collaborate with India** so it is a big opportunity for India which should be encashed fastly.