



BEYOND

IDEAS

MOSTI R & D GRANTS

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SIRIM Berhad
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Presentation Contents

- **Introduction**
- **R & D Eco System**
- **MOSTI R & D Grants**
- **Preparation of Proposal**
- **Discussion and Q & A**



My Background

- 1982 - B.Sc in Engineering Production, Birmingham University, UK
- 1982 - Joined SIRIM as Researcher
- 1990 - M.Eng (Mechanical), UTM
- 1996 Ph.D (Manufacturing), Loughborough University, UK
- Current job – Senior Director, Plant and Machinery Flagship, Research and Technology Innovation Division
- Adjunct Professor, UTHM

Research and Evaluation Experience

- **1990 – 2008 : Involved in 12 major Research Projects**
 - ❖ 7 as project leader, 5 as project member
 - ❖ 1 Technofund, 1 IRPA-PR, 1 International, 2 Science fund, 7 IRPA
- **Since 1998 - Chairman/member Technical Evaluation Committee for IRPA, IGS, Sciencefund, Technofund, Innofund, Brain Gain Malaysia, National Science Fellowship, DSTIN**
- **Chairman/member for Project Monitoring Team for Technofund and Brain Gain recipients**

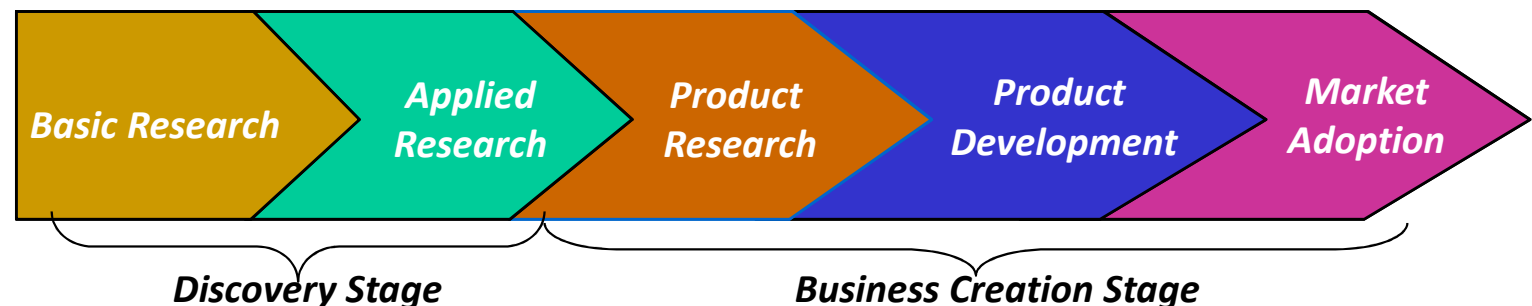


R & D ECO SYSTEM

The Generic R&D Chain

- **Basic Research**
 - Characterized by “knowledge for knowledge's sake and leads to basic scientific breakthroughs
 - Principles of biochemistry
- **Applied Research**
 - Characterized by distinct but fuzzy focus on specific applications
 - Growth mechanism of cancer cells
 - Properties of nano particles
 - Hypothesizing specific product concepts from the knowledge obtained from applied research
 - A concept fermentation process for producing bio degradable polymers
 - A concept drug that can act on a specific receptor to inhibit cell growth

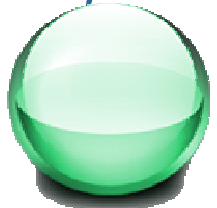
R&D Value Chain : From Lab to Market



Government's Concerns on R & D



**Low level of commercialization of R & D outputs –
Lack of desire among researchers to commercialize
R&D outputs**



**Lack of linkages (smart partnership) between
researchers (supply) and industry (demand)**

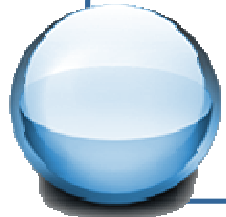


**Limited market place (e.g techno-market) for
researchers and industry to buy and sell R&D output**

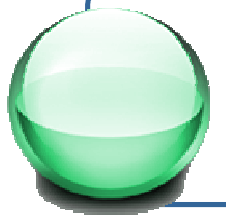


**Lack of entrepreneurship and commercialization
expertise among researchers**

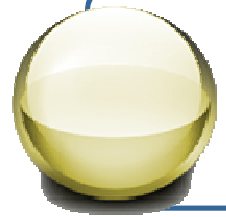
R&D Thrusts Since RMK8



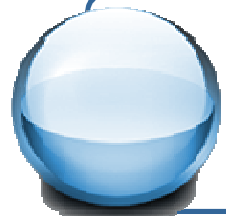
Emphasis on the development of innovation and market-driven R&D projects



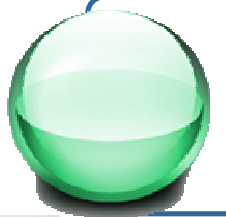
Multi-disciplinary and multi-institutional research and development teams



Private sector participation

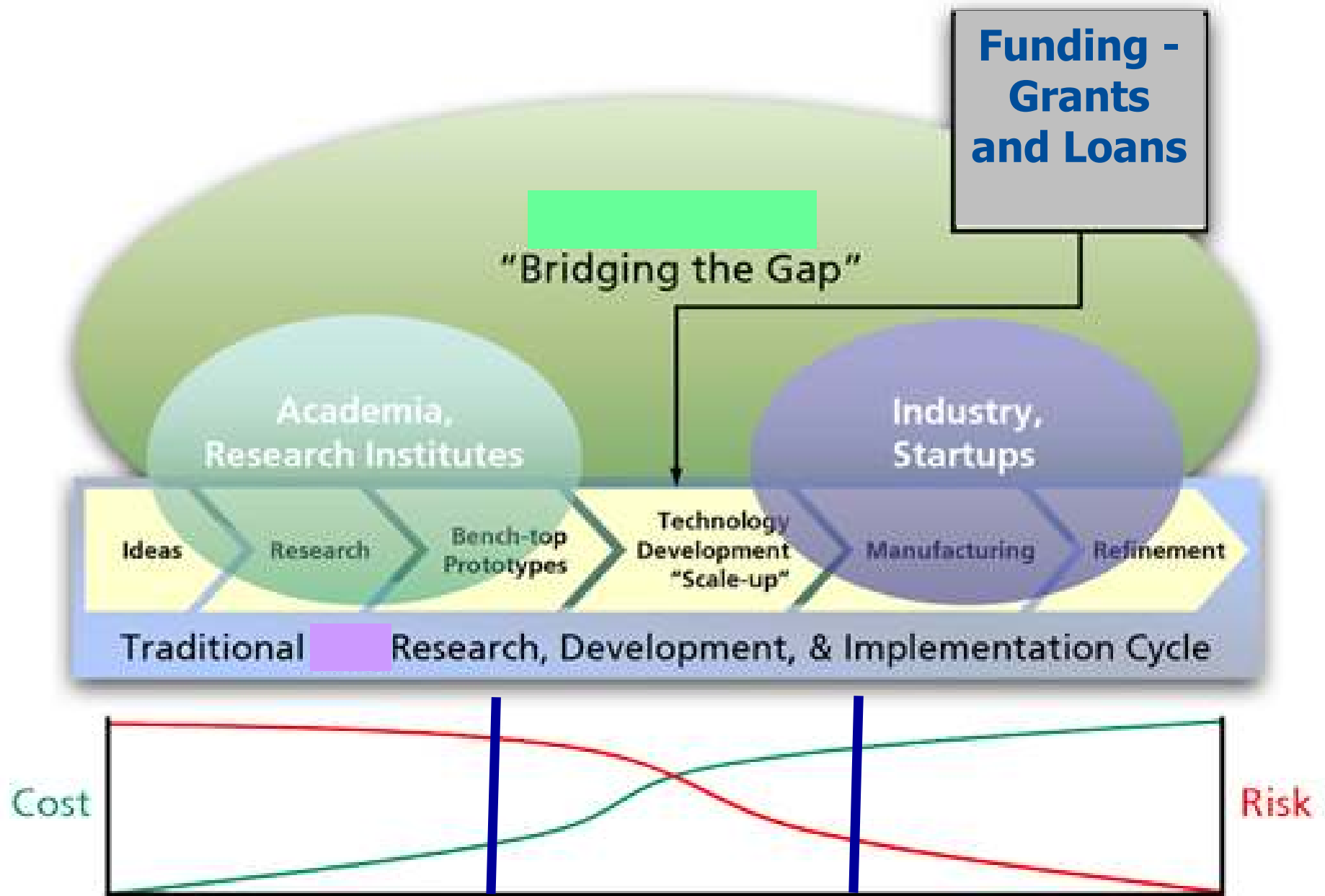


Sharing of facilities and equipment



Commercialisation of R & D outputs

Bridging the Gap Between R & D and Commercialisation



Grants Available From Various Ministries and Agencies



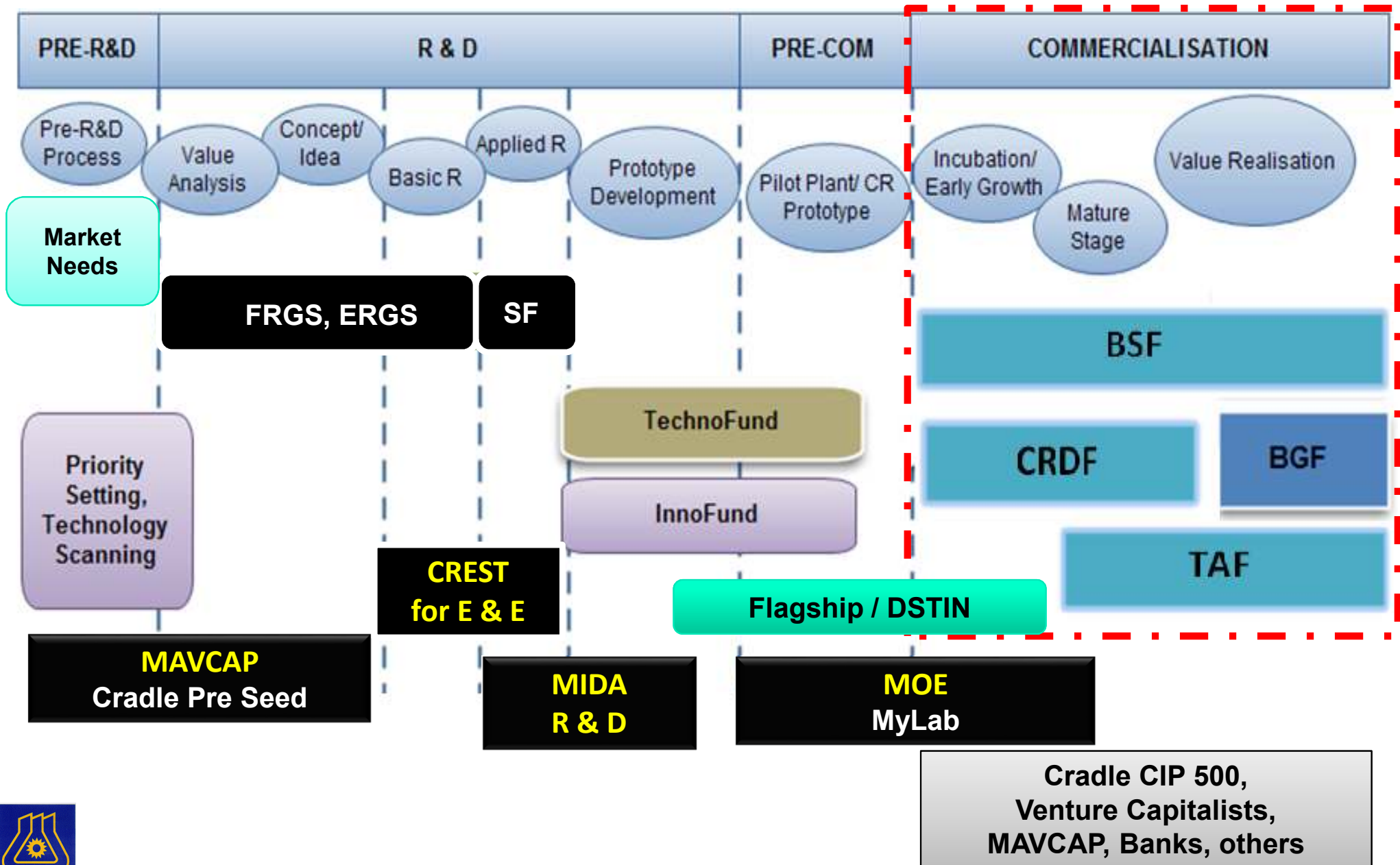
Suruhanjaya Komunikasi dan Multimedia Malaysia
Malaysian Communications and Multimedia Commission



● State Governments



Funding The Value Chain of Innovation



Business Value Chain



MDEC

LHDN
Double Tax Deduction

MOA
KKLW
KBS
State Govt

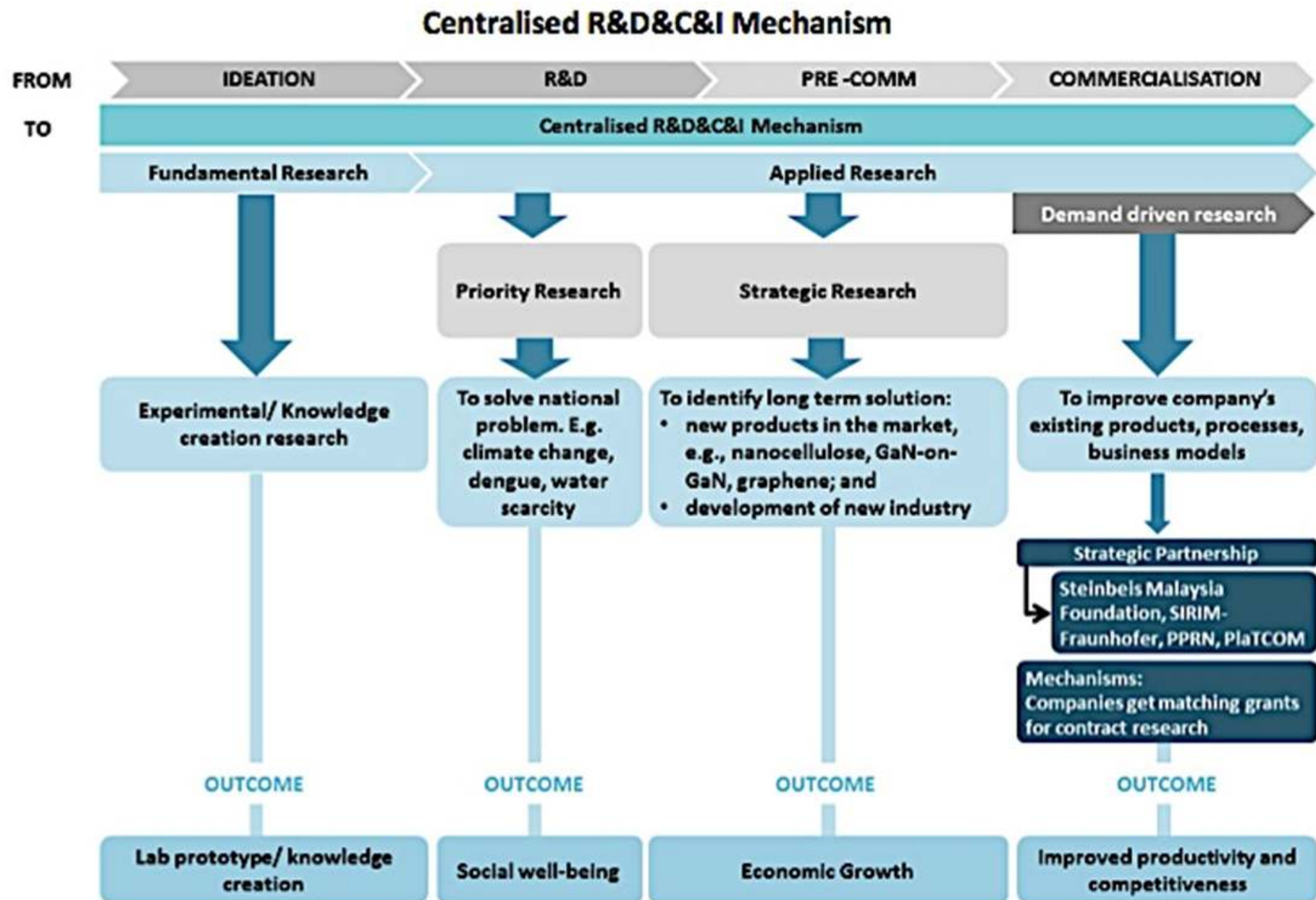
VARIOUS AGENCIES

MATRADE

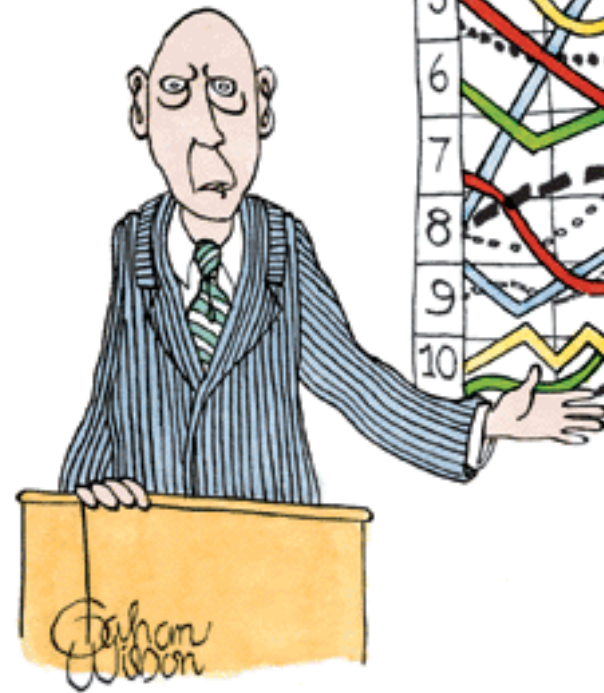
MOA
KKLW
KBS
State Govt

Funds for Skills Development – Various Agencies

R & D Funding in RMK11?



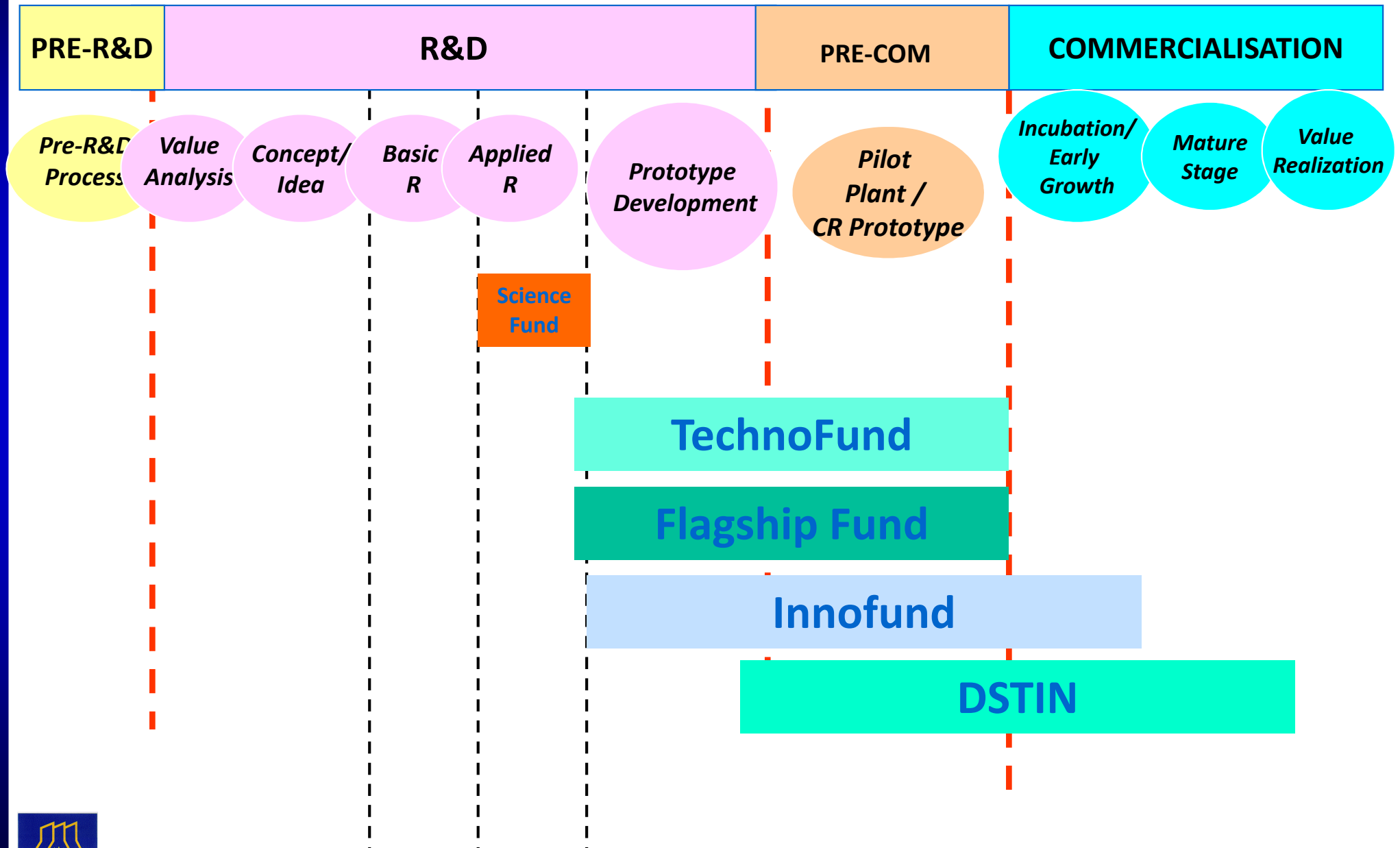
Source: Economic Planning Unit



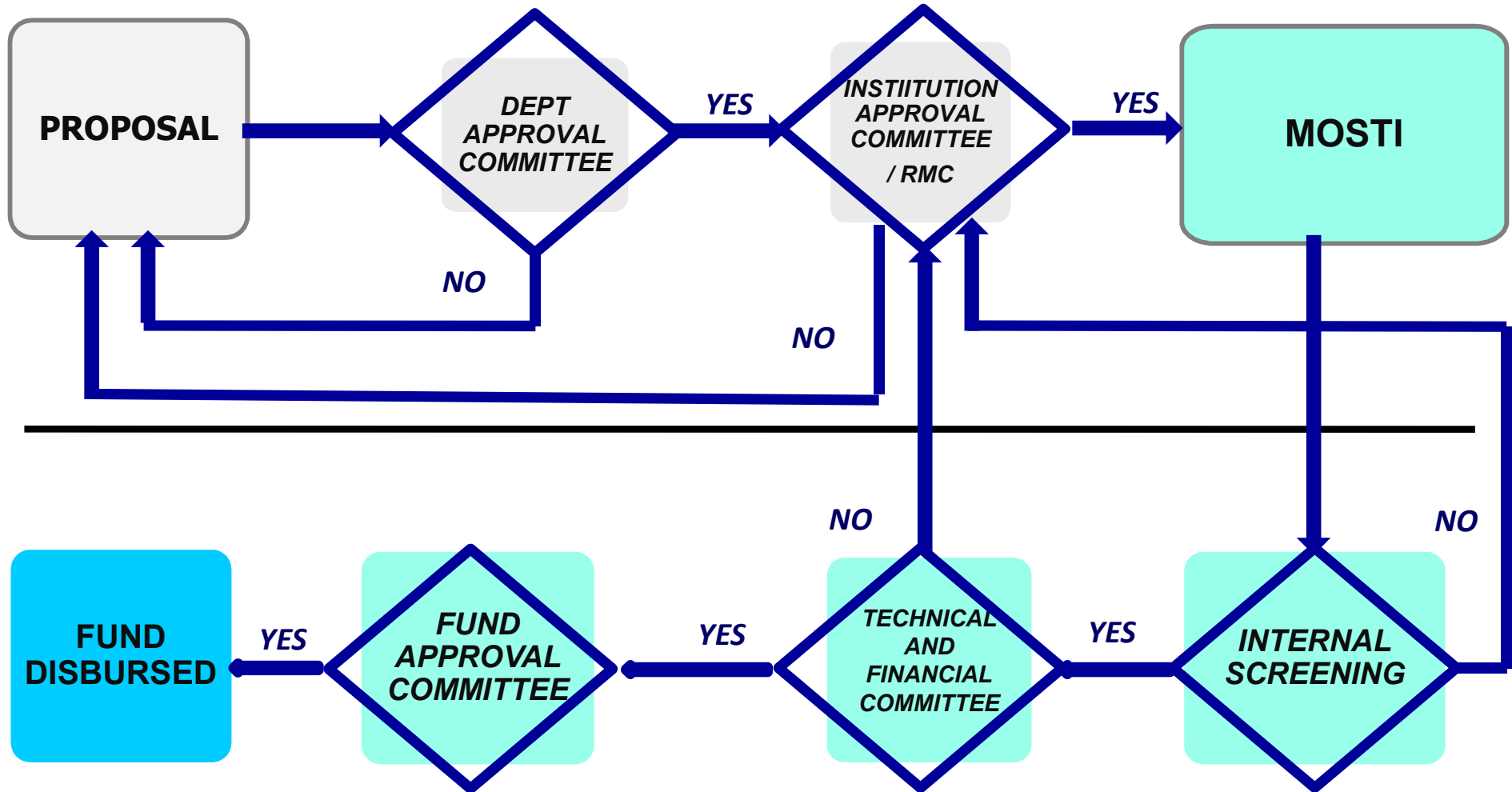
"I'll pause for a moment so you can let this information sink in."

MOSTI R & D FUNDS

MOSTI R&D Value Chain



MOSTI Grant Flow Chart



SCIENCEFUND

Owner

MOSTI

Purpose

To carry out R&D projects (applied research) that can contribute to the discovery of new ideas and the advancement of knowledge in applied sciences, focusing on high impact and innovative research

Eligibility

**Research Institutes, IPTA, IPTS
Companies encouraged to be collaborator**

Quantum

Max: RM 500,000.00. Usually RM 100, 000 – 300,000

Projects up to 30 months

Details

www.mosti.gov.my

Definition of Sciencefund

- **ScienceFund is a grant provided by Government to carry out R&D projects that can contribute to the discovery of new ideas and the advancement of knowledge in applied sciences, focusing on high impact and innovative research**

Research Priority Areas

- Life Sciences
- Computer Sciences and Information and Communication Technology (ICT)
- Agriculture Sciences/ Agricultural Engineering
- Environmental Sciences
- Advanced Materials Science
- Chemical Sciences
- Physical and Mathematical Sciences
- Engineering
- Medical and Health Sciences
- Social Sciences and Humanities

TECHNOFUND

Owner

MOSTI

Purpose

Funding for technology development, up to pre-commercialisation stage, with the commercial potential to create new businesses and generate economic wealth for the nation.

- The acquisition of technology (foreign and/or local). Applicants should provide the acquisition agreement or if such an agreement is not in place, applicants shall provide details of the technology to be acquired
- The up-scaling of laboratory-scale prototype or the development of commercial ready prototype
- Pre-clinical testing/clinical testing/field trials

Eligibility

Research Institutes, IPTA, IPTS, STI Agencies, SME

Quantum

Max: RM 3,000,000.00. Usually RM 1,000, 000 – 3,000,000

Projects up to 30 months

Details

www.mosti.gov.my

Definition of Technofund

- A grant scheme which aims to stimulate the growth and successful innovation of Malaysian enterprises by increasing the level of R&D and its commercialisation
- Provides funding for technology development, up to pre-commercialisation stage, with the commercial potential to create new businesses and generate economic wealth for the nation

Scope of Funding

- **The acquisition of technology (foreign and/or local). Applicants should provide the acquisition agreement or if such an agreement is not in place, applicants shall provide details of the technology to be acquired**
- **The up-scaling of laboratory-scale prototype or the development of commercial ready prototype**
- **Pre-clinical testing/clinical testing/field trials**

What can be Funded

- **Pilot plant / prototype – equipment and supporting infrastructure which is directly related to the pilot plant**
- **IP Preparation and Registration in Malaysia only (excluding maintenance) - existing and new IP**
- **Market testing / assessment and/or evaluation**
- **Regulatory and standards compliance**
- **Expenditure for services (consultancy/ testing) not exceeding 20% of project cost**
- **Contract expenditure applicable to IHLs and GRIs only (research assistant)**
- **Raw materials/consumables**
- **Technology/IP acquisition (if applicable)**

Eligible applicants

Researchers and other individuals from:

- **Small and Medium Enterprises**
- **Institutions of Higher Learning**
- **Research Institutes**
- **Science, Technology and Innovation (STI) Agencies**

❖ **Priority:**

- to applications with projects that have been supported by the ScienceFund and have the potential to be commercialised;

or

- companies that have obtained the InnoCert recognition

Technical and Financial Evaluation

- 1. Does the proposed project fall under the Research Cluster?**
- 2. Does the applicant have the professional qualifications and team members (if applicable) necessary for satisfactory performance of the proposed activity?**
- 3. Is there other funding sources to supplement the fund provided by ScienceFund?**
- 4. Viability of research objectives**

Technical and Financial Evaluation

5. Output expected

6. Collaboration and industry linkages

7. Appropriateness of research methodology

8. Relevancy of key milestone

9. Commercialisation Potential

10. Cost effectiveness

11. Project Risks

- Technical
- Financial
- Timeline

Detailed Evaluation

- **Does the project have scientific merit and is the methodology sound?**
- **What is/are the expected outputs and what are their potential applications, if any ?**
- **Does the project leader/team have the relevant expertise to carry out the project? If no, please specify the requirements**
- **Is the costing appropriate ? If there is a reduction, please specify**

Detailed Evaluation

- **Other relevant aspects that need to be highlighted. (eg. reinventing the wheel, novelty, basic/fundamental research, commercial potential, collaboration with industries, are the milestones relevant and achievable, is the project proposal well written, etc)**
- **If project not recommended for approval, please provide suggestions for improvement**

Evaluation Criteria (TechnoFund)

- **Novelty - new product, new technique, new process, modification of existing product / process, additional application, cutting edge technology and/or patentable**
- **Technical Feasibility - applicant's ability to successfully complete the project within the stipulated time**
- **Laboratory Proof of Concept (POC)**
- **Competency of the Project Team**
- **Credibility of Project Proposal**

Evaluation Criteria (TechnoFund)

- **Appropriateness of Methodology**
- **Deliverables**
- **Financial Capability**
- **Projection of the Project Costs**
- **Risk**
- **Business Plan**



"Look Buster, there's one thing certain in this life, but without grant money we're never going to find out what it is!"

PREPARATION OF PROPOSAL

Basic Questions When Undertaking Projects

WHY

A PROJECT IS CARRIED OUT

WHAT

THE PROJECT IS EXPECTED TO ACHIEVE

HOW

THE PROJECT IS GOING TO ACHIEVE THESE RESULTS

WHICH

WE CAN ASSESS THE SUCCESS OF THE PROJECT

WHY

*WE WILL FIND THE DATA REQUIRED TO ASSESS THE
SUCCESS OF THE PROJECT*

WHAT

THE PROJECT WILL COST

Discussion

- **How do you generate ideas for R & D?**
- **Does your organization implement formal method for idea generation?**

Filling the Form

- Title
- Key words
- Objective
- Research cluster, SEO and FOR
- Research background
- Literature review
- Related research
- Relevant past research
- Research methodology

Filling the Form

- **Project activities, schedule and key milestones**
- **Risks – technical, financial, timeline**
- **Outputs**
- **Collaboration – other organisations, industry**
- **Project team members and manhour**
- **Intellectual property rights**
- **Cost**
 - **Staff**
 - **Direct expenses**
 - **Special equipment**

Ingredients of Good Proposal

- **Clear** – can be easily understood by reader
- **Accurate** – facts written exactly as they are
- **Objective** – facts presented fully and fairly
- **Accessible** – easy to find needed information
- **Concise** – brief, direct to the point
- **Correct** – in grammar, punctuation and usage

Common Mistakes

- **Title – too long, does not reflect research area**
- **Literature review – not focused, not extensive, out-dated information**
- **No or not clear Problem Statement**
- **Objective – not relevant, ambiguous, research activity**
- **Methodology – differentiate methodology and activity, precise explanation, relate with requirement of special equipment**
- **Research Activity – should be linked to outputs, realistic schedule**

Common Mistakes

- **Milestones – concept of milestone, wording and timing**
- **Outputs – do not tally with title or objective**
- **Collaboration – if project is for industry, then should have relevant industry collaborator**
- **Team member – no member with expertise in research domain area, not realistic manhour**
- **Intellectual property – not identified or not well distributed**

Common Mistakes

- **English – sentences, grammar, spelling**
- **Costs – do not follow funding guidelines especially on travelling and purchase of equipment or machine**

References

- MOSTI web site – www.mosti.gov.my
- KRSTE – <https://krste.my>

Thank You

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