



IIT ROORKEE



NPTEL ONLINE
CERTIFICATION COURSE

Innovation, Business Models and Entrepreneurship

Technology Innovation Process

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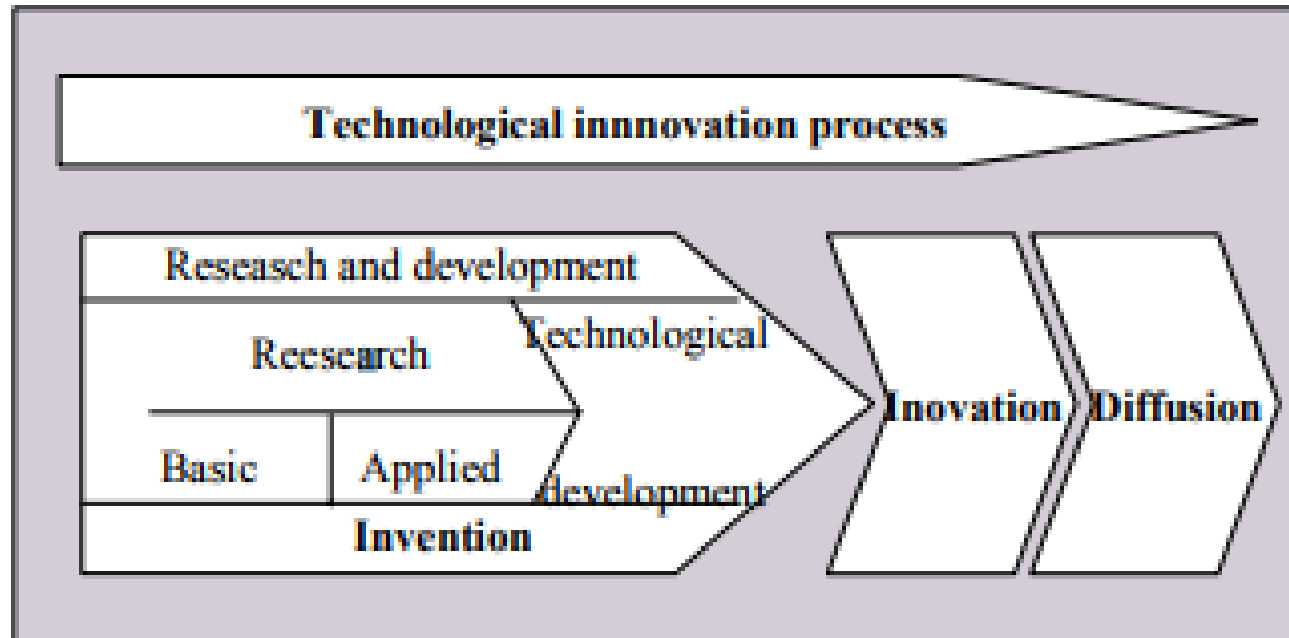
| Scientific Invention | Technological Innovation |
|--|---|
| New idea or concept generated by R & D | When invention is transformed into a socially usable product. |
| Experimental and Theoretical Physics (Faraday, Maxwell, Hertz) | Radio (Marconi 1896-1897-1902(Age of Transatlantic wireless communication)) |

- Technological Innovation is a complex socioeconomic and technological process which often extends over several decades or longer, requiring substantial financial investment.

Technological Innovation Process

It is sequence of activities by which technical knowledge is translated into a physical reality and becomes used on a scale having substantial societal impact.





BRIGHT's 8 stage process

Stage 1

The innovation begins in one or both of two ways. One is by suggestion and/or discovery . Another way is by the perception of an environmental market need or opportunity.



BRIGHT's 8 stage process

Stage 2

Synthesis of existing knowledge and techniques to provide the theoretical basis for the technical concept. This synthesis usually occurs after considerable trial and error.

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Stage 3

The verification of the theory or design concept.



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Stage 4

The laboratory demonstration of the applicability of the concept, such as the development of the “breadboard” model in electronics.

BRIGHT's 8 stage process

Stage 5

Alternative versions of the concept are evaluated and developed to be defined as the full scale approach.

At this stage, a prototype is developed and subjected to field trial.

BRIGHT's 8 stage process

Stage 6

The commercial introduction or initial operational use of innovation.



BRIGHT's 8 stage process

Stage 7

The widespread adoption of the innovation when its scale and scope of usage are sufficient to generate substantial cash flows in the producing enterprises and significant societal impact.

BRIGHT's 8 stage process

Stage 8

Proliferation, when either the generic product or the generic technology is adapted for use in newly defined markets.

e.g. radar equipment to detect speeding motorists
and microwave technology in cooking ovens

Thank You

