



Rafflesia Technology



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- ❑ Vision, Mission & Values
- ❑ Drivers

About Us

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- ❑ Directors

The Team

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- ❑ Railway System Design and Engineering
- ❑ Energy Optimization
- ❑ Power Generation Control & Automation
- ❑ Microgrid
- ❑ Project and Construction Management

Business Sector

03

□ Vision, Mission & Values

□ Drivers

About Us

01

MISSION
VISION
VALUES

Visions, Mission & Values

Uniqueness of this plant shall symbolize our business. One that merge innovative solution, quality, economy, environment stewardess and joy of realizing tomorrow's dream today for our business partners.

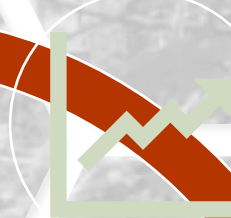

Rafflesia Technology is an Employee-Owned Company and we strive to create value for our clients and employees alike.

Drivers (Railway Electrification)

- Vision, Mission & Values
- Drivers

About Us

01




1T USD is the global estimate for railway sector by 2030 with > 50% is in Asia and SEA. CAGR is > 6%. Growth will be sustained until 2050.



Significant potential for electrification. < than 75% of passenger train is electrified globally. Lower electrification % in SEA.



Push for decarbonization of railway sector by 2050 accelerate opportunities for railway electrification





Timing right to enter the market. No local players focusing in system studies & energy optimization for railway sector

- Vision, Mission & Values
- **Drivers**


About Us

01


Drivers (Power Generation)




Significant potential for power plant automation and electrification system retrofitting and rehabilitation in Malaysia and the region.



Power plant automation and electrification is a high tech. business sector with few players in the region



Push for decarbonization of power generation sector by 2050 accelerate opportunities for Solar, Hydro and WtE opportunity



Timing is right where most of the hydro power plant retrofitting projects are up for tender with no local players



☐ The Team

☐ Organization Structure

☐ Directors

The Team

02



The Team

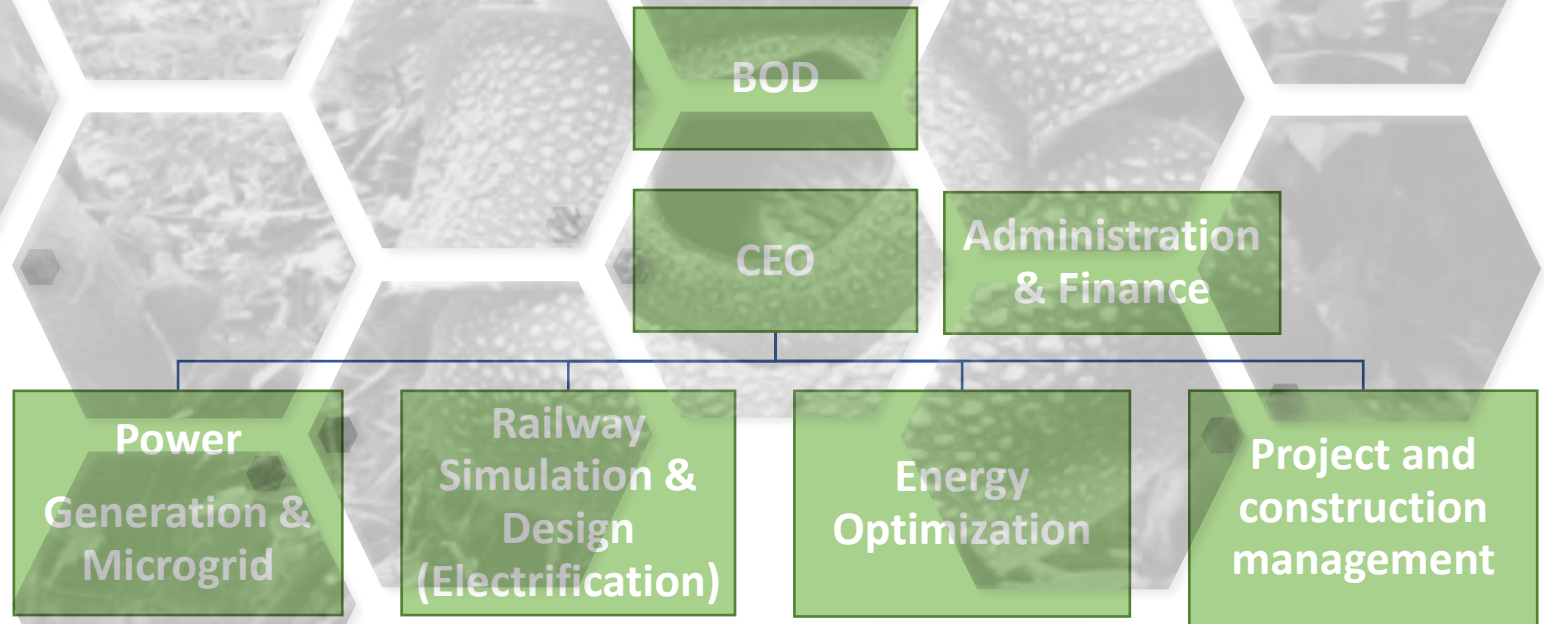
- Backed by a team with 20 - 30 year of experience in power systems planning and design in MNC and Local Organization.
- Area of expertise includes railway electrification (Mainline and metro) and power generation instrumentation, control and automation.
- Field of expertise includes project management, multi-discipline system modelling and simulation, design and engineering, testing and commissioning and operation and maintenance.
- Passionate in formulation of high technology and innovation solution with the goal that every solution is a “master-piece”.

- The Team
- Organization Structure**
- Directors

The Team

02

Organization Structure



- ❑ The Team
- ❑ Organization Structure
- ❑ **Directors**

The Team

02

EXECUTIVE DIRECTOR – PAISMANATHAN GOVINDASAMY



Professional Qualification

Paismathan holds a degree in Electrical and Electronics Engineering from University of Malaya. He graduated in 1994. He holds Master in Electrical Engineering from University of Bath UK where his area of research is on small signal stability of grid systems.

Employment History

He started his career in ABB (A Swiss and Swedish Power & Automation Company) after graduating in 1994. He holds various roles in ABB in various countries that includes Commissioning & Design Engineer for thermal power plants, Engineering Manager, South Asia Regional Technology Manager before taking over the role of Business Unit Manager of Power Generation in Malaysia. His last Role in ABB is Vice President of ABB Malaysia responsible for Power Systems and Power Products.

Paismathan left ABB after 20 years in 2014 to help to develop a Malaysian Company, PESTECH International in the area of Rail Electrification & System Works and Power Generation. He was the Chief Executive Officer of PESTECH Technology Sdn Bhd (A subsidiary within PESTECH Group responsible for Power Generation and Rail System Works) handling all aspect of the business. He retired from this role in February 2025 after 10 years at the helm of PTSB.

Professional memberships

Member of Institute of Electrical and Electronics Engineering (IEEE) and graduate member of Institute of Engineers Malaysia (IEM) and Board of Engineers Malaysia (BEM). He is currently in the Industrial Advisory Panel as board member for University of Malaya Electrical & Electronics Engineering Department. Paismathan is the founding member of Malaysian Rail Industry Consortium (MARIC) a private-public initiative under Malaysian Industry Government High Technology (MIGHT).

Biodata

Malaysian, 55 years, married with 2 children. He has not other position or directorship in any other organization.

- ❑ The Team
- ❑ Organization Structure
- ❑ **Directors**

The Team

02

DIRECTOR & CHIEF EXECUTIVE OFFICER – OOI BAN JUAN



Professional Qualification

Ooi Ban Juan holds a degree in Electrical and Electronics Engineering (First Class) from University of Malaya. He graduated in 2012. He holds Master in Business Administration from KEDGE and majored in Business Analytics, Financial Management, Strategic Innovation, Digitalization, Change Management, Supply Chain Management, Human Resource, Project Management etc.

Employment History

He started his career in ABB (A Swiss and Swedish Power & Automation Company) after graduating in 2012 as instrumentation, control and automation engineer for power plants. In this role he undertook control and automation design and commissioning for various type of power plants covering thermal, combine cycle and hydro.

He left ABB to join a Malaysian Company, PESTECH Technology Sdn Bhd (A subsidiary within PESTECH International Bhd responsible for Power Generation and Rail System Works). He holds various roles in PTSB including Lead Engineer, Engineering Manager and elevated as Principal Engineer. Ooi Ban Juan was instrumental in setting up a competent and well-respected power system modelling and simulation and traction power system design team in PTSB. He undertook lead roles in various complex projects undertaken by PTSB. He retired from in March 2025 after 10 years at the helm of PTSB engineering community as principal engineer.

Professional memberships

PEng (Malaysia) from Board of Engineers Malaysia, PTech (Malaysia) from Board of Engineers Malaysia, MIEM, CEng (Australia), A.C.P.E., CEng (UK). He is currently the alternate for Paismanathan in Industrial Advisory Panel as board member for University of Malaya Electrical & Electronics Engineering Department.

Biodata

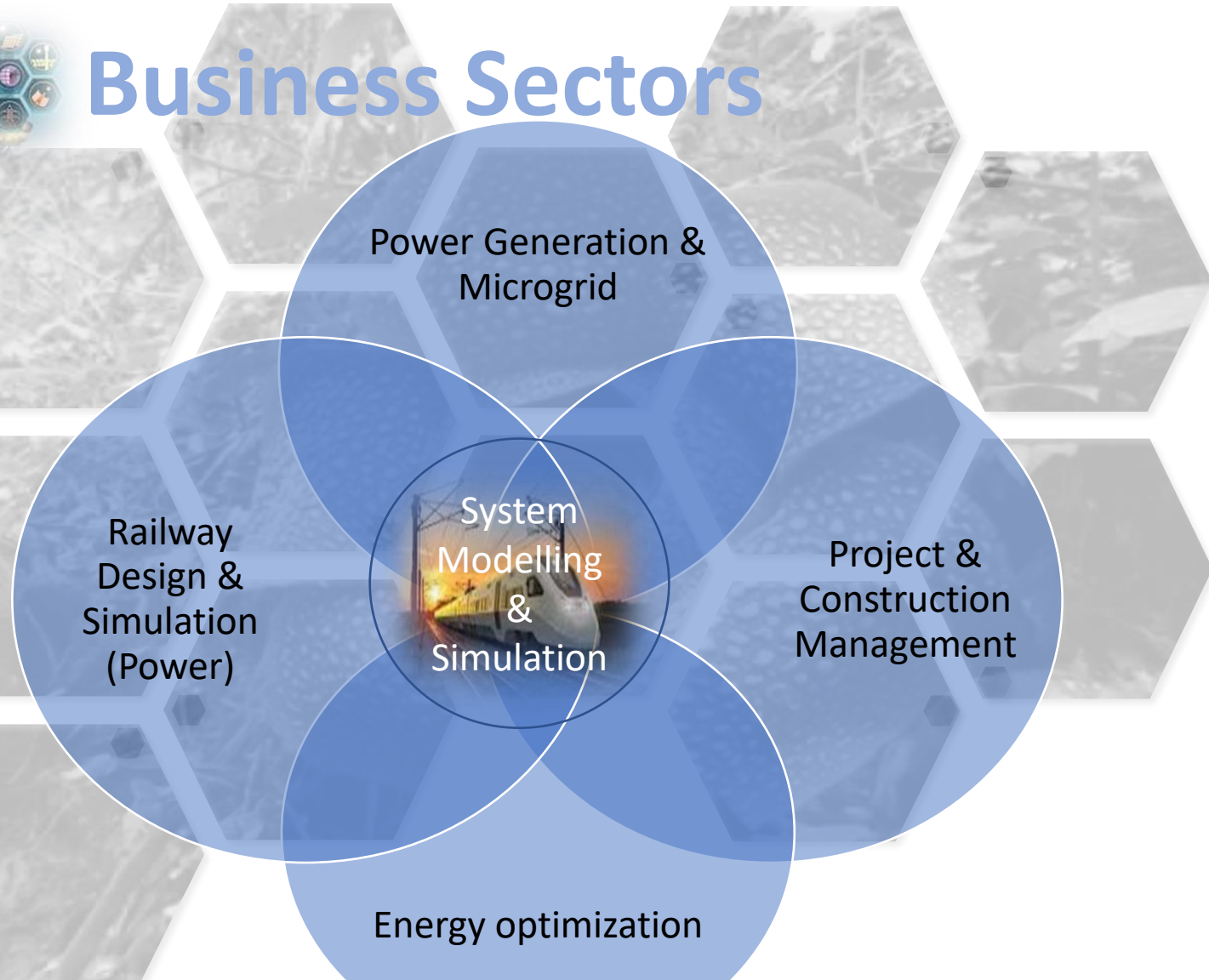
Malaysian, 35 years, single. He has not other position or directorship in any other organization. An adaptive and life-long learner who embraces new challenges.

Business Sectors

- ❑ Railway System Design and Engineering
- ❑ Energy Optimization
- ❑ Power Generation Control & Automation
- ❑ Microgrid
- ❑ Project and Construction Management

Business
Sector

03



At the heart of these business sectors are our in-depth multi-discipline system modelling, simulation, studies and multi sector design and engineering capabilities.

RAILWAY SYSTEM MODELLING, SIMULATION, DESIGN AND ENGINEERING (ELECTRIFICATION)



- The highest OPEX for railway operators is energy cost. Thus, an efficient traction power system design is paramount to ensure overall efficiency.
- We carry out in-depth system modelling and simulation for the design of traction power and overhead catenary system with safety, reliability, maintainability, ease of operation and energy efficiency in mind.
- We undertake electrification design for mainline (Intercity and Highspeed Rail) and metro system for:-
 - Traction Power System
 - Overhead Catenary System
 - 3rd and 4th Rail System
- For metro system our electrification design includes selection, sizing and positioning of regenerative energy recuperation system of type:
 - Automatic Assured Receptivity Units (AARU)
 - Traction Energy Recovery System (TERS)
 - Traction Energy Storage System (TESS)

RAILWAY SYSTEM ENERGY OPTIMIZATION



- Railway sector consume significant amount of energy due to its high traffic volume and frequency.
- Energy efficiency in this sector is paramount and contributes towards faster decarbonization goal.
- We assist existing fleets and new projects in carrying out energy optimization studies and solutions.
- Among the major initiatives are:



Time Table
Optimization

Eco Driving

Optimum
Adhesion

Station
Height -
Gradient
Profile

Reduction of
feeder losses
(OCS and
Conductor Rail)

Traction
motor
efficiency

Maximize Regen
Energy
Recuperation

Aero Dynamic
Design

POWER PLANT INSTRUMENTATION, CONTROL & AUTOMATION

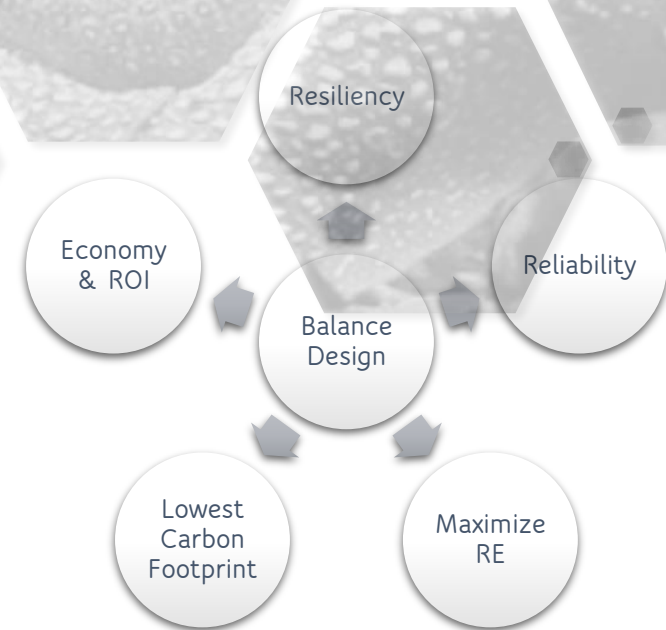
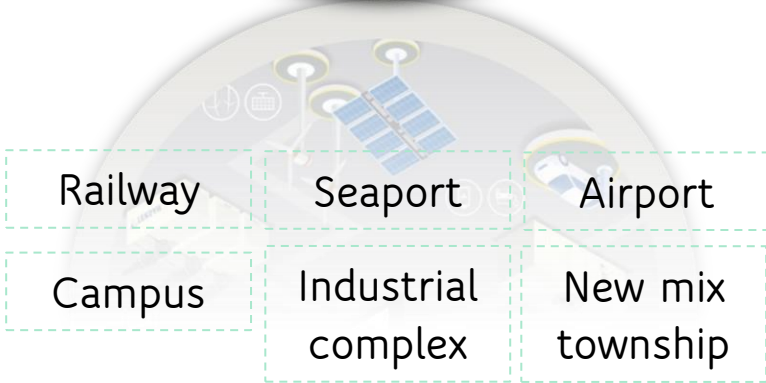


- Combine extensive experiences of our pool of engineers in deployment of power plant instrumentation, control and automation system for thermal, combine cycle, WtE and hydro plants.
- Steam, gas and hydro turbine governor upgrades.
- Deployment of generator protection, excitation system and synchronizing system.
- We undertake turnkey automation solution for both greenfield and brownfield project.
- Operator training simulators
- Integration with plant enterprise and asset life cycle management system.
- Energy efficiency and plant optimization is in the heart of our solution.
- Co-firing of biomass and SRF/RDF in existing thermal plants
- WtE process, incinerator and boiler design catering to specific waste profile

MICROGRID

- The landscape of traditional power system structure where power is generated remotely and transmitted over the long-distance interconnected transmission grid to the consumers is changing.
- Distribution network is being rapidly transformed into a self-sustaining “microgrid” capable of supplying its own load with utility as standby.
- We conduct technical and economical feasibility of microgrid deployments.

We pride in being able to carry out in-depth design to cater for every situation depending of the drives

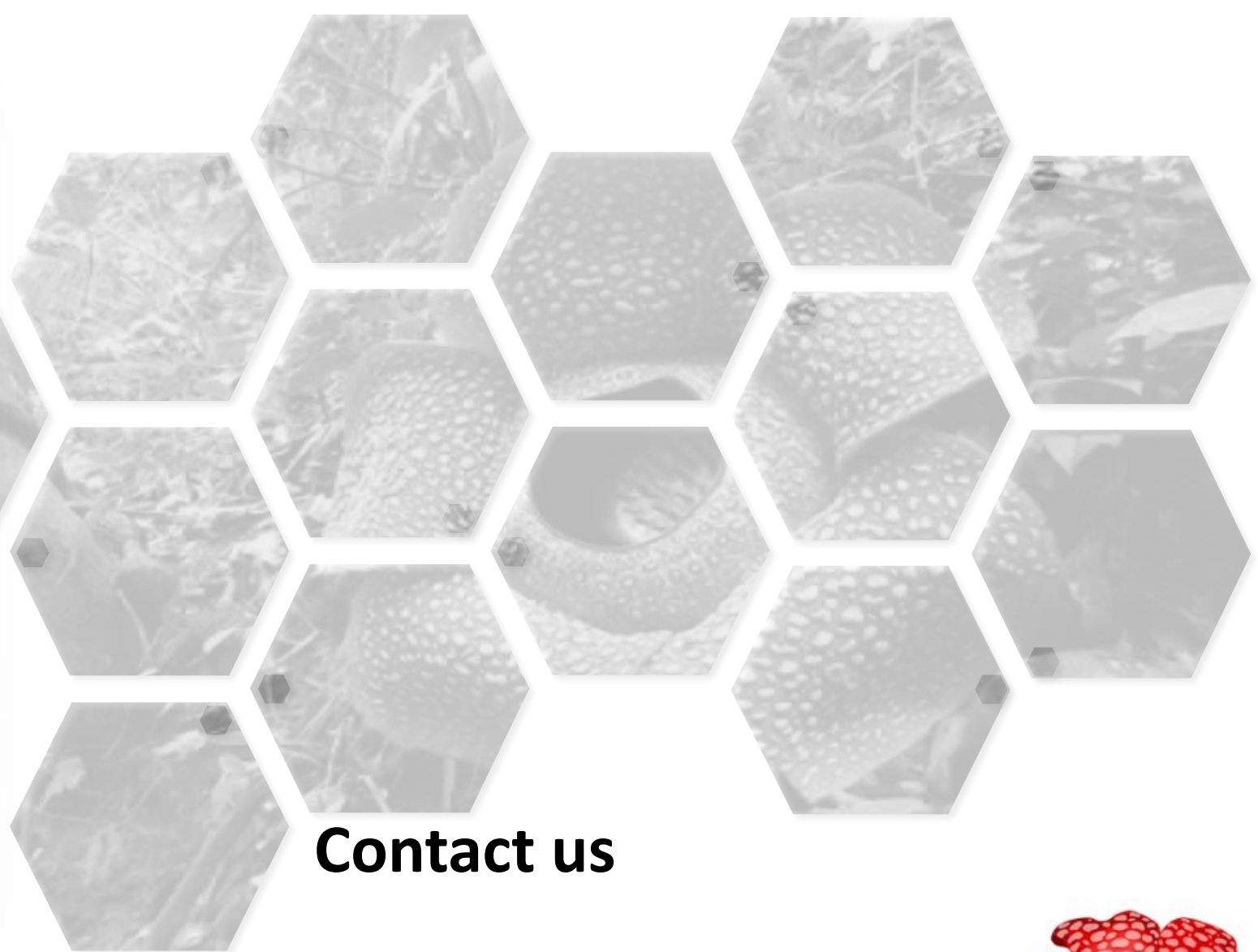


PROJECT AND CONSTRUCTION MANAGEMENT



- In the environment of fast-track projects and with strict regulatory requirements, efficient project and construction management is key to the project success.
- Backed by many years of experience in managing and constructing various type of system projects for railway sector, we are poised to be your ideal partner.
- We assist clients in risk identification, management and mitigation throughout the lifecycle of the project.
- We support the client in effective change management that often derail smooth execution of the project

Our construction planning is based on in-depth 5S planning method that ensured all pre-requisite for construction and other requirements are in place prior to the constructability gate review and start of construction.



Rafflesia Technology

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