

Overview of IPR and National Innovation System in India



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Shifting Paradigm of Economy

- *19th Century- Agrarian Economy*
- *20th Century- Industrial Economy*
- *21st Century- Knowledge Based Economy*

PARADIGM SHIFT THROUGH INNOVATIONS





सत्यमेव जयते
Government of India

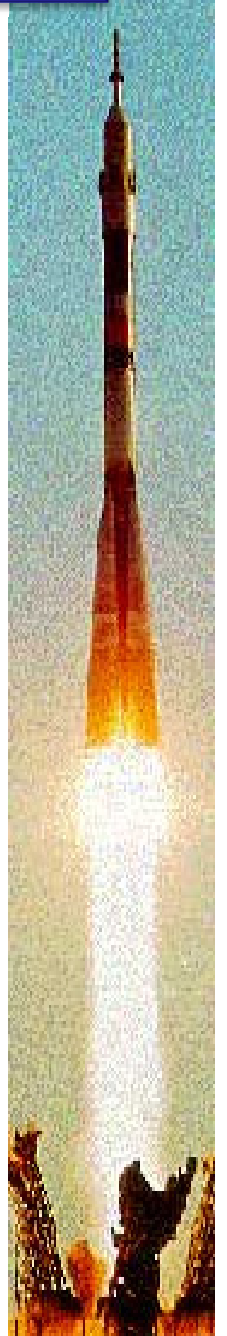
“Decade of Innovation”

4th June 2009

Indian Science, Technology and Innovation (STI) Policy 2013

The guiding vision of optimistic Indian STI enterprise is to accelerate the pace of discovery and delivery of science-led solutions for faster, sustainable and inclusive growth.

- Manufacturing & Services are leading the way
- World class service and R&D centre for NT, BT & IT
- Growing externalization of the economy
- Global manufacturing hub
- High skill-level in work force
- Only third world country having own remote sensing satellite



INDIA

- Contribution of sectors: agriculture: 17.2%, industry: 26.4%, services: 56.4% (2011.)
- Labour force – 48.76 crores
- Labour distribution -agriculture: 52%, industry: 14%, services: 34%
- MSME Contribution ; Manufacturing - 40 %, Export - 45 %, GDP including all – more than 8 %

Global Competitiveness: India

Global competitiveness: Innovation Capacity Components Index

Country	Innovation Capacity Index		Quality of scientific research institutions		University-industry research collaboration		Availability of scientists & engineers		Utility patents (per million of people)		Public procurement of advanced technology	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Brazil	27	4.0	43	5.13	50	3.6	57	4.4	58	0.5	84	3.4
China	25	4.2	37	5.12	23	4.5	52	4.5	54	0.6	20	4.2
India	35	3.8	27	5.1	45	3.6	3	5.7	57	0.5	88	3.4
Japan	2	5.9	15	5.4	21	4.6	2	5.9	3	260	42	3.9
South Korea	9	5.3	14	5.5	12	5.1	19	5.1	7	131	2	5.1
United Kingdom	14	14.0	7	5.7	9	5.1	32	4.8	18	55	32	4.0
United States	6	5.5	1	6.3	1	5.8	6	5.5	1	262	4	4.9

Note: Rank refers to the economy's global rank on each indicator among 134 economies. Scores range from 1, low, to 7 highest, except for utility patents, where the score shows the number of patents per million people.

Source: WEF 2008.

IP Granted in India till 2012-13



Year	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13 (up to 7 th May 2013)
Patent	7359	15316	16061	6168	7509	4433	4316
Designs	4250	4928	4772	6025	9206	6590	7963
Trade Marks	10936 1	10085 7	102257	67490	115472	51765	46542
GI	3	31	45	14	29	23	21

Source: DIPP, Govt of India

Intellectual

- intellect
- intangible

Property

- tangible
- does not diminish with use

Rights

- monopoly right
- legal domain
- role of state

1. Industrial Property (functional commercial innovations)

✓ Patent, Design, TM, GI, SICLD and Trade Secret

2. Artistic and Literary Property

✓ Copyrights

3. *Sui generis* systems

✓ PPV &FR, SICLD

Fully TRIPs Compliance

Characteristics of IPRs

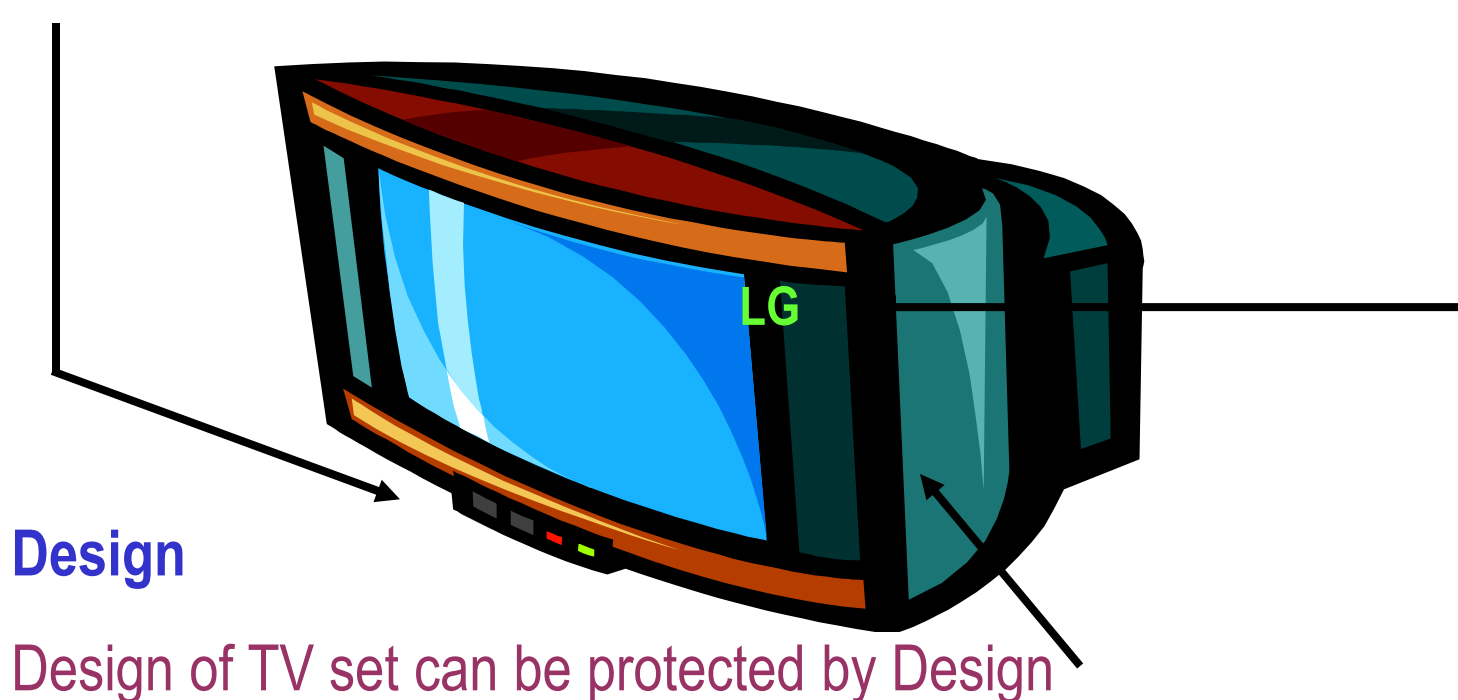
- *Legal rights*
- *Limited in time*
- *Territorial in application*
- ✓ Rights do not exist on physical object resulting from the idea, but instead to the intellectual creation as such
- ✓ Rights granted are essentially negative

Patent

An invention on remote control mechanism can be protected by Patent

Trade Mark

Trade Mark “LG” can be protected by Trade Mark





Gillette Mach3

35 Patents

2-3 Design

2-3 Copyright

Gillette Mach3 - One product, 35 patents

AGRICULTURAL GOODS



**DARJEELING
TEA**



Assam Tea



KANGRA TEA



SAREES



KANCHEEPURAM SILK



POCHAMPALLI IKAT



KOTA DORIA



MADURAI SUNGUDI

Kotpad Saree

KOPAD SAREE



**MYSORE
SILK**



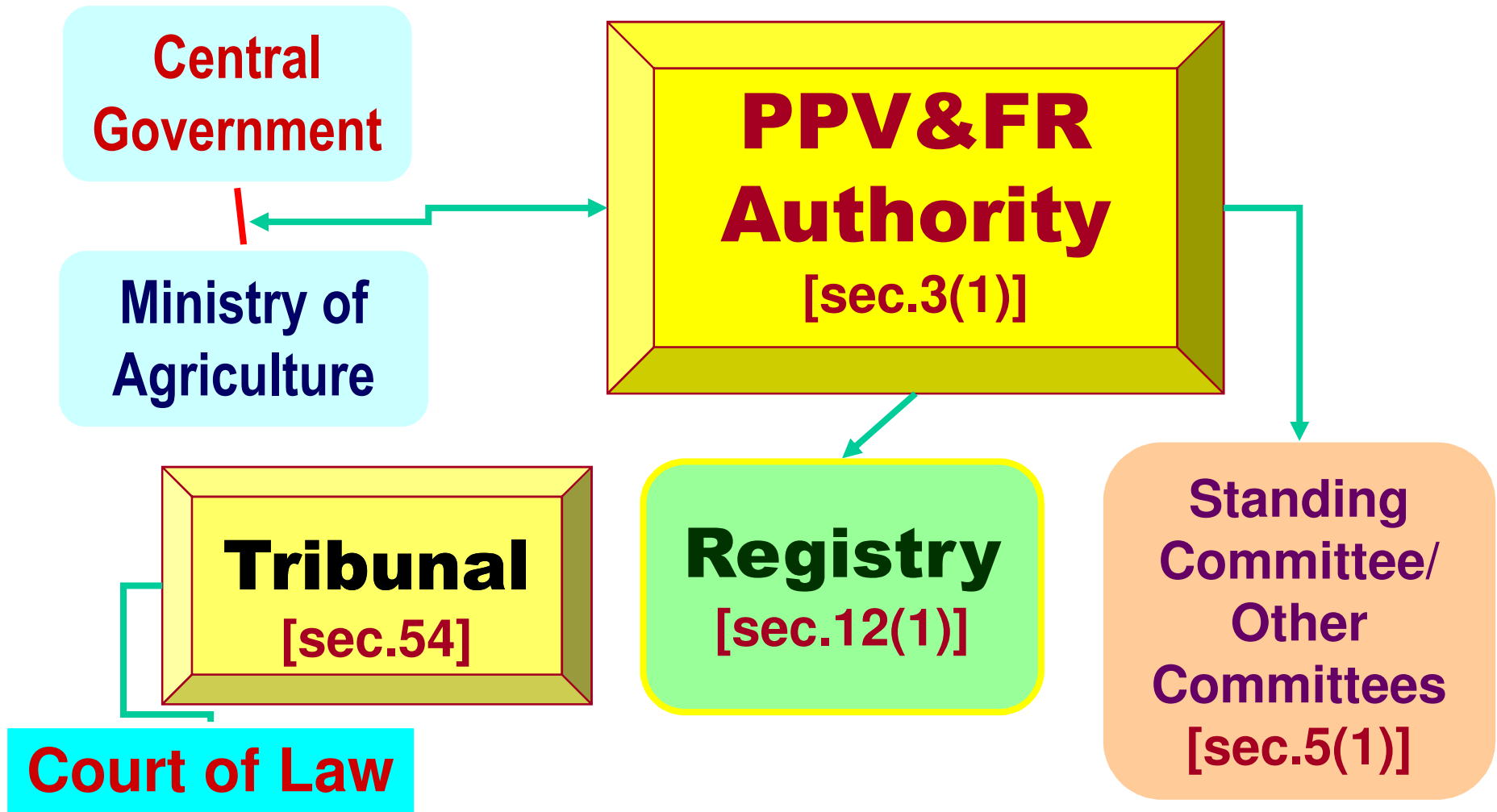
CHANDRI SAREES

PATENT vis-à-vis PVP

- **Patents protect specific inventions**
- **Must be new, inventive (non-obvious), and useful (industrially applicable) products or processes**
- **Need not to exist physically**
- **Less than 1 in 10 patents are exploited commercially**

- **PVP protects specific plant varieties**
- **Varieties should be New; and Distinct, Uniform & Stable (DUS)**
- **Seed of protected varieties is mostly ready for marketing**
- **Most of the protected varieties are commercialized**

Administration/Enforcement of PPV&FRA



The Indian sui generis PPV&FR Law



- **Protection of FR *vis-à-vis* TRIPS Art. 7 (Objectives)**
 - **Social and economic welfare**
 - **Balance of rights and obligations**
- **Protection of extant varieties & FR *vis-à-vis* TRIPS Art. 70.4**
 - **Recognition of significant investment made in the**
 - **Development of extant varieties**
 - **Conscious selections made by generations of farmers in the development of farmer varieties and genetic resources of potential value for present and future breeding programmes**

Plant Variety Authority

Visit: <http://www.plantauthority.gov.in> Email: plantauthority@gmail.com

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Ministry of Agriculture
New Delhi, INDIA



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PROTECTION OF PLANT VARIETIES AND FARMERS' RIGHTS AUTHORITY, INDIA

ABOUT THE PPV&FR AUTHORITY, INDIA

In order to provide for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants it has been considered necessary to recognize and protect the rights of the farmers

in respect of their contribution made at any time in connection



[DUS Centres](#)

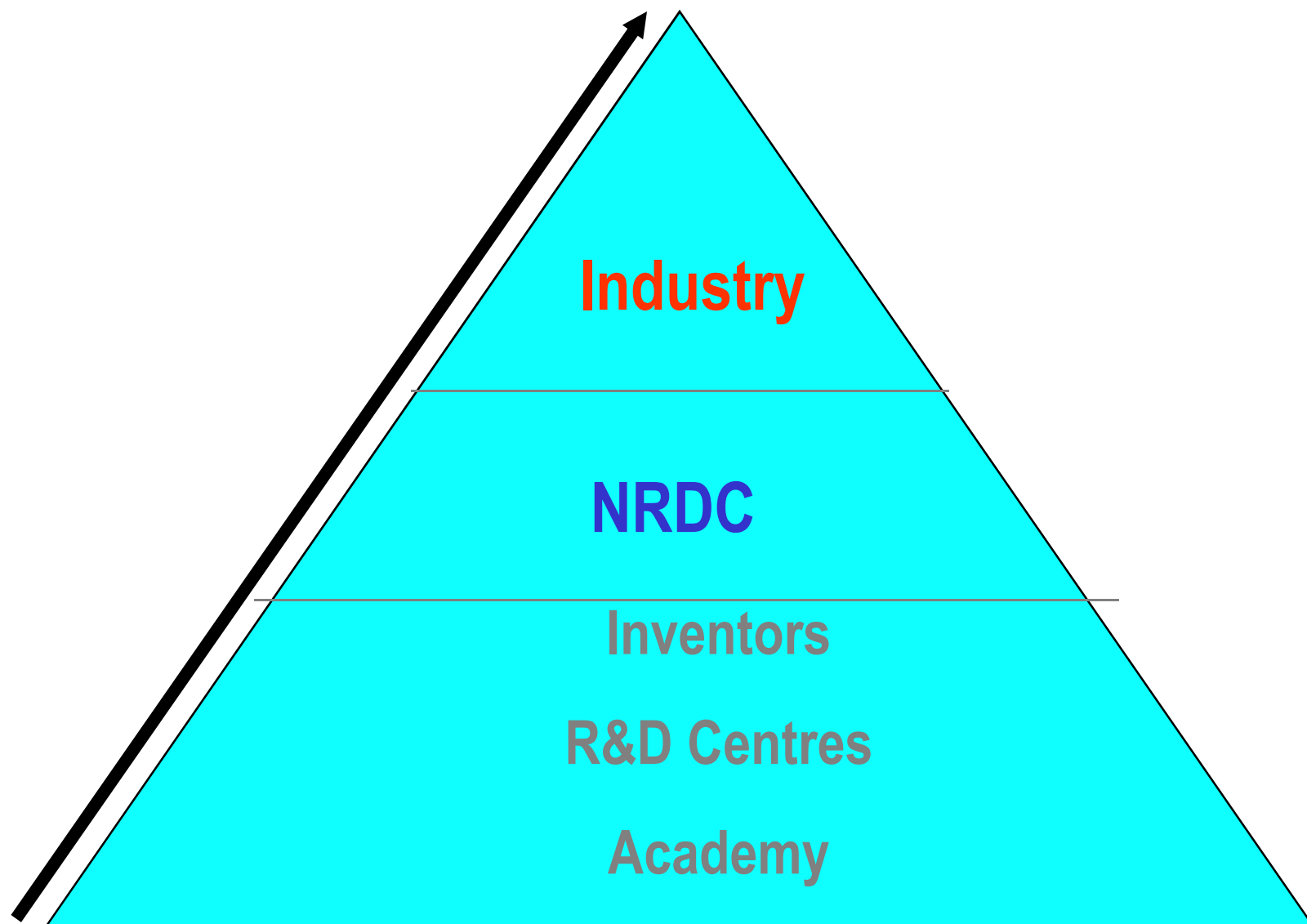
DUS centres identified for each crop.

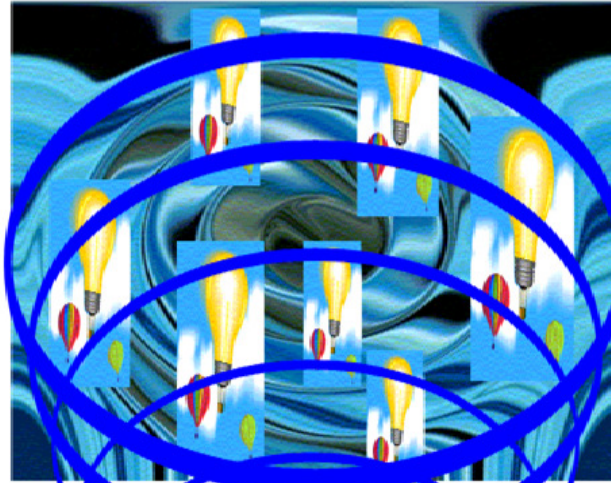
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National Guidelines for the Conduct of Tests for



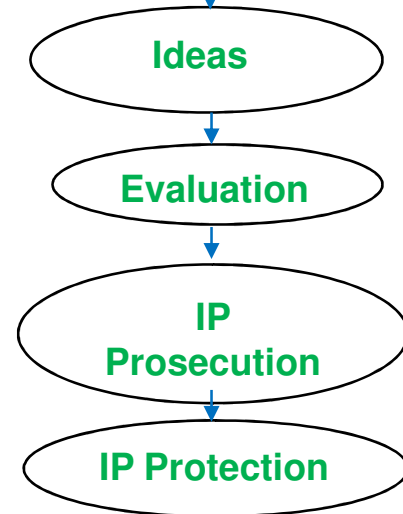
NRDC



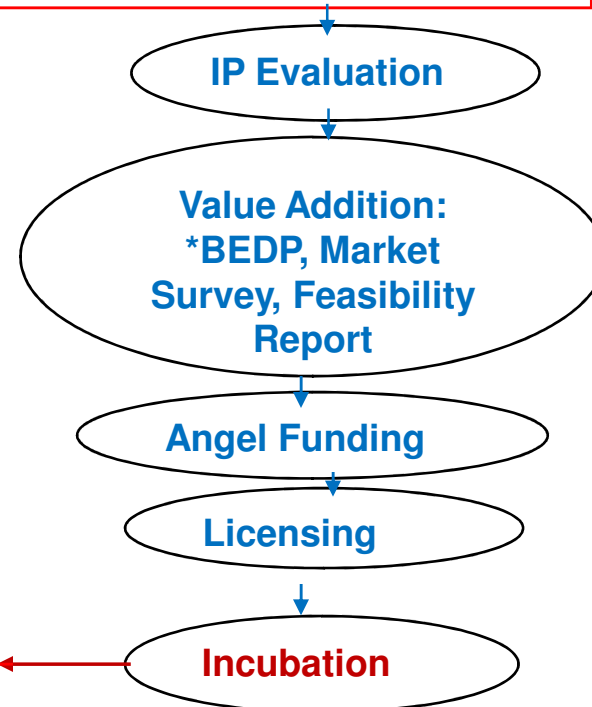


Value Creation through Innovation
(Entrepreneurship)

Capturing & Creating Opportunities to Protect & Nurture IP



Commercialization of IP



*BEDP-Basic Engineering Design Package

Intellectual Property

Intellectual Property Management

- ✓ Protecting & Leveraging Intellectual Property through enhanced patent & licensing initiatives

Financial Assistance for Patenting

- ✓ National Patent Protection Scheme
- ✓ Foreign Patent Protection Scheme

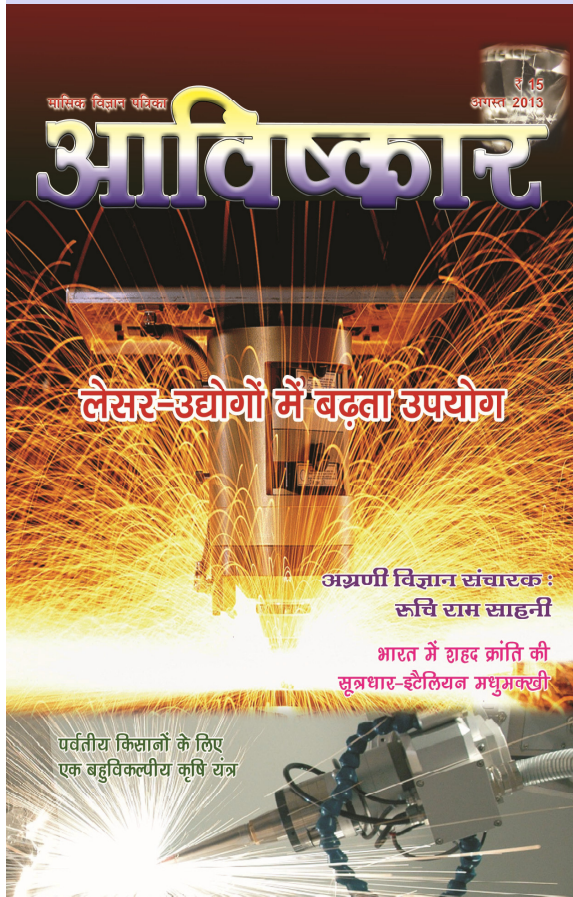
IP Awareness Program

- ✓ Regional Awareness Seminar/workshop/training
- ✓ Training Program



Workshop on "IP & Innovation Management in Knowledge Era" at Sam Higginbottom Institute of Agriculture, Technology & Science, 7th Nov 2013 , Allahabad.

'Awishkar' Hindi Monthly S&T Magazine



• Subscription :

One year Rs. 150/-
Two years Rs. 280/-
Three years Rs. 400/-

Send your subscription through
DD/MO in favour of NRDC, New Delhi .

Subscription form is also available at
NRDC website : www.nrdcindia.com

• Started in May 1971

- **Main objectives** are to propagate information and create awareness amongst the masses about :
 - ✓ New technologies
 - ✓ Inventions/ innovations
 - ✓ IPR issues etc. and
 - ✓ Foster the spirit of inventiveness, innovativeness and entrepreneurship amongst the students, scientists, budding entrepreneurs, students, etc.

• Focuses on :

- ✓ Scientific topics of current public interest & national importance technologies
- ✓ inventions / innovations
- ✓ Intellectual Property Rights
- ✓ Interviews of Scientists, Inventors, Innovators, etc.

• Columns :

- ✓ *Awishkar aur Navachar* (Invention & Innovation)
- ✓ *NRDC kee Prodikeye apkay liyae* (NRDC Technologies for you)
- ✓ *Bhauhdik Sampada kee batain* (Talks of Intellectual Property)
- ✓ *Khel-khel mein vigyan* (Learning science through play way method)
- ✓ *Samacharikee* (S&T News)
- ✓ *Yigyan Sahitya Charcha* (S&T Book review)

- **Subscribed by** : individuals, libraries of numerous schools, colleges, institutes, S & T organizations, laboratories etc.

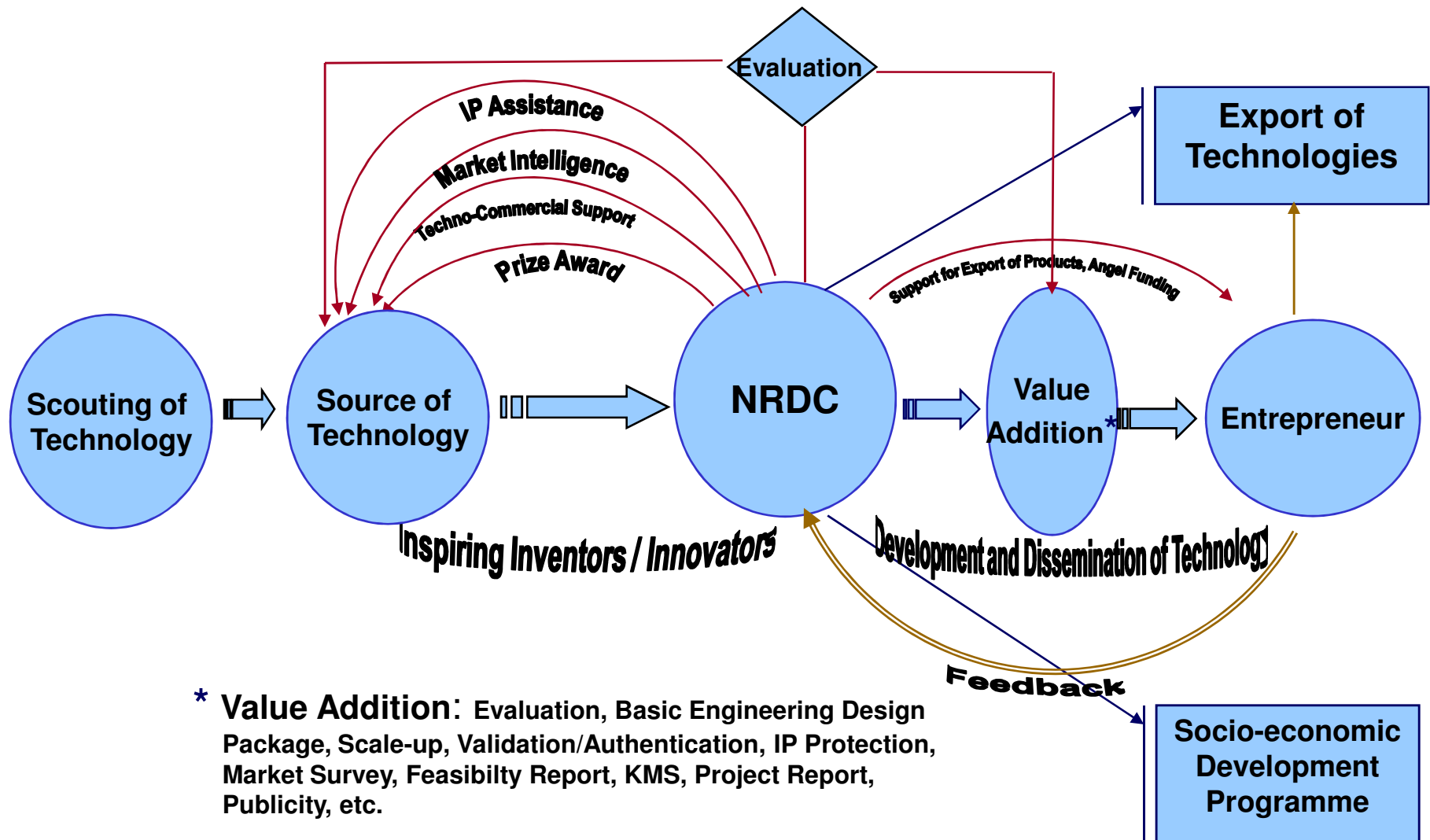
➤ Financial Assistance for Patenting

- ✓ National Patent Protection Scheme
- ✓ Foreign Patent Protection Scheme

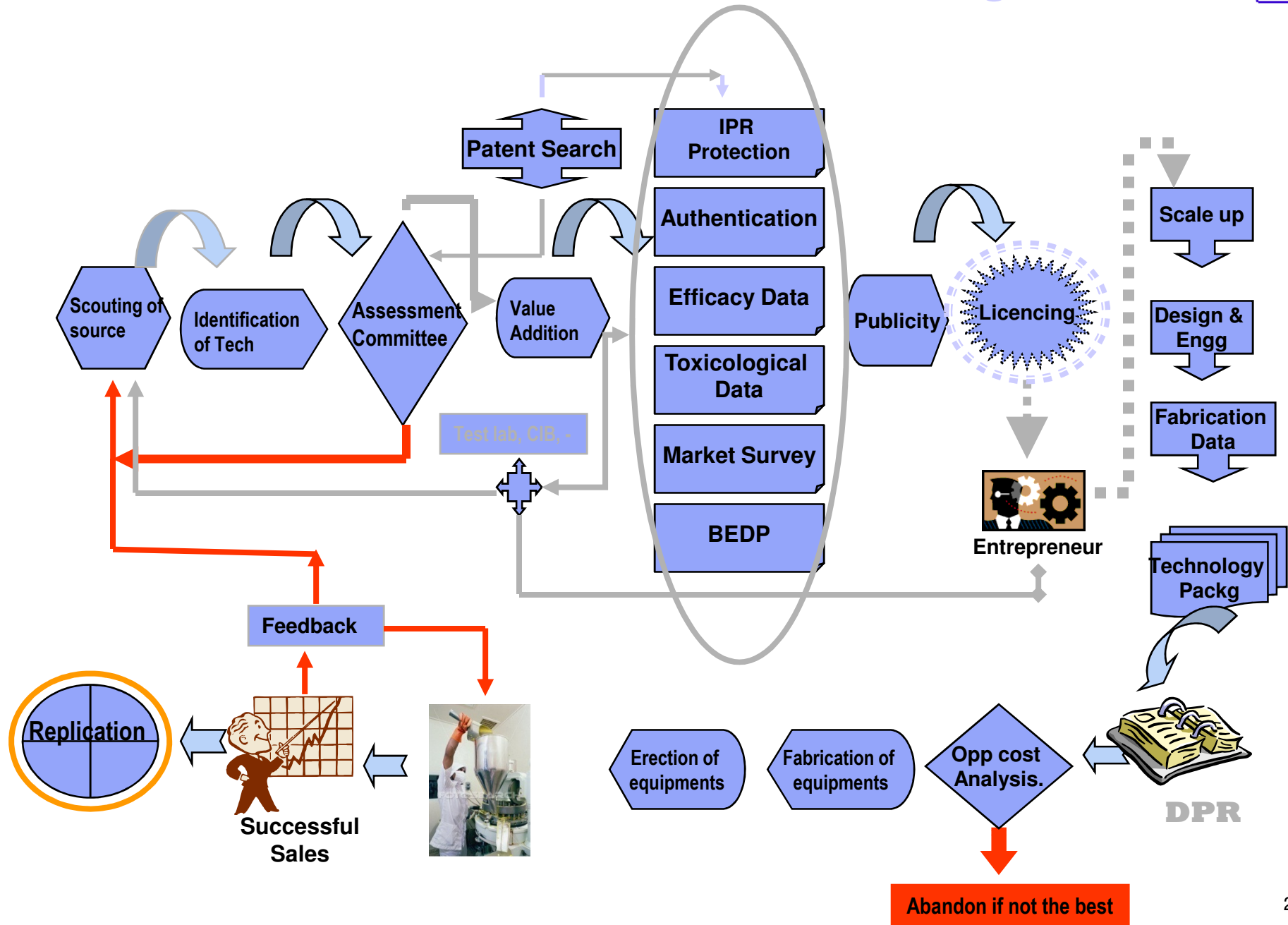


AIIMs, ICMR, ICAR, NDRI, DU, University Calcutta, JNU, CCRUM, CCRAS,,CAZRI, CSR&TI, IISR, CSB, IISER,IIHR, Pondicherry University, DRDO, Coir Board ,Thapar University, CCSHAU, GBPUAT, & etc.

NRDC Technology Transfer Model-NIS



Commercialisation of Lab-scale technologies



Technology Transfer: Experience of NRDC

(Rs in Million)

Know-how	No. of Licensees	Revenue Earned
<u>20 HP Tractor</u>	2	28.4
<u>Blood Bag</u>	5	42.1
<u>Liposomal Amphotericine B</u>	2	5.65
<u>Zeolite A</u>	2	13.5
<u>Graphite Aluminium Composites</u>	1	-

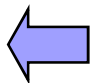
20 H.P. Tractor

- NRDC's Role in Commercialization



The Development - 20 HP Tractors

- 20 H.P., Two Cylinder Tractor, 2000 RPM
- Single lever automatic depth-cum-draft control hydraulic system
- Universal three point linkage
- Front & Rear Wheel tracts- variable to cater crop pattern
- Power Take Off (PTO) design patented in India and abroad (7 countries)
- Suitable for small farm holding



Commercialization by NRDC - 20 HP Tractors

Licensed to

- **M/s Punjab Tractors Ltd. (PTL) In December, 1972**

Royalty received- Rs. 24.5 Million

- **M/s International Tractors Ltd., Hoshiarpur**

LP & Royalty received- Rs. 3.9 Million

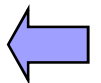


Present Status - 20 HP Tractors

- Mahindra & Mahindra (M&M) acquired 43.3% stake in PTL from Actis group & Burman family at a price of Rs. 360 per share
- M&M invested Rs. 900o Million
- Presently PTL is valued at over Rs. 20,000 Million

PTL in 2005-06

- Turnover Rs. 10.3 Million
- Profit after tax Rs. 12.9 Million



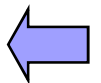
Disposable Blood Bag

- NRDC's Role in Commercialization



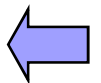
Disposable Blood Bag System

- Disposable bio-medical device used for collection, storage, transportation & transfusion of blood & blood components
- All manufacturing operations are in conformity to GMP
- Manufactured to meet international standards
- Bags are available as single, double or triple transfer bags
- Product has been accepted internationally and exported to Africa, South-East Asia and Europe.



Disposable Blood Bag System - Contd.

- NRDC licensed technology to other companies at much higher premium after its success, some of them are:
 - M/s Hindustan Latex Ltd in 1991. The plant completed in 3 years and now exporting
 - J Mitra & Company in 1994
 - Electro- medical and Allied Industries in 1984
- NRDC also disinvested equity share of its first licensee



Disposable Blood Bag System - Contd.

Return NRDC	to	• Lumpsum premium	Rs 13.15 m
		• Royalty	Rs. 35.0 m
		• Return on	Rs. 8.925 m
		disinvestment of equity share	
		(NRDC Equity in PPL Rs. 4.375 m)	

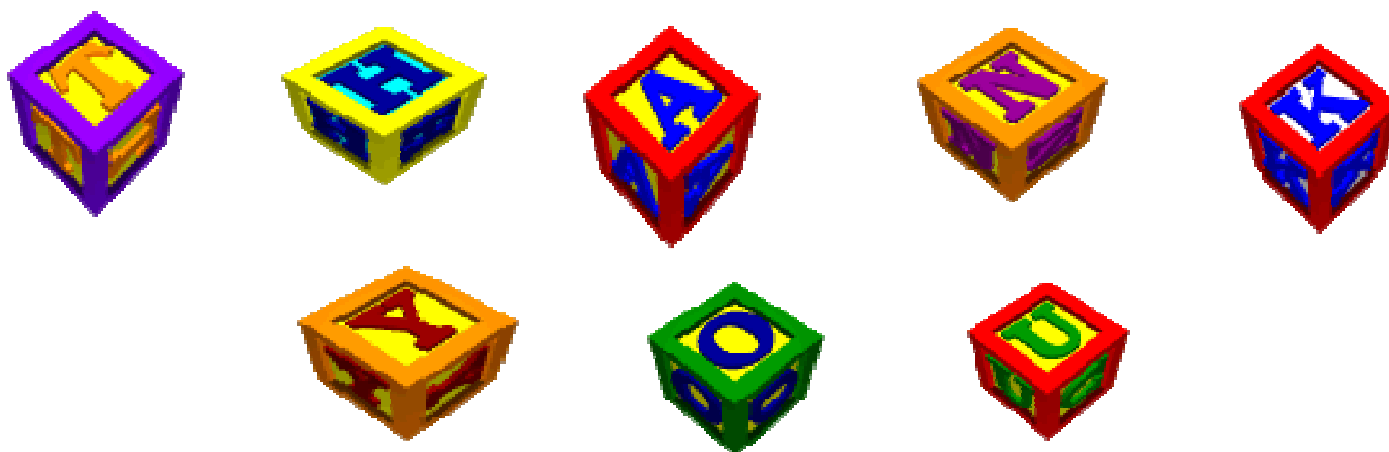


Conclusion

- **Knowledge Economy rewards those enterprises that are creative, innovative and understand the importance of the market for ideas**
- **The IP system provides the formal framework for protecting their knowledge, creativity & innovation**
- **To maximize the potential provided the IP system one has to think beyond exclusive rights to IP assets**

So You've Got An Idea...





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