



REUTERS/David Mdzinarishvili

PROTECTING, AND EXTRACTING VALUE FROM RESEARCH

ENABLING TECHNOLOGY TRANSFER & COMMERCIALISATION

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Intellectual Property Specialist



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AGENDA INNOVATION AMBASSADORS

1. Challenges & Trends in the Innovation Ecosystem
2. Innovation Ambassadors
3. Models of Innovation Research
4. Tools and Services – Derwent World Patent Index
5. Thomson Innovation



INNOVATION – THE RIGHT MINDSET

*Innovation is the process of **making changes**, large and small, radical and incremental, to products, processes, and services that result in the introduction of **something new** for the organization that **adds value** to customers and **contributes to the knowledge** store of the organization.*

Prof. Aart Boessenkool



THE UNIVERSITY AND (or VS) THE TECHNOLOGY TRANSFER OFFICE (TTO)

- “The University” 16th Century system (very rigid) current emphasis on **innovation**
 - Research, Teaching & Learning , Knowledge Centre (Library), TTO, etc
- Formal Technology (*Knowledge*) *Transfer* practice **relatively new**
 - IPR PFRD Act (Act 51 of 2008)
- How can the TTO be part of the university system without **disrupting the system** but rather assist by:
 - Develop Innovative thinking; IP awareness; inter-disciplinary projects; Collaborations; conducting the commercial transaction
- There are many practices & models of TTOs across Africa “add on”
- **How can the TTO fit better into the University Structure?**
- **From “add on” to “Part off”**

CHALLENGES FACED IN THE ECOSYSTEM

- Lack of access to tools (IP Research and Analytics)
 - No shortage of good ideas in Rwanda or its research institutions
 - Government finding ROI difficult to see
- *“Inventions are too early stage”*, say the TTOs
 - Innovators are focused on publishing, no/ little IP awareness
 - Invention pipelines are weak with a lack of innovator capacity building
- Innovation Funds – No Innovation Outputs
 - Applied research and scarce research resources can deliver high-value outputs (IP)
 - Problem solving approach needed: Pre-research Insight would be **valuable**
- Intervention Strategies are needed
 - NGO partnerships – SARIMA, EARIMA, SAIS, RIIS
 - Disconnect between Government, Academia, Corporate, and Industry (IP Due Diligence)

LOSS OF INNOVATION: IP IN RESEARCH

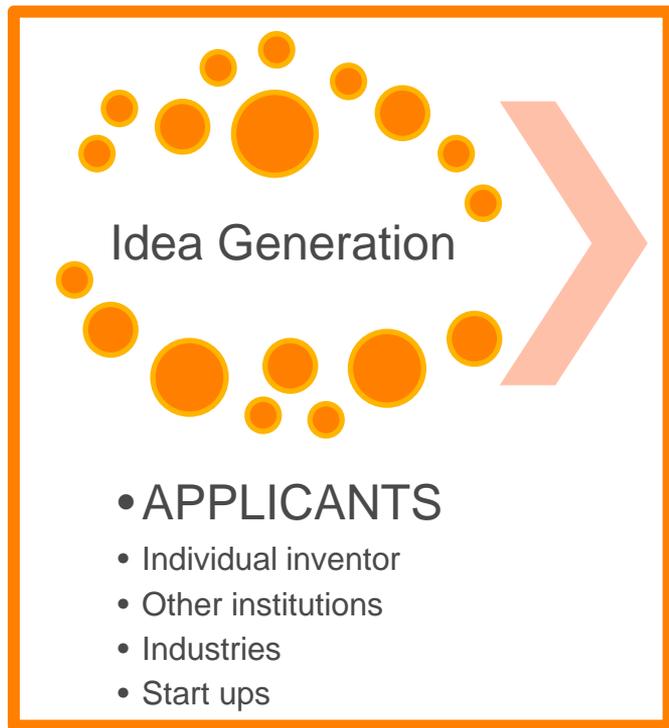
- Rwandan Institutes are generating research output
 - Novel research being published in WoS journal list
- Intellectual Property rights may be lost
 - Walking off campus; Lack of Awareness; Publish or Perish
- Innovation funds are available to researchers
- Students are innovative by nature
 - Problem Solving mindset, competitive environment; Awareness?
- Local problems = Global Opportunities
- Valuable IP assets may be lost – for good
- Sustainable third stream income opportunities may be missed

OVERVIEW- BUILDING AN INNOVATION PIPELINE

DISCOVER

PROTECT

COMMERCIALIZE

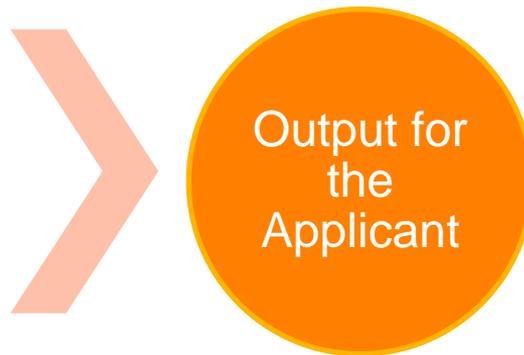


Technology
Evaluation
Process



The diagram for the 'PROTECT' phase consists of the text 'Technology Evaluation Process' centered on the page. A large light-orange arrow points from the 'DISCOVER' phase to this text.

- DUE DILIGENCE
 - Patentability
 - Commercialization
 - Social Impact



RECOMMENDATION

1. Licensing partners
2. Co-development options
3. Spin off Company
4. Return to inventor



EXTENSION OF TTO

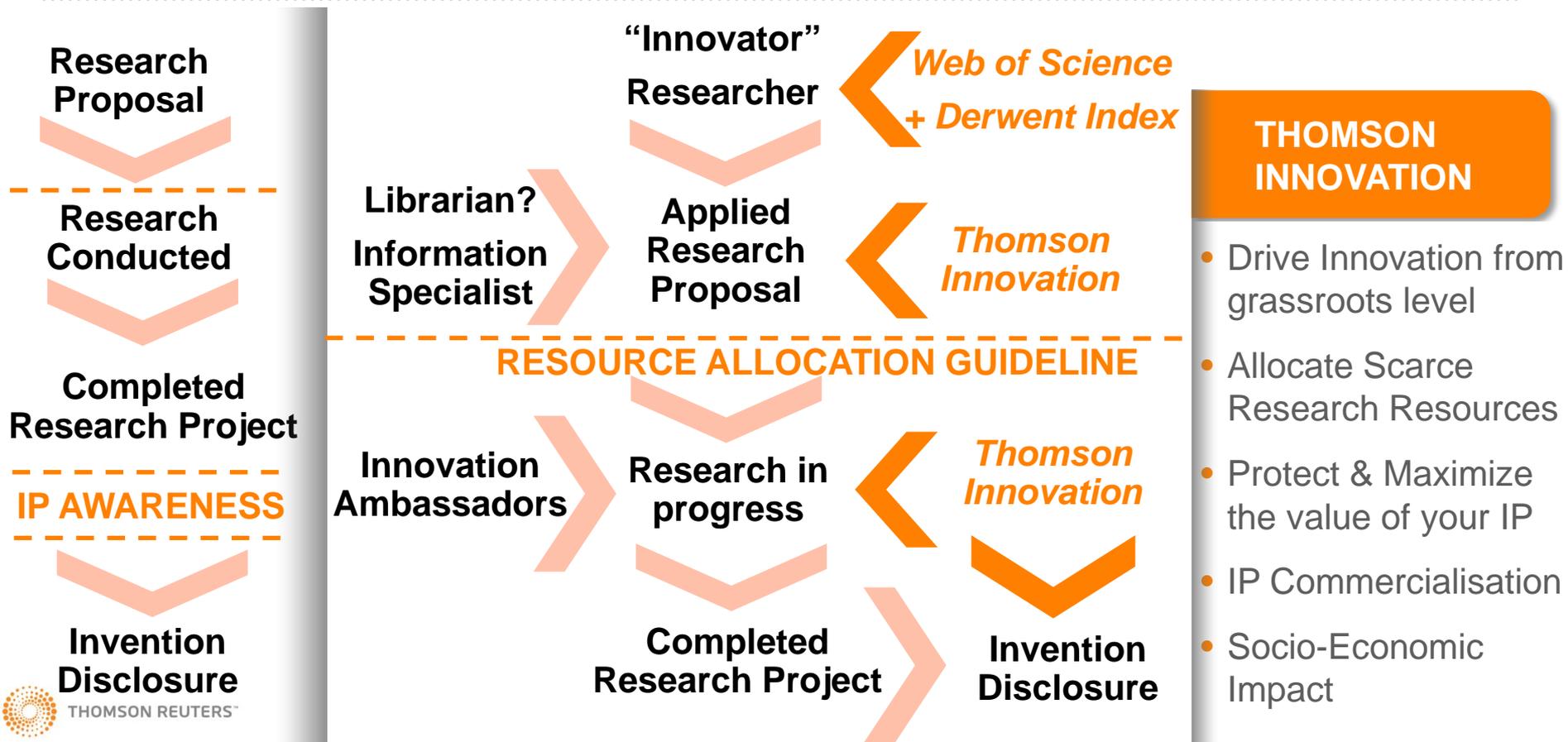
“INNOVATION AMBASSADOR” (IA)

- Missing Link: TTO and the University
 - Focus on Innovation Development across faculties
- **IA** are already present in the institution
 - Have carefully defined criteria for “**IA**”
 - Will need additional IP & Innovation training
- Value add through analysis of scientific and non scientific information sets.
 - ~60-80% of technical information is found in patent databases & not scientific journals
- Value of **IA** include:
 - ‘Relevant’ research; novel proposals and innovative teaching
 - Enhanced technology level of the innovation
 - Increased competition activity in the innovation space
- **PURPOSE: Develop High-Value Invention Pipeline**

MODELS OF INNOVATIVE RESEARCH:

SUPPORTING INNOVATORS

“Research & Innovation”



INFORMATION TO SUPPORT VALUATION

TOOLS AND SERVICES ARE ESSENTIAL

- Training: Innovation Management
- Access to Patent & Non-Patent Literature
 - Manually Curated IP Research Database
 - Business News & Market Data
 - Request IP Reports (FTO & Novelty)
- Access to view University IP Portfolio
 - Portal: Track Invention Disclosure
- Tools for Brand development
 - Spin-off Company, New Products/Services
- Internal Documents:
 - IP Policy
 - Inventor/ Innovator Handbook



- Derwent World Patents Index® (DWPI)
- Thomson Innovation – Themescape
- Thomson Compumark
- SAEGIS
- File Histories
- Thomson IP ManagerSM
- IP Search & Analytics Services
- IP Translation Services
- MarkMonitor online brand protection

DERWENT WORLD PATENTS INDEX:

UNMATCHED GLOBAL COVERAGE IN ENGLISH



DWPI – ENRICHED PATENT DATA

Record View: WO2013095738A3

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DWPI Title ?

New antibody or its antigen binding fragment useful in pharmaceutical composition for treating viral infections including Rous sarcoma virus, Ebola virus, HIV and influenza virus, cancer and inflammatory disease

Original Title ?

MONOCLONAL ANTIBODIES WITH ALTERED AFFINITIES FOR HUMAN FCYRI, FCYRLLLA, AND C1Q PROTEINS

DWPI Abstract ?

Novelty: An antibody or its antigen binding fragment, is new. The antibody is present in substantially homogeneous composition by presence of GNGN glycoform or G1/G2 glycoform, where antibody has a binding affinity for human Fcγ RI and Fcγ RIIIa and binding affinities for Fcγ RI and Fcγ RIIIa of the GNGN or G1/G2 antibody, are greater than the binding affinities for Fcγ RI and Fcγ RIIIa of the antibody, or its antigen binding fragment present in composition containing G0, G1F, G2F or GNGNF glycoforms.

Use: The antibody or its antigen binding fragment is useful in pharmaceutical composition for treating viral infections including Rous sarcoma virus, Ebola virus, HIV and influenza virus, cancer and inflammatory disease (all claimed). The cancer includes breast cancer and B cell lymphoma and inflammatory disease includes rheumatoid arthritis and Alzheimer's disease.

Advantage: The antibody or its antigen binding fragment enables to increase biological activity as compared to non-glycosylation-engineered monoclonal antibody, and decrease toxicity, and/or dose of marketed monoclonal antibody or monoclonal antibody.

Images

Image 1/1

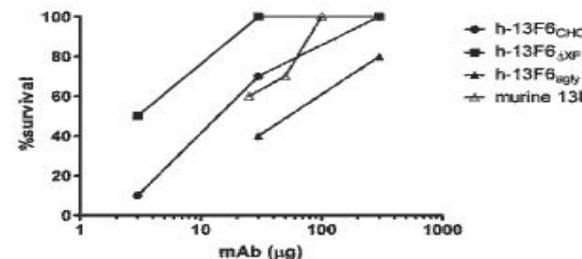
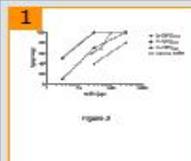
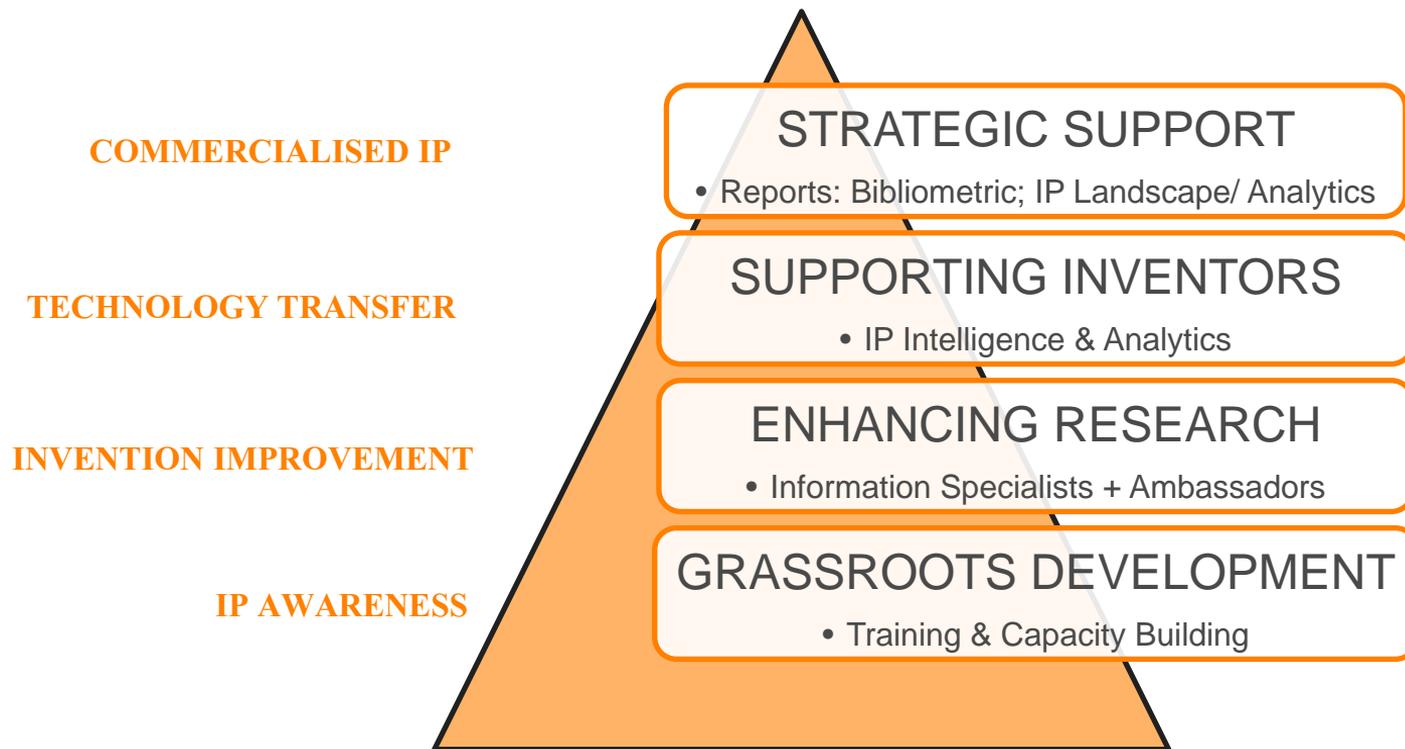


Figure 3



MITIGATING RISK, INCREASING RESEARCH EFFICIENCY:

INNOVATION AMBASSADOR PROGRAM



INNOVATOR CAPACITY BUILDING:

DIFFUSING IP WITHIN RWANDA

- Patent **landscape report** providing insight into patent activity: turning IP data into IP intelligence
- **Thomson Innovation**: Streamline your work and processes with tools that will facilitate accessing the most relevant, global IP data with interactive analysis and visualization tools
- **Training and capacity building** to strengthen and diffuse IP skills and knowledge within Rwanda's Research Institutes
- **Ambassador Programme** workshops and consultancy

PATENT LANDSCAPE REPORT



- Assemble and analyze patent output from leading University & Council researchers
- Analysis will include:
 - Volume of patent output
 - Commercial intent (geographical analysis)
 - Prosecution stage analysis
 - Impact analysis
 - Thomson Strength Indicator analysis

Tier 1 Entity Rankings	Total Inventions	Average Years to Expiry	Number of Quad Filings	Number of Granted Families	Average Citations per Family	Age Weighted Citation Impact	Thomson Reuters IP Analytics Strength Indicator
CASIO	45	13.3	15.0	38	9.4	1.3	4.9
COMMISSARIAT ENERGIE ATOMIQUE	19	14.3	8.0	15	6.5	1.2	4.5
EVEREADY BATTERY COMPANY	26	11.2	3.0	25	6.6	0.8	4.0
SAMSUNG	68	14.6	8.0	50	4.7	0.9	3.6
SANYO ELECTRIC	27	14.9	2.0	15	4.6	1.0	3.4
SOCIETE BIC	39	13.6	12.0	13	4.9	0.8	3.3
PANASONIC	66	13.8	6.0	34	4.3	0.7	3.2
NEC CORP	24	12.9	4.0	11	5.3	0.7	3.3
ULTRACELL CORP	16	12.3	1.0	8	5.9	0.7	3.3
SONY CORP	54	14.6	12.0	15	4.9	1.0	3.3
CANON	55	13.2	7.0	31	4.0	0.6	3.1
TOSHIBA CORP	183	14.1	34.0	54	4.3	0.8	3.0
TOYOTA CORP	16	14.9	3.0	4	3.9	0.8	3.0
HITACHI LTD	34	12.9	0.0	18	4.1	0.6	2.9
FUJITSU LTD	20	13.4	2.0	9	3.2	0.5	2.8
MTI MICROFUEL CELLS INC	16	11.4	0.0	8	2.9	0.4	2.4

CUSTOM APPROACH: CAPACITY BUILDING & TRAINING

- IP management basics (fee-based workshop series)
- Thomson Innovation platform training (at no cost for *named users)
- Understanding patent records (at no cost – using TI*)
- Searching and locating patents (strategy) (at no cost – using TI*)
- Knowledge Transfer & Commercialisation (fee-based workshop series)

Compliments SARIMA, SAIS, etc

Record View: Patent WO2010071491A1 Help

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Full View [Jump to: Bibliography](#) | [Abstract](#) | [Classes/Indexing](#) | [Legal Status](#) | [Family](#) | [Claims](#) | [Description](#) | [Citations](#) | [Other](#) | [Custom Filter](#) | [Quick View](#)

Bibliography

DWPI Title ?
Control method for hazard light of vehicle, involves controlling hazard light of vehicle based on hazard control signal transmitted via wake-up signal cable in response to hazard input

Original Title ?
HAZARD LIGHT COMMUNICATION

Assignee/Applicant ?
Standardized: **VOLVO LASTVAGNAR AB** | **WAGNER CARL-MICHAEL**
Original: VOLVO LASTVAGNAR AB, SE | WAGNER Carl-Michael, SE

DWPI Assignee/Applicant ?
VOLVO LASTVAGNAR AB (VOLV-C)

Inventor ?
WAGNER Carl-Michael, SE

DWPI Inventor ?
WAGNER C

Images Highlighting Close

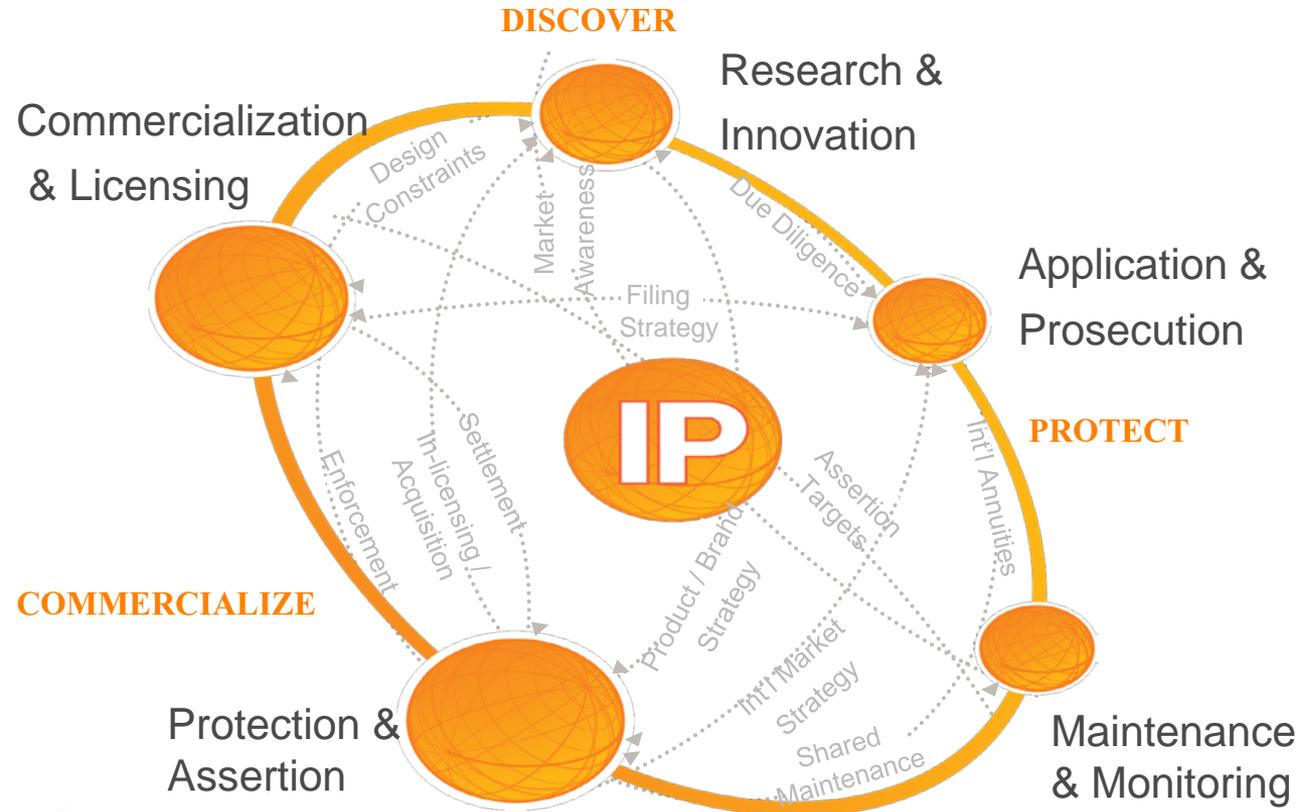
Image 1/6 Zoom (+)

FIG 2

----- Communication bus 13
— Wake-up signal cable 15

THOMSON INNOVATION

POWERING THE INTELLECTUAL PROPERTY LIFECYCLE



THOMSON INNOVATION

- Drive Innovation from grassroots level
- Allocate Scarce Research Resources
- Protect & Maximize the value of your IP
- IP Commercialisation
- Socio-Economic Impact
- Support Innovation from the top, down

INNOVATION AMBASSADOR PROGRAMME

CORE FUNCTION OF THE INNOVATION AMBASSADOR

TEACHING & LEARNING IN

INTER DISCIPLINARY

PART OF INSTTUTION

RESEARCH ENVIRONMENT

IMPROVED
IDEA GENERATION
CAPACITY

- PATENT & NON - PATENT LITERATURE
- RESEARCH BENCH & LABORATORY
- KNOWLEDGE CENTRES - LIBRARY
- OPEN LECTURES
- IP SUMMER SCHOOL
- IP COMPETITIONS
- MARKETING
- TEACHING & LEARNING

INCREASED
INVENTION
DEVELOPMENT

- IP RESEARCH & ANALYTICAL TOOLS
- BUSINESS INFO
- MARKET DATA
- OPPORTUNITY ASSESSMENT
- BUSINESS CASE

INVENTION IMPROVEMENT
✓ Patentability
✓ Commercialization

- POTENTIAL IP LICENSING
- FREEDOM-TO-OPERATE
- TECHNOLOGY LANDSCAPE
- MARKET LANDSCAPE
- COMPETITIVE LANDSCAPE
- INDUSTRIAL SOLUTIONS
- IN-HOUSE PATENT ATTORNEY

INVENTION DISCLOSURE
SUBMISSION

TECHNOLOGY TRANSFER
OFFICE REVIEWS
DISCLOSURE

OUTCOMES:
COMMERCIALISATION
LICENSING, ETC

IP MANAGEMENT SOLUTIONS

(Disclosure Tracking, Portfolio Management, Payments etc.)

ENHANCED TTO
EXPERIENCE

CORE FUNCTION OF THE TTO

INNOVATIVE UNIVERSTY

INNOVATION
AMBASSADOR



INTELLECTUAL PROPERTY SOLUTIONS SUMMARY

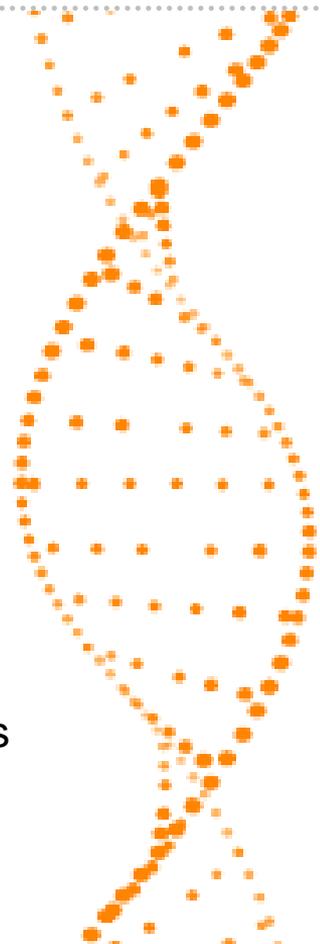
VARIOUS PROGRAMS ACROSS THE RESEARCH & INNOVATION LIFECYCLE

■ Pre-Research Insight

- Enabling Environment to generation high-value IP
- Increased Resource Efficiency
- Global landscape with white space opportunities
- Researcher Support Structures

■ Academic Excellence

- Innovation Functionality
- Partnerships to Create Industries
- Maximise Capabilities' & Research Infrastructure



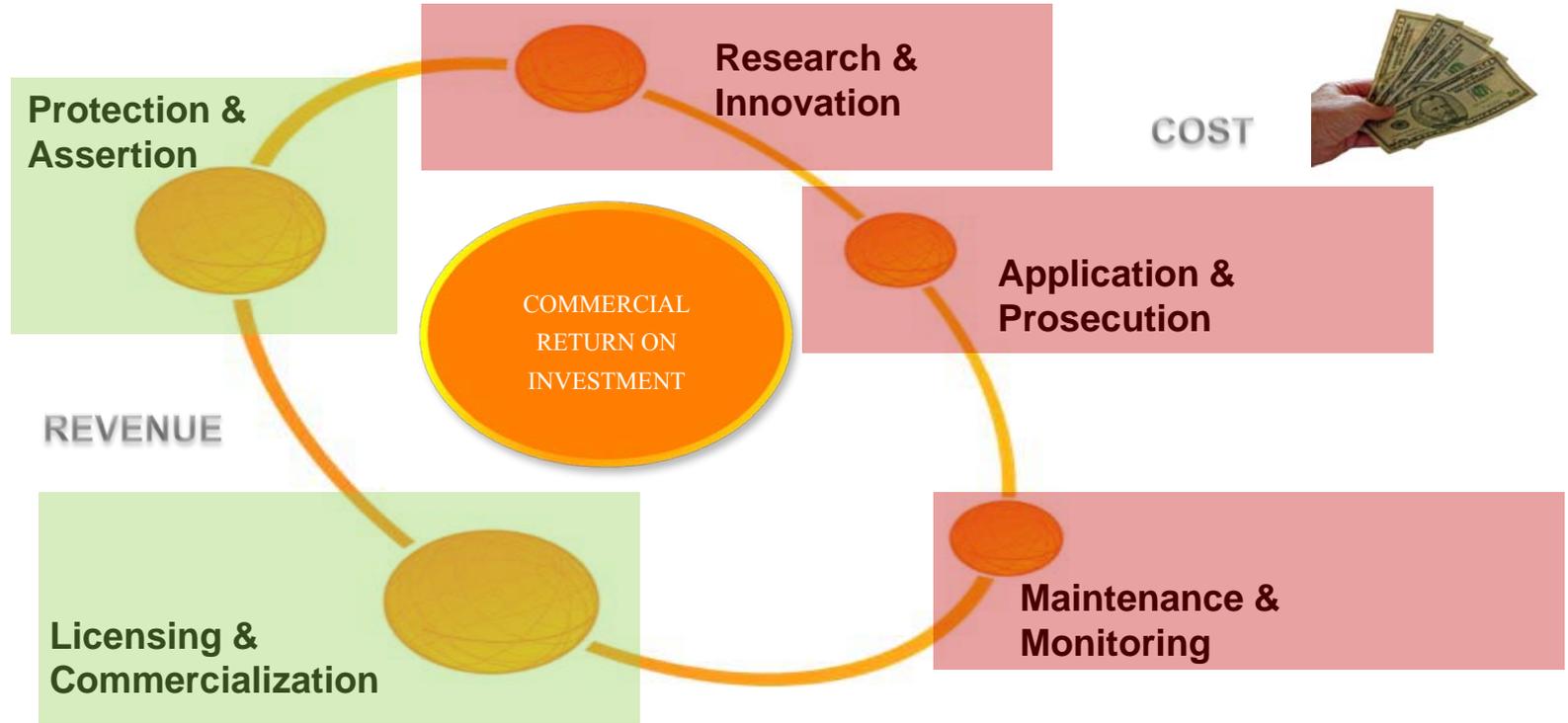
■ S.M.M.E.'s As Industrial Drivers

- Competitive Advantage
- Global Growth Potential
- Academically Enhanced Prototype
- Profit-based, Solution Oriented
- Catering for an evolving market

■ Strategy

- Thomson's Experience & Expertise
- Return on Investment & Partnership
- See Around Corners
- Improve efficiency, and mitigate risk on Research "Innovation funds"

VALUE OF INTELLECTUAL PROPERTY RIGHTS





A STRATEGIC PARTNERSHIP

QUESTIONS ?

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QUESTIONS

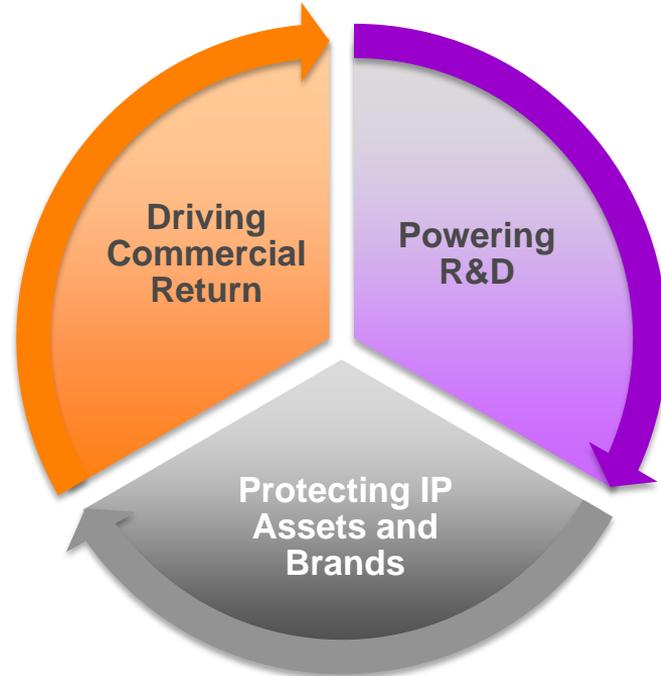
- **How can we use this system/ tool to commercialise Indigenous Knowledge?**
- **My institute does not even have an IP Policy, how is this relevant to me?**
- **Do we need a National TTO to make this work?**
- **Does the Information Specialist need to be based in the library?**
- **Tell me more about the Innovation Ambassadors, who are they?**

THOMSON REUTERS: RWANDA'S STRATEGIC PARTNER THROUGHOUT THE INNOVATION LIFECYCLE

National Outreach of Innovative Research

Regulatory and Standards Intelligence for Ministries

Review of national and regional Patent frameworks, and international best practices



Consolidated National Research Database & Regional Citation Index

Benchmarking Reports

Certification Program for Innovators

**Innovation Landscape Reports
IP Regional Centre of Excellence
Inventors Institute (IA)**