

# DOMESTIC INVESTMENT SEMINAR 2019

MIDA

## SIRIM-FRAUNHOFER PROGRAMME

Productivity Improvement through Technology  
Penetration and Upgrading

Presented by:  
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SIRIM Berhad  
26<sup>th</sup> June 2019



MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY





# VISION

Best Partner for Innovation

# MISSION

We provide quality and sustainable innovation to:

**1**

## **Government**

Contribute towards national policies and aspiration

**2**

## **Industry**

Enhance trade access, competitiveness and business growth

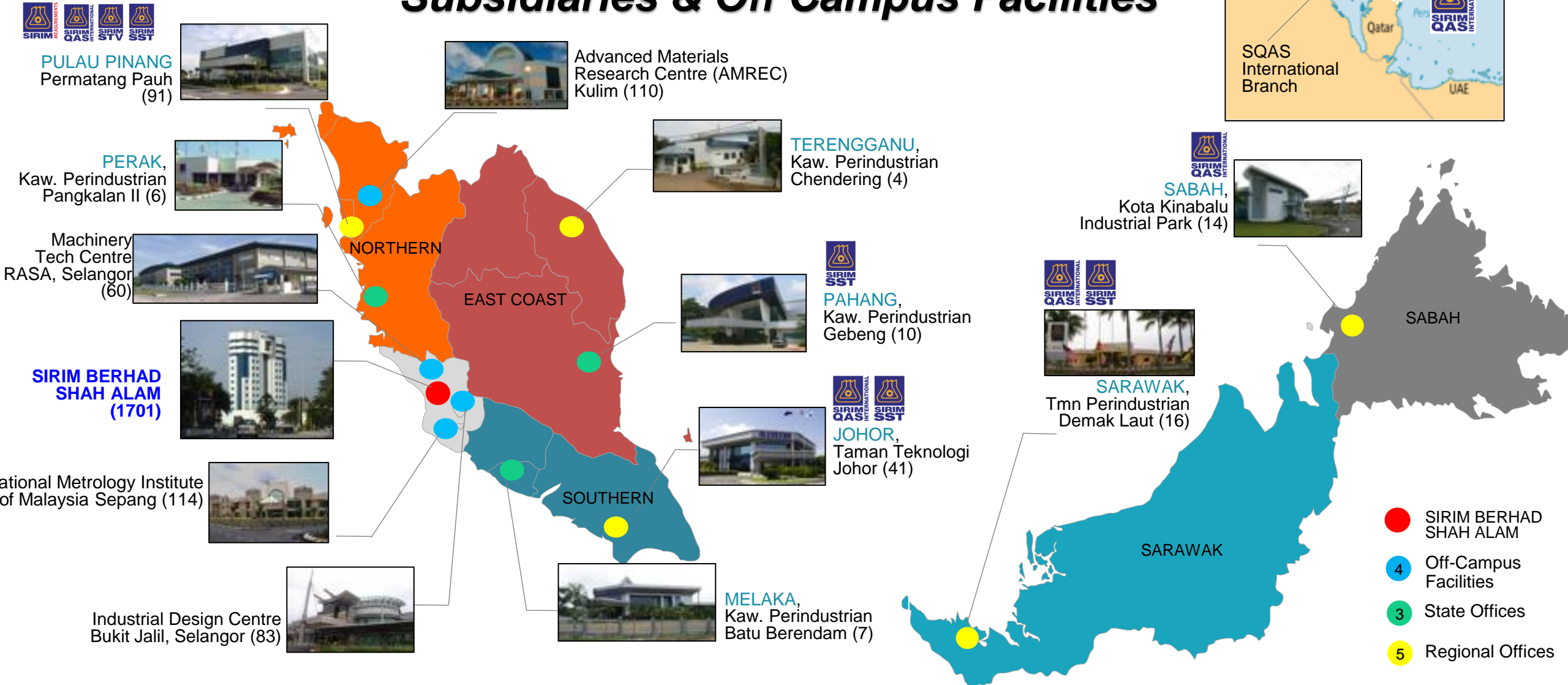
**3**

## **Society**

Improve quality of life through health, safety, environment and consumer protection

# SIRIM STATE OFFICES

## Subsidiaries & Off Campus Facilities



# SIRIM GROUP OF COMPANIES



## COMMERCIAL

- Conformity Assessment
- Training and Consulting
- Standard Research and Development
- Calibration and Measurement
- Entrepreneur Development
- Packaging and Security Design
- Commercialisation Services

SIRIM INDUSTRIAL  
RESEARCH ([SIRIM IR](#))

MAJLIS REKABENTUK  
MALAYSIA

## DEVELOPMENTAL

- Industrial Research
- Technology Innovation
- Technology Services
- Design Activities
- Design Advisory



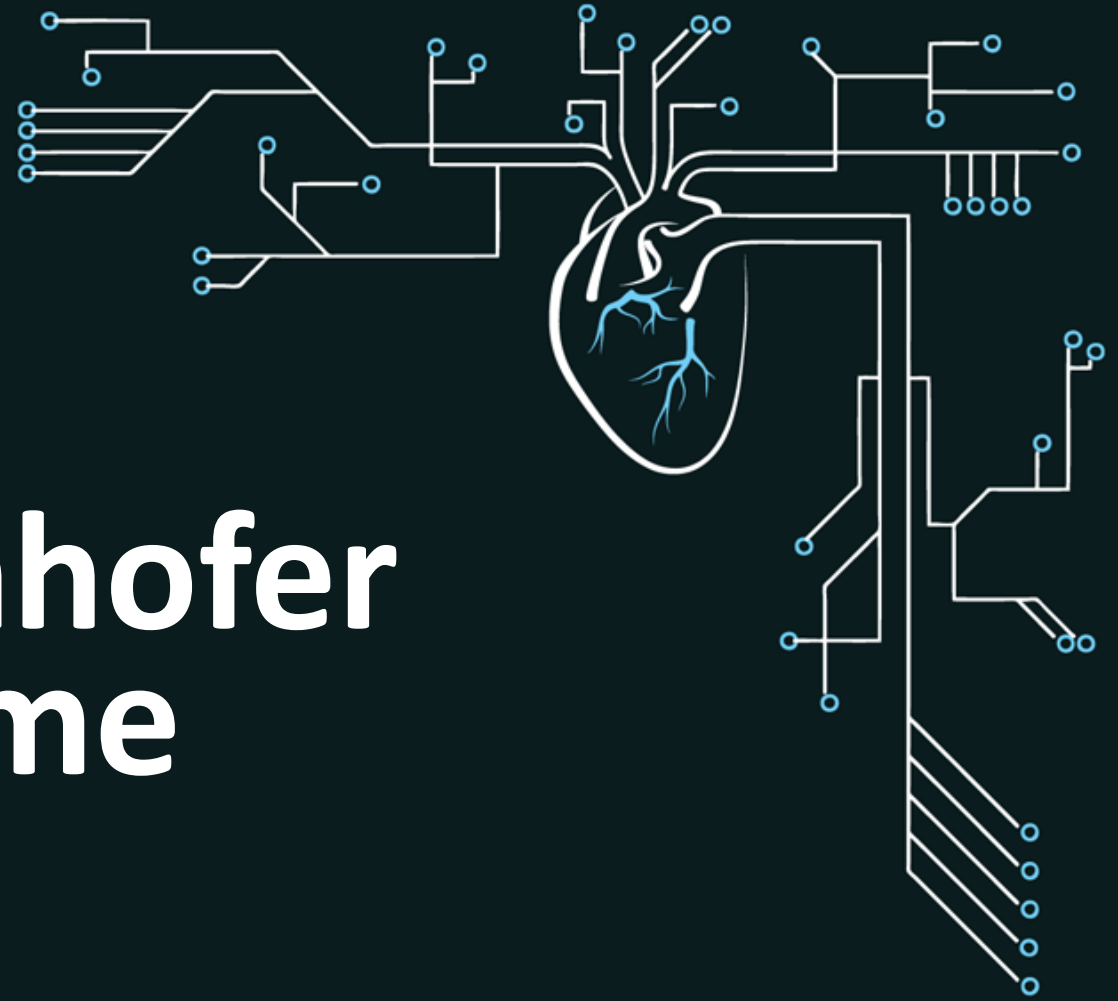
NATIONAL METROLOGY  
INSTITUTE OF MALAYSIA  
(NMIM)

## STATUTORY

- Measurement and Traceability
- R&D in Measurement  
Technology & Measurement  
Standard



# SIRIM-Fraunhofer Programme



# SIRIM-Fraunhofer Programme

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## OBJECTIVE

To improve productivity of SMEs through technology penetration and upgrading in manufacturing sector

## SIRIM-FRAUNHOFER ALLIANCE

MOU SIRIM - Fraunhofer-Gesellschaft, Germany  
Adapting Germany's approach to increase productivity of SMEs through technological innovation

## PROGRAM DURATION

Program Started - 2015  
6 years (2015 – 2020)

## ASSISTANCE FROM GOVERNMENT

Provision of grant on 80:20 principle; where 80% of the project value is from the government and 20% is the commitment from the participating SMEs. Maximum amount of funding by the government is RM200K.

## FUNDED PROJECTS

Technology related projects or competency building/training that contributes to productivity improvement of SMEs

# Program implementation

Identify  
Issues

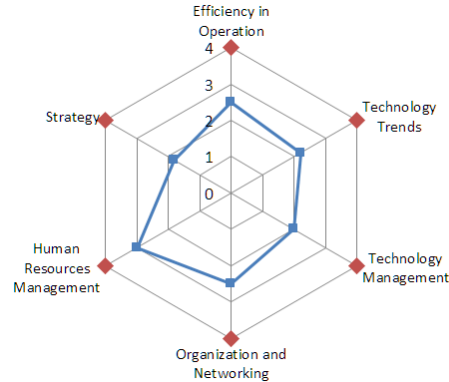


Technology  
intervention



Impact

Conduct Technology Audit and  
Client Engagement



Implement productivity improvement  
projects



Mechanisation & Automation



Plant layout and production  
process



Product development



Technical advisory  
(Design and Standard compliances)



Upgrading of technical competency



Market penetration  
(Through Packaging and Labelling)

Measure Project Impact



Inefficiency



New products  
New market  
Innovation culture

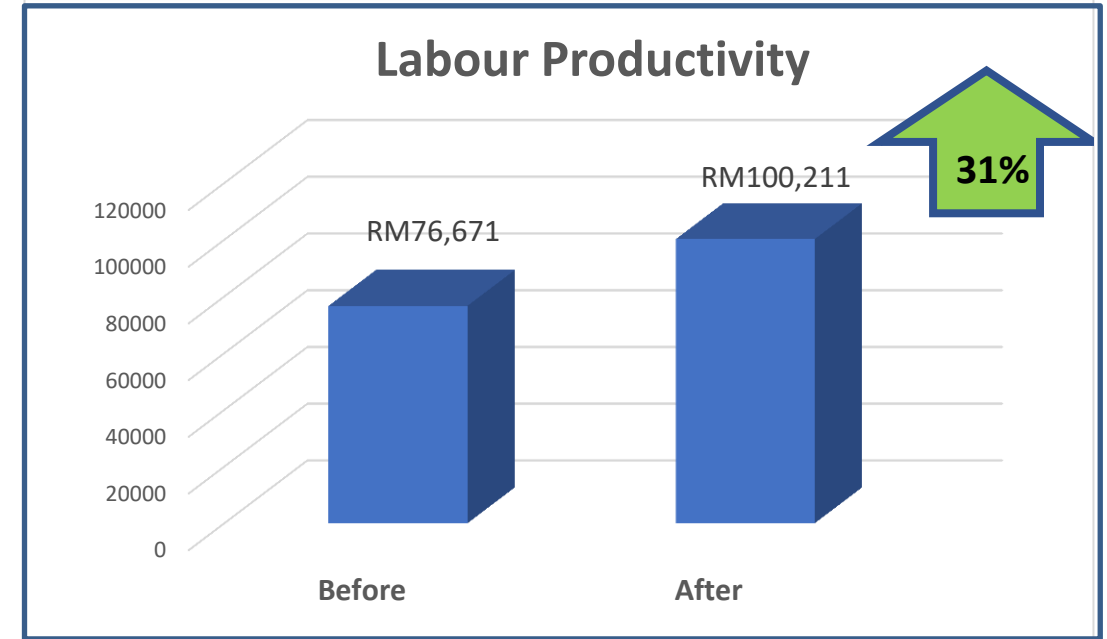
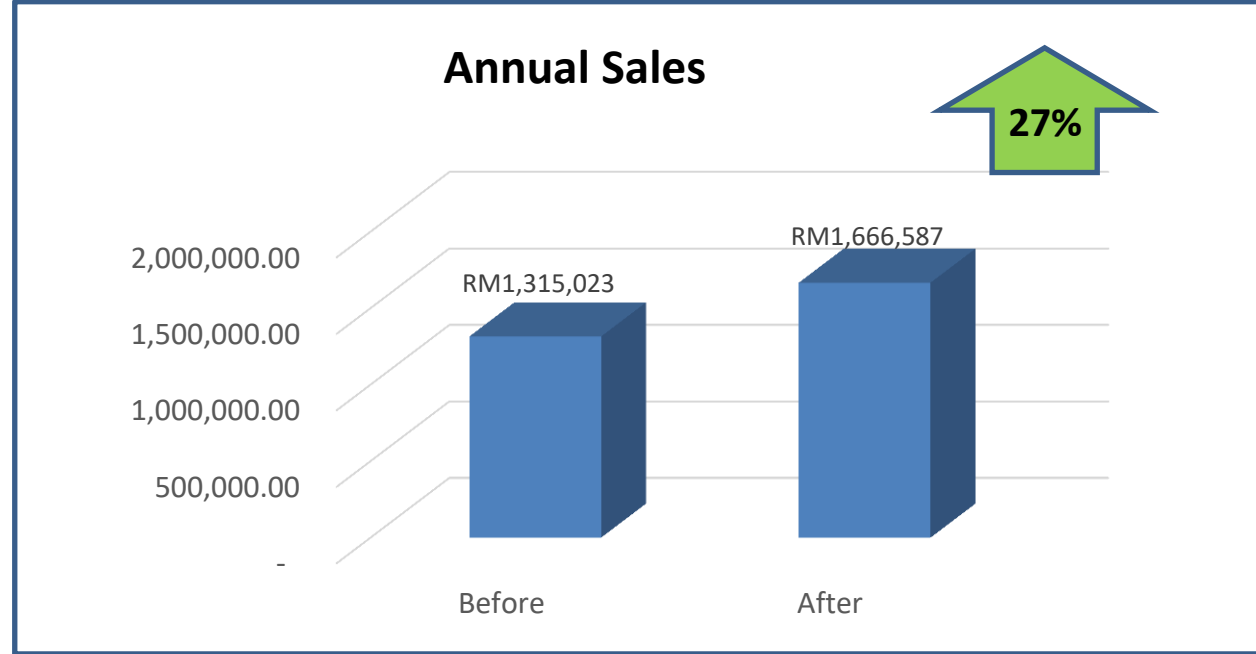


Yield  
Sales & Profit  
Level of Automation



Energy consumption  
Wastage

# Impact Analysis



- ❑ SIRIM-Fraunhofer programme increases sales through increase of output
- ❑ The programme improves labour productivity in terms of output or efficiency

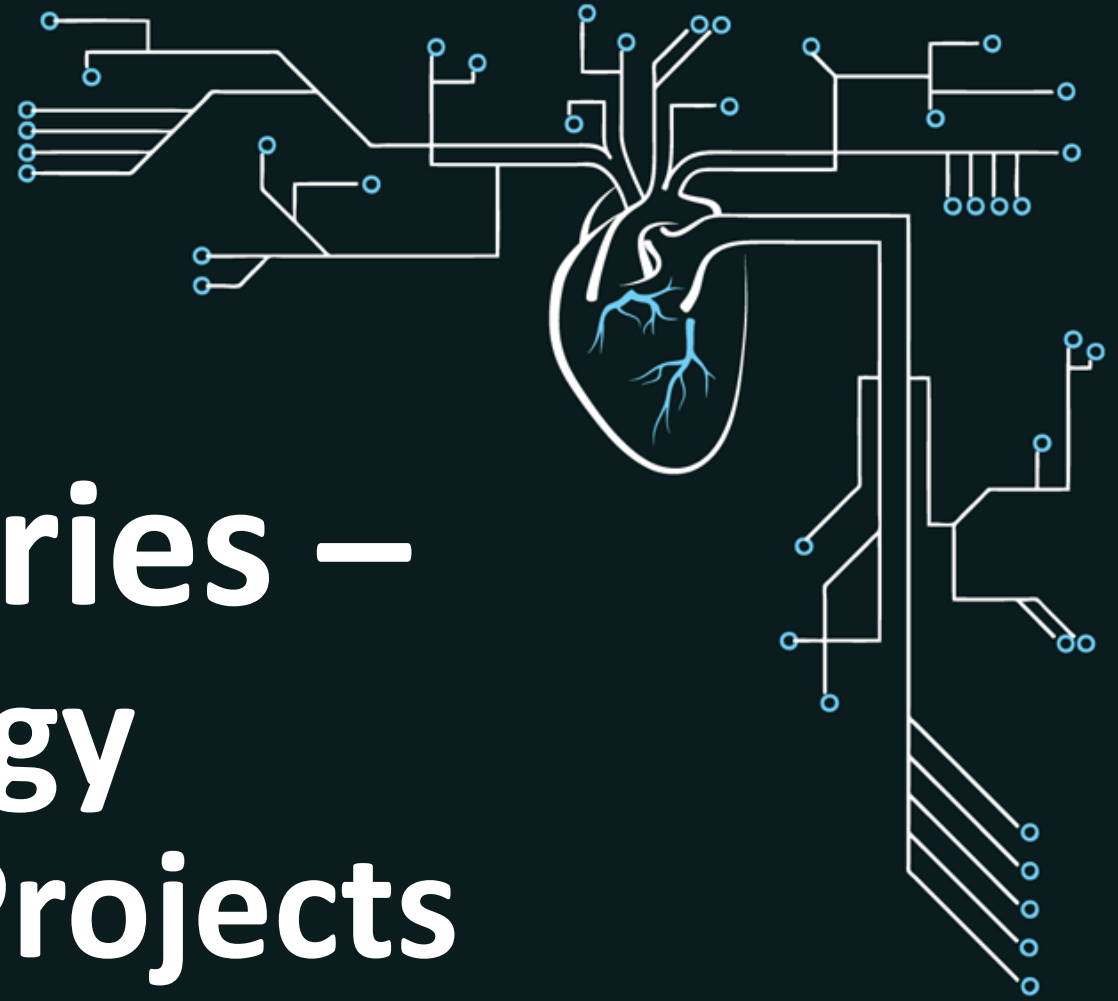
**Impact  
analysis  
conducted by**

**PUTRA**   
**Business School**  
Nurturing Human Leaders



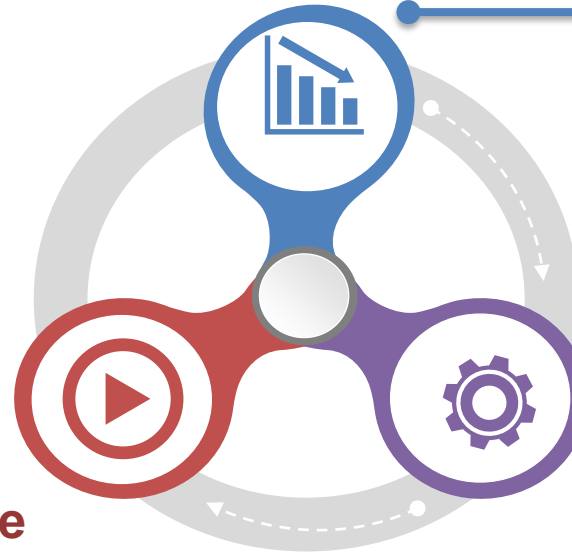


# Success Stories – Technology Intervention Projects





# Automated Fleet Management System using Auto Guided Vehicle (AGV)



## Problem

- Labour Intensive Material handling of semi-finished products
- WIP issues - FIFO issues
- Ineffective fleet management

## Solution

- Deployment of AGV with fleet management system to transfer semi-finished products from Production Line to Proofer and return (Route A) and from Proofer to Blast Freezer and return (Route B)

## Outcome



**Reduce Manhour**

830 hrs of operators time



**Eliminate Rejection**

2% or 6460 pcs per day



**Improve Product Quality**

Production Time Management



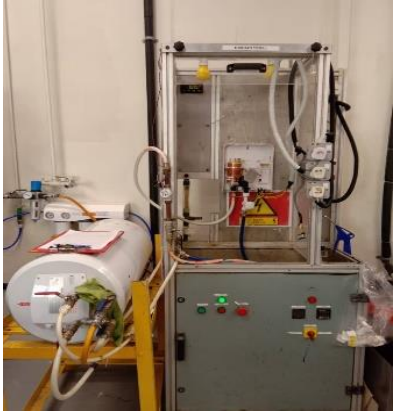
**Maximize OEE**

Seamless production flow

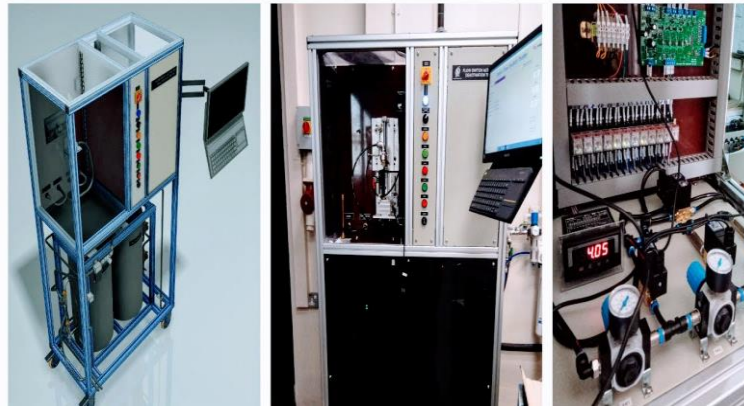
# Project : Automation in Testing of Flow Rate and Leak Testing in Production of Water Heater

## Flow Rate Testing

**Before**



**After**



## Leak Testing

**Before**



**After**



	Before	After	% Increase
Flow Rate Testing	> 4 minutes/ unit	2 minutes / unit	100%
Leak Testing	> 4 minutes/ unit	2 minutes/ unit	100%
Sales	RM 0.9 mil/month	RM 1.2 mil/month	27%

# Project: Development of Smart Oven for Drying Process

## DRYING PROCESS

Before



After



## SLICING PROCESS

Before



After

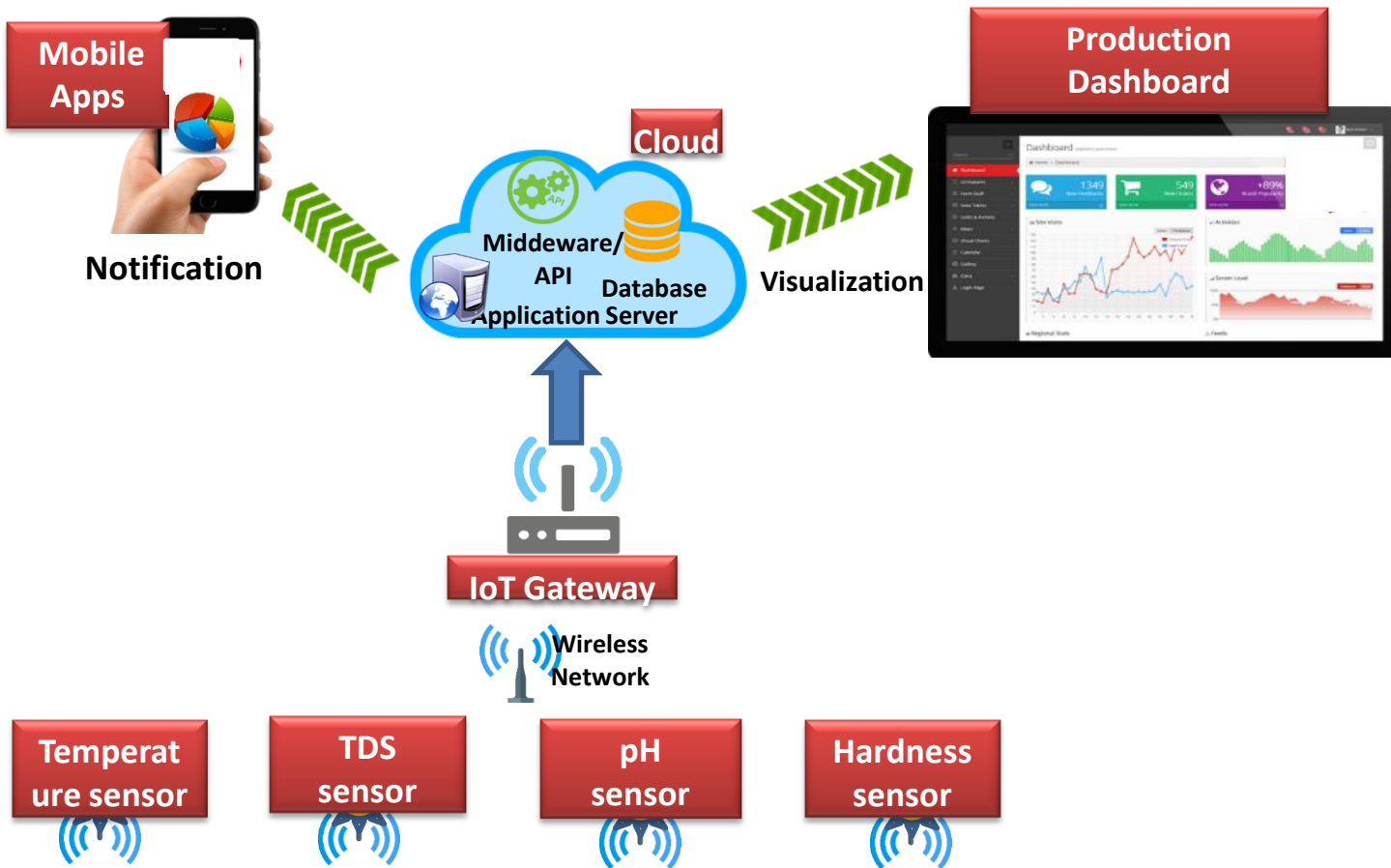


	BEFORE	AFTER
Defrost of crushed fish meat	5 hours	5 minutes
Drying of fish cracker	12 hours (depending on weather condition)	2 -3 hours
Sales	RM8000/month	RM 16,000/month

# Ongoing Projects – Monitoring and Visualisation

## Water Treatment Plant Health Monitoring

Food & Beverages Industry



### PAIN POINTS

1. Manual water quality and condition monitoring
2. Inaccurate data collection
3. No real time data
4. Delayed corrective action

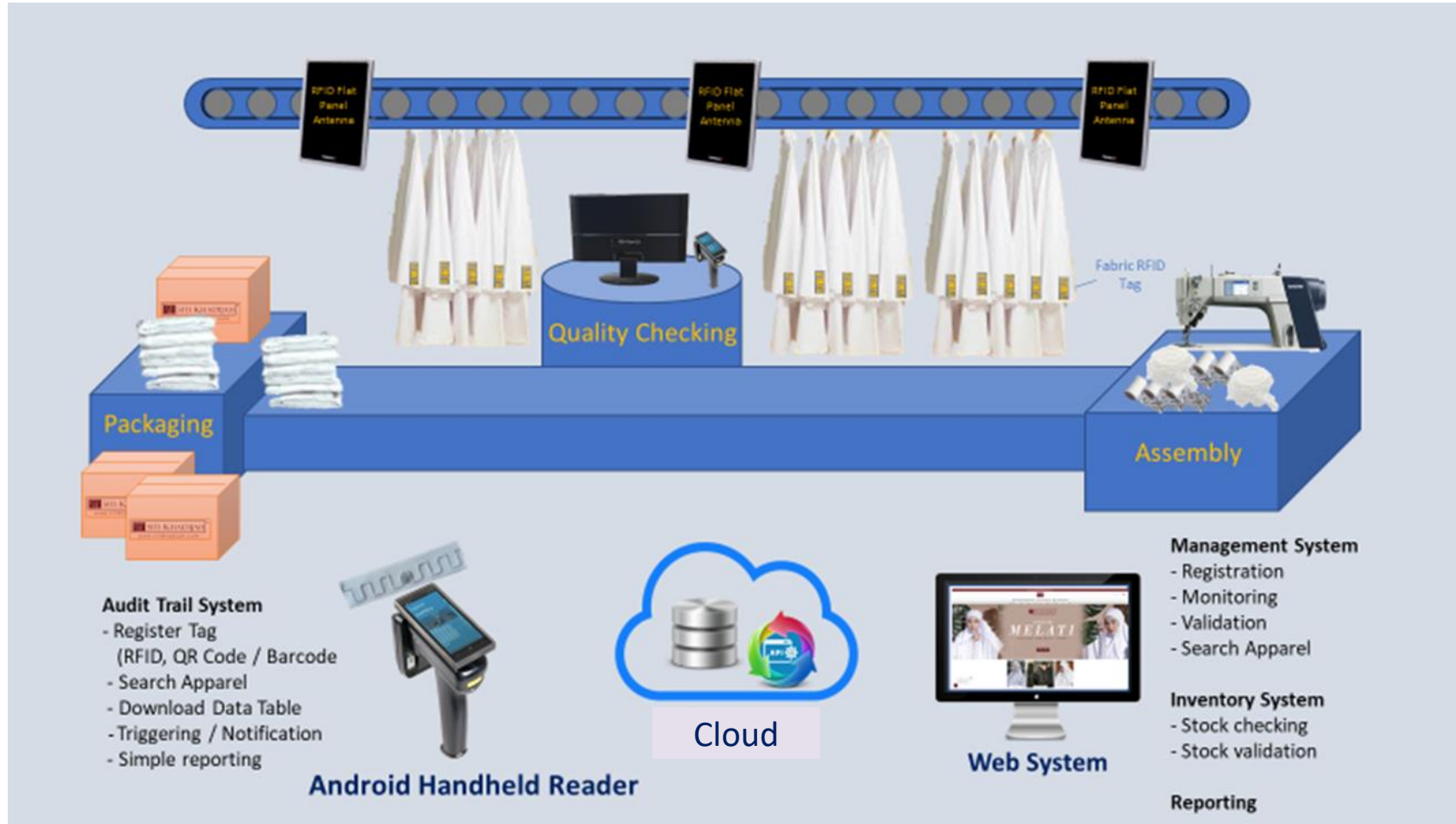




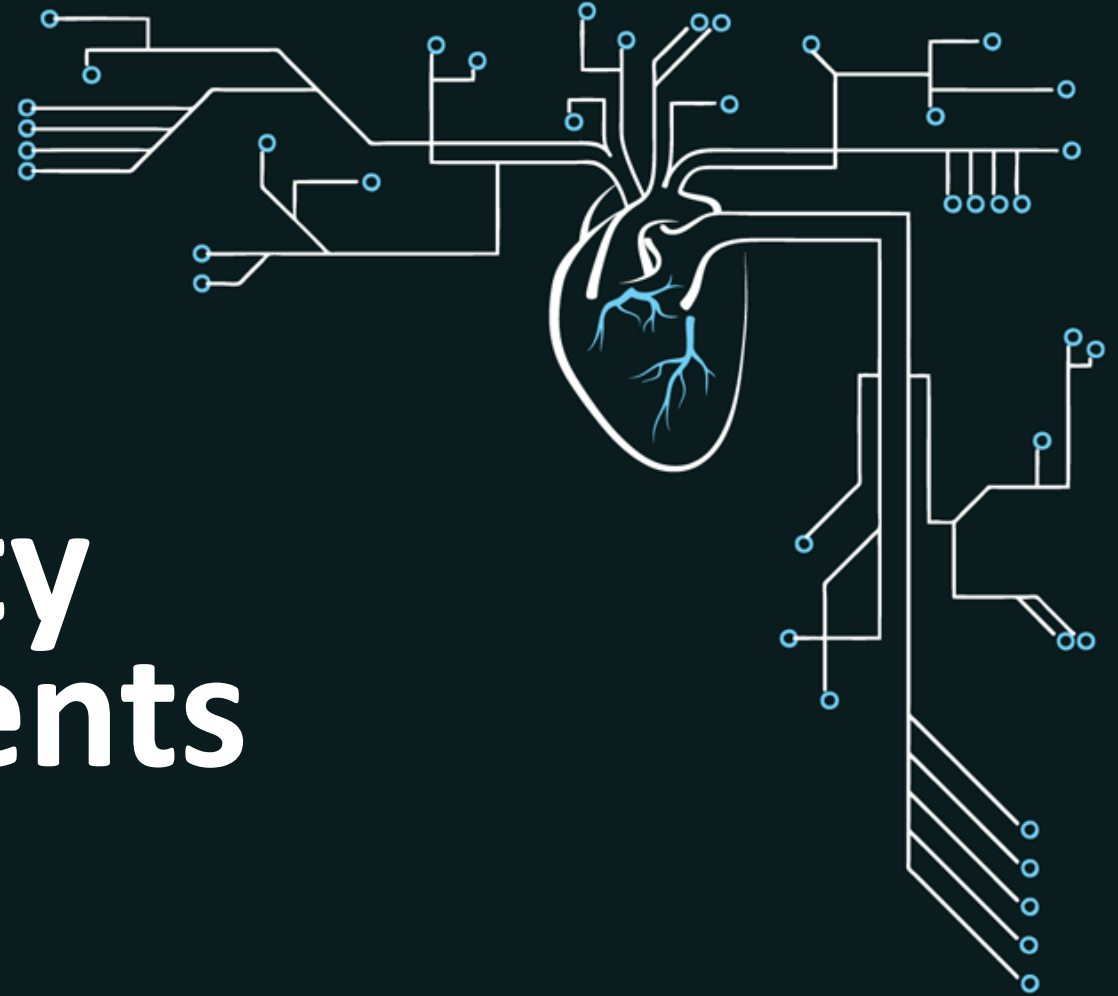
# Ongoing Projects – Track and Trace

## Finished Product Tracking and Verification System

### Textile Industry



# Eligibility requirements



# Eligibility for the Programme



In the SME category



Malaysian owned



Manufacturing sector



Has been in operation for at least 2 years



Voluntary - willing to be audited, committed in follow-up programmes, willing to commit monetary investment of 20% of project value

apply

<http://sirimtechnologyaudit.my>

SME definition for manufacturing sector;

- firms with sales turnover **not exceeding** RM50 million OR number of full-time employees **not exceeding** 200.

SMEs must be entities registered with SSM or other equivalent bodies excluding;

- Entities that are public-listed on the main board; and
- Subsidiaries of:
  - Publicly-listed companies on the main board;
  - Multinational corporations (MNCs);
  - Government-linked companies (GLCs);
- Syarikat Menteri Kewangan Diperbadankan (MKDs); and
- State-owned enterprises.

# Industry 4.0 Readiness Assessment



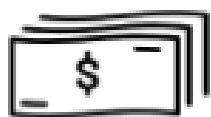
# Eligibility & How to apply?

## Who is eligible?



- ✓ Manufacturing and its related services sector
- ✓ Incorporated under the Companies Act (1965/2016)/ Registration of Business Act (1956)
- ✓ Hold a valid license
- ✓ In operation for more than 3 years

## What are the benefits?



To identify areas of improvement in terms of people, process and technology.



Receive comprehensive readiness report.



Be entitled to apply for financial incentives.

## Incentives for RA

- 500 SMEs will be selected for free assessment.
- Others will get tax exemption on RA fees up to RM27k.



## Enquiries

- General: [i4.0@miti.gov.my](mailto:i4.0@miti.gov.my)
- RA: [industry4wrd@mpc.gov.my](mailto:industry4wrd@mpc.gov.my)





# 2 programmes

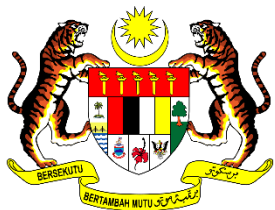
**SIRIM-Fraunhofer Programme**

<http://sirimtechnologyaudit.my>

**Industry4WRD- Readiness Assessment**

<http://www.miti.gov.my/industry4wrd>

*Thank You*



MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY



**SIRIM**

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