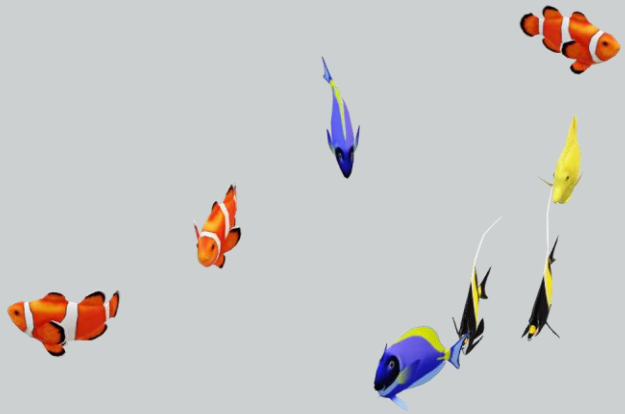
WaTTerson Technology Sdn Bhd

www.wattersontech.com



As we did so far, we try to

Ensure Clean Water for our Next Generation

A child playing in polluted water.

- According to the survey done by Food & Water Watch cities that approximately 3.5 billion people in 2025 will face water shortage mainly due to water pollution.

Address

- **Head Office**
  - No 22, Jalan TPP 1/10,
  - Taman Perindustrian Puchong,
  - 47100 Puchong,
  - Selangor, Malaysia
- Tel : 03 – 8051 2310
- Fax : 03 – 8066 6292

- Website: www.wattersontech.com

Watterson Technology Quality Policy

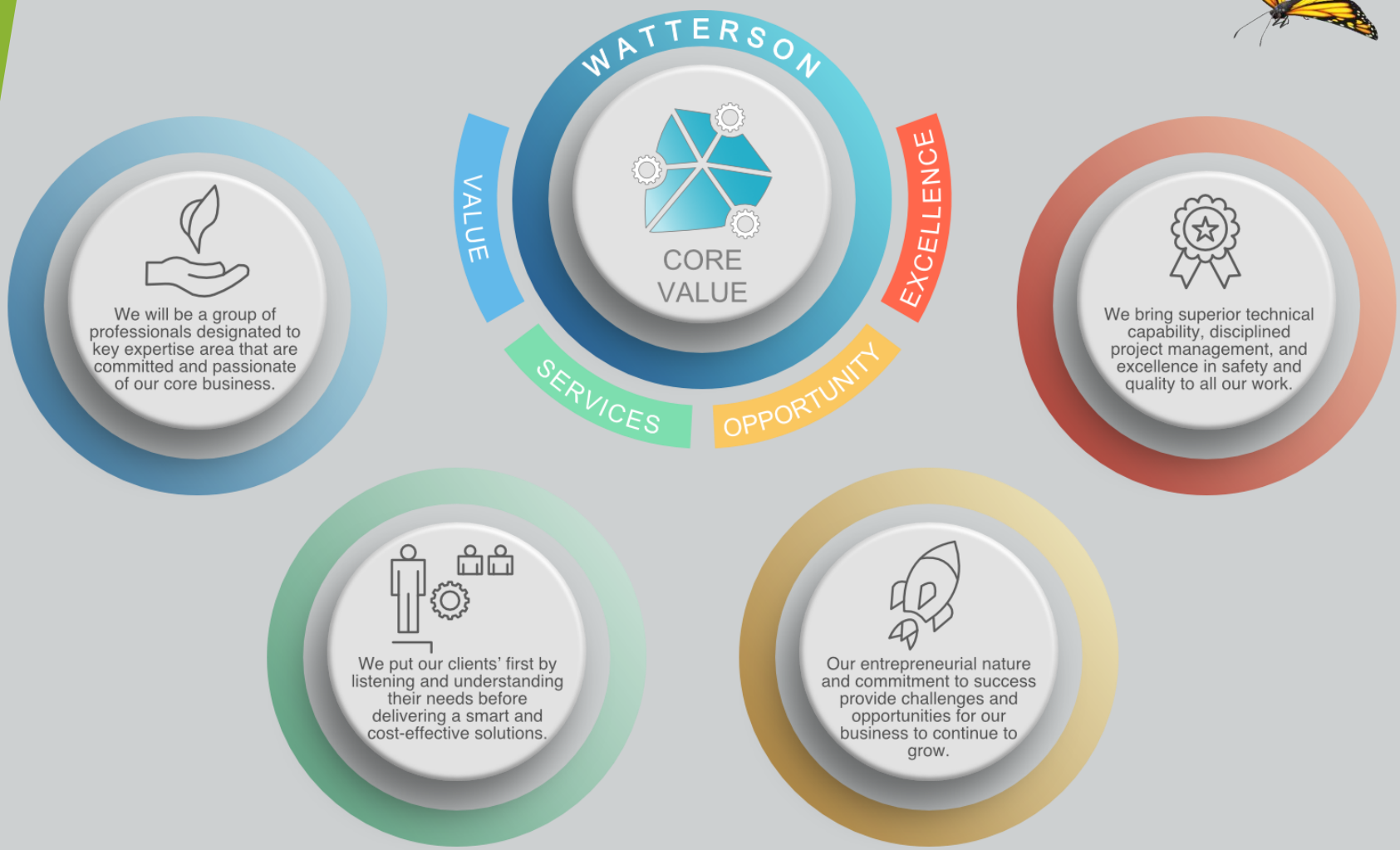
Our Vision

- We are committed to be a leading brand in water and wastewater treatment industry. We aim to be a **group of professionals** who are **committed and passionate** towards our business and core values.

Our Mission

- We are committed to **satisfy requirements** set by our interested parties such as customer, regulatory bodies and other relevant parties.
- We are also committed to **continually improve** our management system to ensure high **customer satisfaction** and provide latest technology and solutions offered in the industry.

Our Core Value



Watterson brings together the experience and know-how of

20 years of water & wastewater treatment expertise.

Certification

AJA EQS CERTIFICATION (M) SDN. BHD.

"Certified Been Arranged Worldwide"

Certificate

This is to certify that the Quality Management Systems of

WATTERSON TECHNOLOGY SDN. BHD.

have been assessed by AJA EQS Certification (M) Sdn. Bhd. and registered against the requirements of

MS ISO 9001:2015

SCOPE OF REGISTRATION

1. PROVISION OF ENGINEERING, PROCUREMENT, CONSTRUCTION (EPCC) OF WATER AND WASTEWATER RELATED PRODUCTS AND SYSTEMS
2. PROVISION OF SERVICES RELATED TO MAINTENANCE OF WATER AND WASTEWATER RELATED EQUIPMENT
3. SUPPLY AND TRADING OF WATER AND WASTEWATER RELATED EQUIPMENT, PRODUCTS AND CHEMICALS

Certificate Number	:	AJAMY18/1640
Date of Original Registration	:	05TH MARCH 2018
Date Re-registration	:	NA
Date of Expiry	:	05TH MARCH 2021
NACE Code	:	28, 29

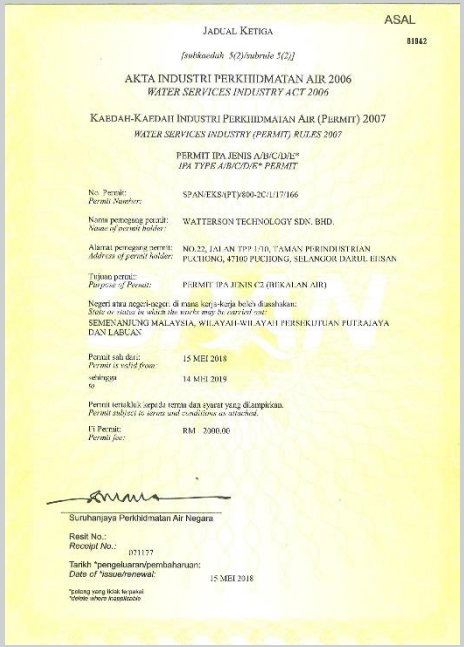
This certificate is valid from 05TH MARCH, 2018 until 05TH MARCH, 2021 & remains valid subject to satisfactory surveillance audits.

Site Registered :

NO. 22, JALAN TPP 1/10, TAMAN PERINDUSTRIAN PUCHONG, 47100 PUCHONG, SELANGOR DARUL EHSAN, MALAYSIA.

Jacqueline Francis
Group Chief Executive Officer

Satheesh Karat
Group Managing Director



ASAL

01942

JADUAL KETIGA

[subkaedah 5(2)/subrule 5(2)]

AKTA INDUSTRI PERKHIDMATAN AIR 2006
WATER SERVICES INDUSTRY ACT 2006

KAEDAH-KAEDAH INDUSTRI PERKHIDMATAN AIR (PERMIT) 2007
WATER SERVICES INDUSTRY (PERMIT) RULES 2007

PERMIT IPA JENIS A/B/C/D/E*
IPA TYPE A/B/C/D/E PERMIT*

No. Permit: / *Permit Number:* SPAN/EKSA(PT)/800-2C/1/17/166

Nama pemegang permit: / *Name of permit holder:* WATTERSON TECHNOLOGY SDN. BHD.

Alamat pemegang permit: / *Address of permit holder:* NO.22, JALAN TPP 1/10, TAMAN PERINDUSTRIAN PUCHONG, 47100 PUCHONG, SELANGOR DARUL EHSAN

Tujuan permit: / *Purpose of Permit:* PERMIT IPA JENIS C2 (HEKALAN AIR)

Negeri atau negeri-negeri di mana kerja-kerja boleh dijalankan: / *State or states in which the works may be carried out:* SEMENANJUNG MALAYSIA, WILAYAH-WILAYAH PERSEKUTUAN PUTRAJAYA DAN LABUAN

Permit sah dari: / *Permit is valid from:* 15 MEI 2018

sehingga / *to* 14 MEI 2019

Permit tertakluk kepada terma dan syarat yang dilampirkan. *Permit subject to terms and conditions as attached.*

Fi Permit: / *Permit fee:* RM 2000.00

Suruhanjaya Perkhidmatan Air Negara

Resit No.: / *Receipt No.:* 071177

Tarikh *pengeluaran/pembaharuan: / *Date of *issue/renewal:* 15 MEI 2018

*potong yang tidak berlaku
*delete where inapplicable

CIDB MALAYSIA

248594 A

PERAKUAN PENDAFTARAN

Adalah dengan ini diperakui bahawa kontraktor yang dinyatakan di bawah ini telah berdaftar dengan Lembaga mengikut Bahagian VI Akta Lembaga Pembangunan Industri Pembinaan Malaysia 1994. Pendaftaran ini adalah tertakluk kepada syarat-syarat yang telah ditetapkan di belakang Perakuan ini

No Pendaftaran: 0120080820-SL119707

Nama Kontraktor : WATTERSON TECHNOLOGY SDN. BHD.

Alamat Berdaftar : 29A, LORONG P.S.1
BANDAR PERDA
14000 BUKIT MERTAJAM
PULAU PINANG

Gred, kategori dan pengkhususan berdaftar

G5 ME M15

Tarikh Mula Berkuatkuasa : 08 JUN 2016

Tarikh Habis Tempoh Perakuan : 14 APR 2019*

*Perakuan ini hendaklah diperbaharui selewat-lewatnya 60 hari sebelum tarikh habis tempoh.

STATUS : AKTIF - Kontraktor yang diawardkan projek semasa perakuan pendaftaran ini dikeluarkan.

(Sr MOHD ZAID ZAKARIA)
b.p. Ketua Eksekutif

Bertarikh: 23 JUN 2016

AJA EQS CERTIFICATION

STANDARDS MALAYSIA
ACCREDITED CERTIFICATION BODY

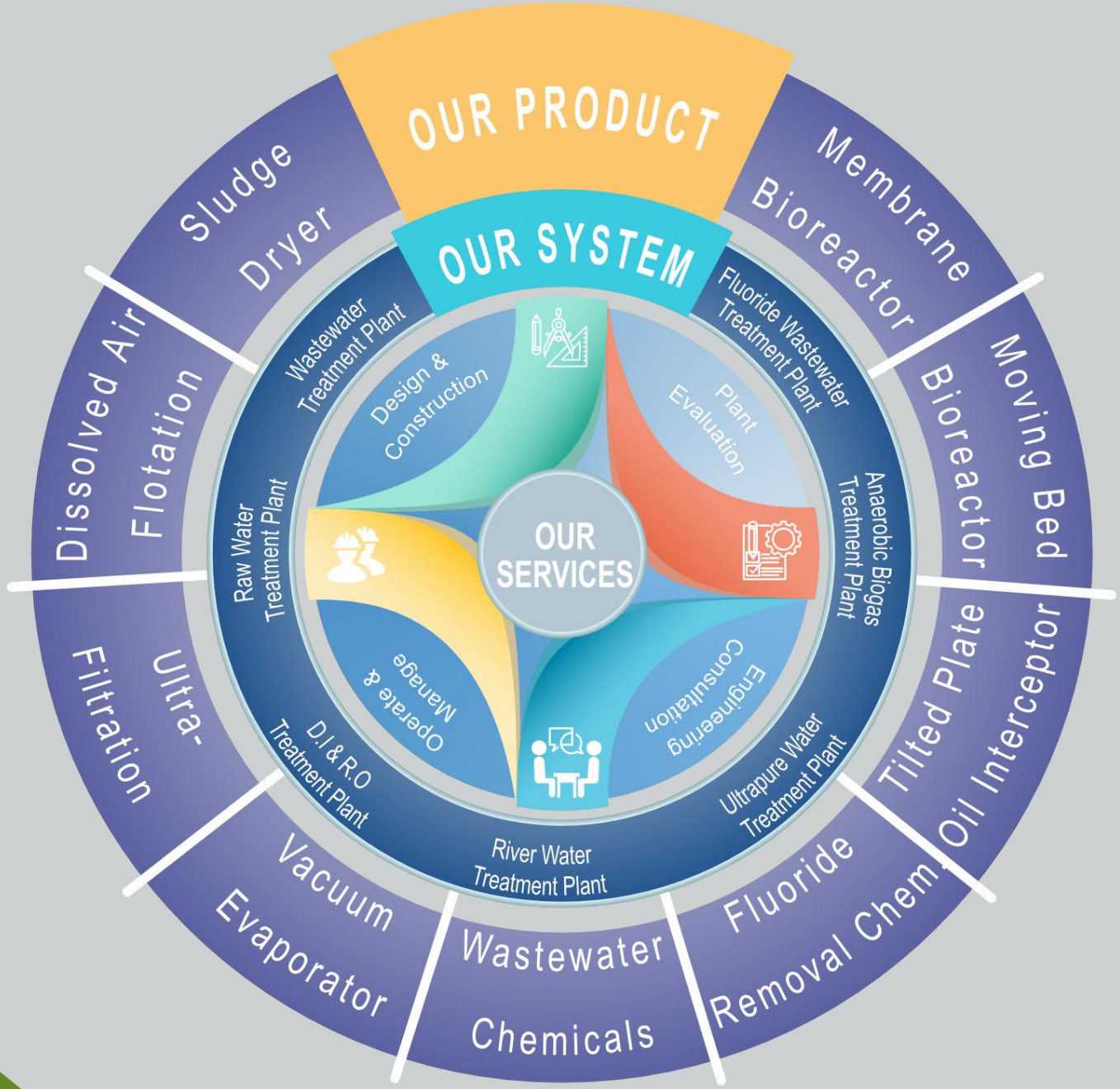
ISO 9001:2015

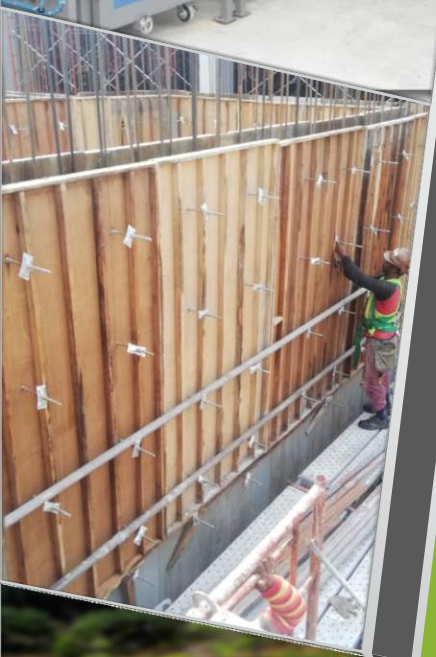
No Akreditasi:
QS 29072008 CB 08

Cert. No: AJAMY18/1640

SPAN®
Suruhanjaya Perkhidmatan Air Negara

CIDB
MALAYSIA


OUR PRODUCT
OUR SYSTEM
OUR SERVICES
Sludge Dryer
Membrane Bioreactor
Dissolved Air Flotation
Moving Bed Bioreactor
Ultra-Filtration
Tilted Plate Oil Interceptor
Vacuum Evaporator
Wastewater Chemicals
Fluoride Removal Chem
Wastewater Treatment Plant
Fluoride Wastewater Treatment Plant
Raw Water Treatment Plant
Anaerobic Biogas Treatment Plant
D.I & R.O Treatment Plant
Ultrapure Water Treatment Plant
River Water Treatment Plant
Design & Construction
Plant Evaluation
Operate & Manage
Engineering Consultation



Our Capabilities & Services

Design, Build, Install & Commission

Wastewater & Water Treatment System for :

- Ultrafiltration, reverse osmosis,
- Domestic , Ultra Pure water filtration/treatment
- Demineralization (DI Water) and water softener
- Wastewater Chemical treatment (Clarifier & DAF) and Biological System (MBR, MBBR, CAS, ANAEROBIC IC REACTOR)

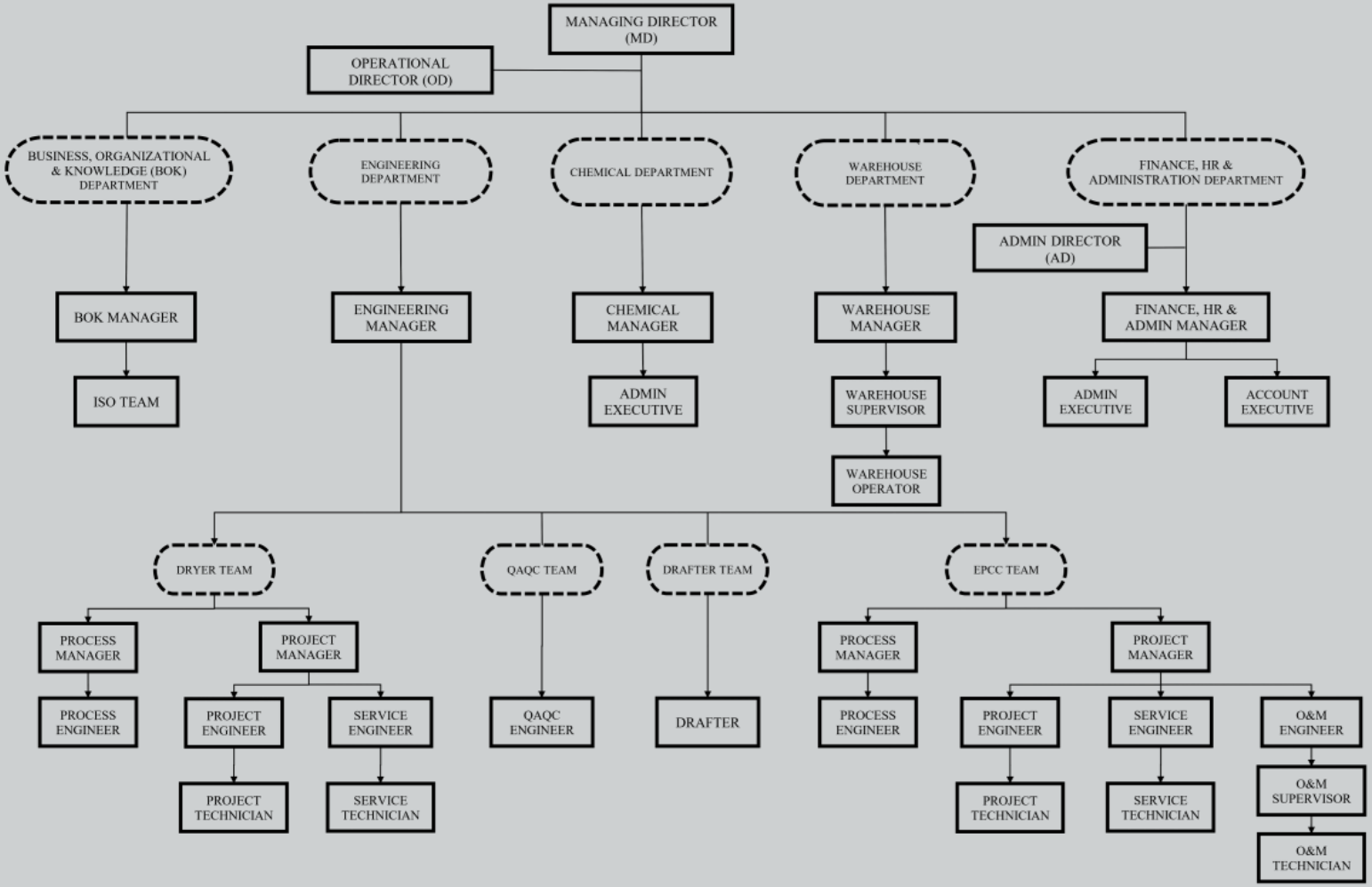
Sludge Management

- Sludge Dryer System
- Sludge collection for energy fuel

Other Services

1. Operation & Maintenance of Plant.
2. Proprietary Chemical Treatment
   - Fluoride removal.
   - Colour removal.
   - Manganese removal.
3. System evaluation for Upgrading, Technical support & trouble shooting
4. Wastewater Characteristics Studies
5. In-house Laboratory
6. DOE Submission

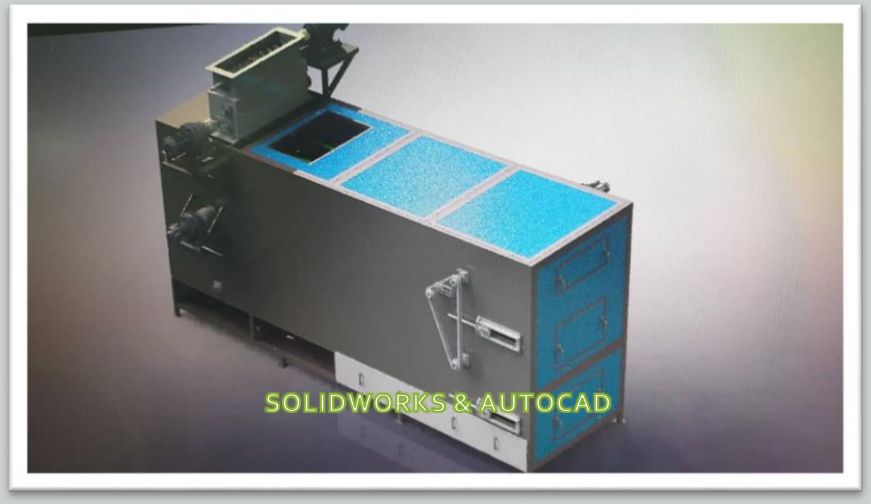
WATTERSON TECHNOLOGY SDN BHD – Organizational Chart



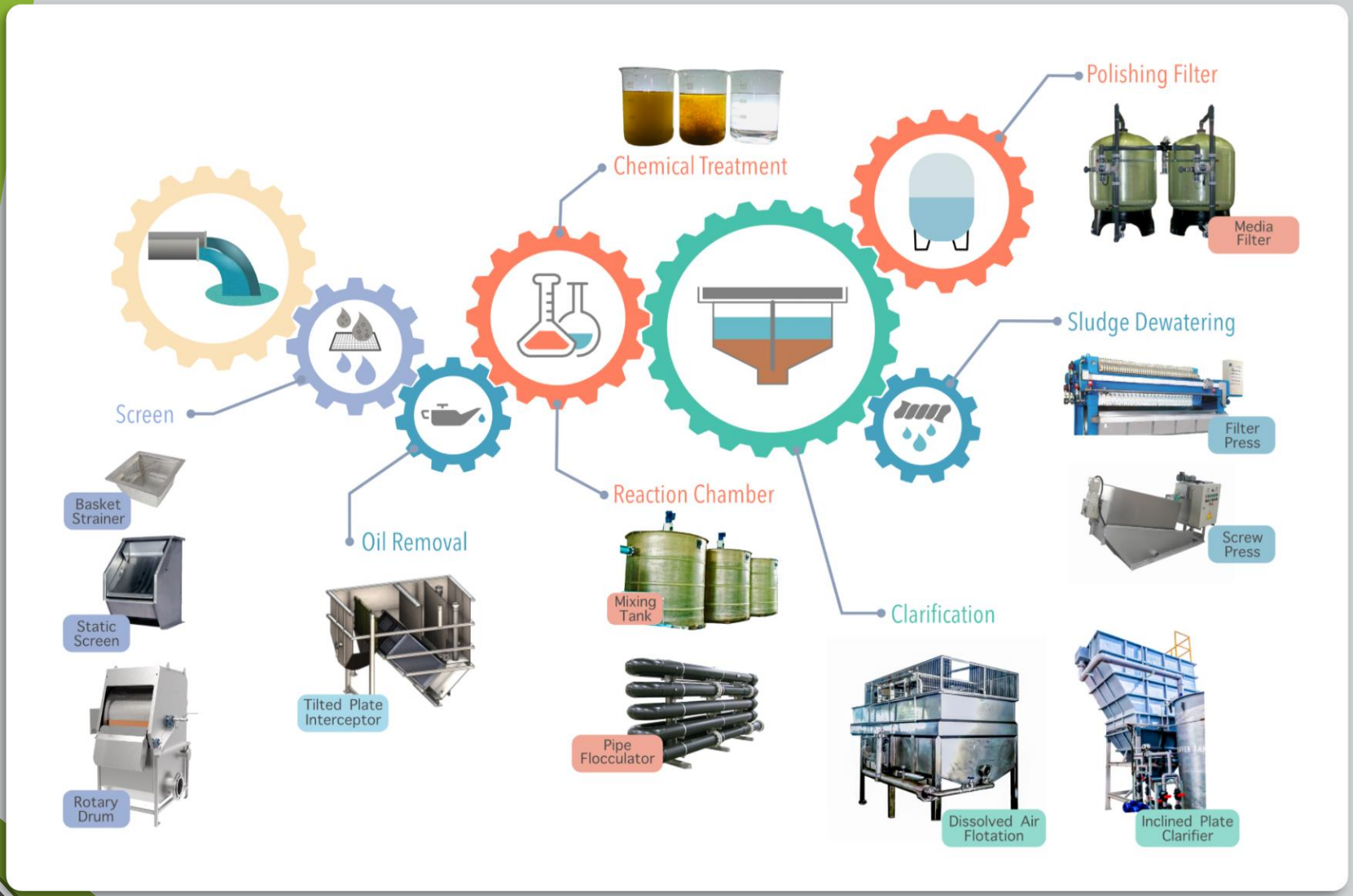
Our Professional Team

Our Engineering team comprises of :

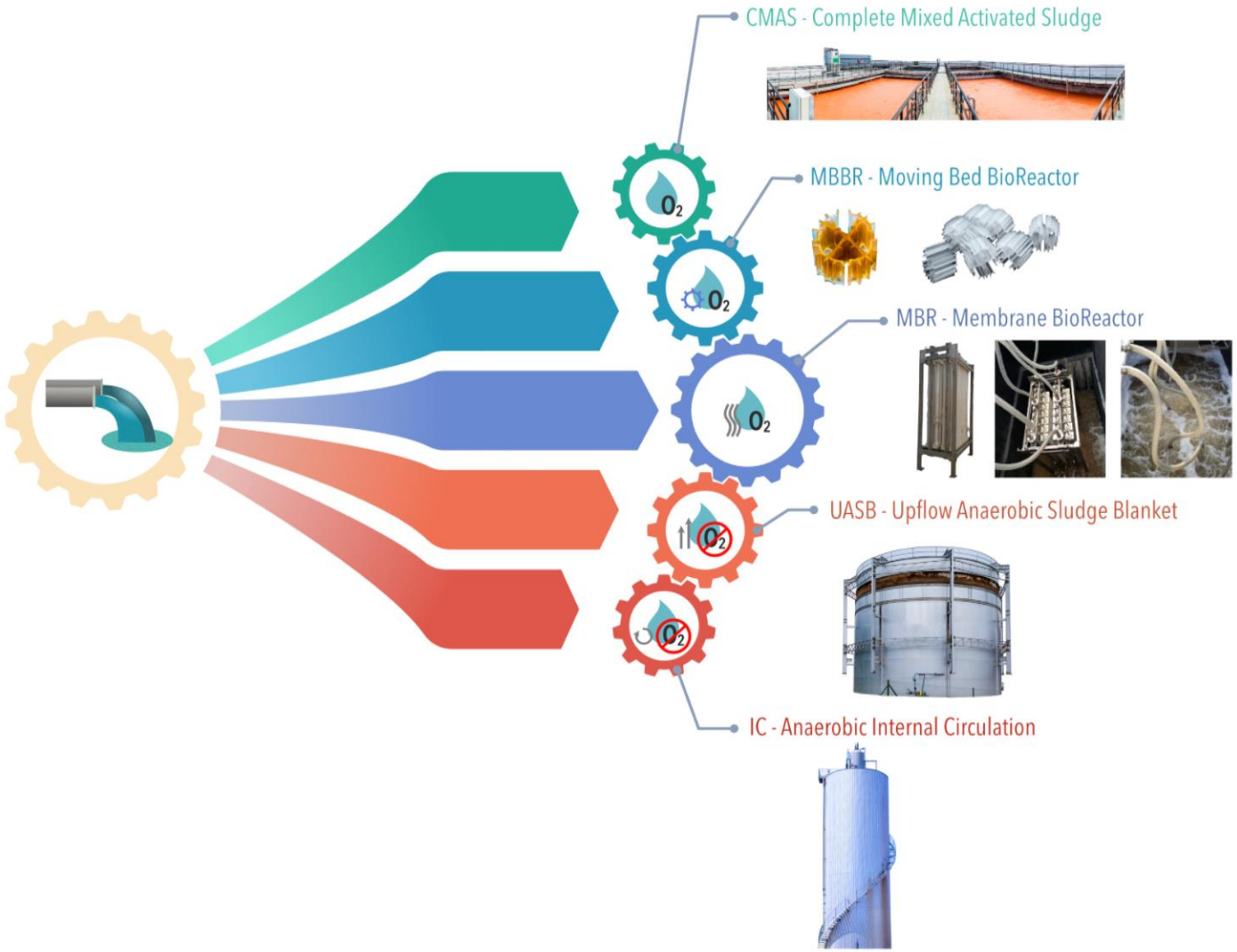
- Process Engineer using Solidworks, Autocad & In-house Design Calculation.
- Site Engineer for site execution
- Chemist for jar test & lab analysis.



TYPICAL WASTEWATER PRIMARY TREATMENT

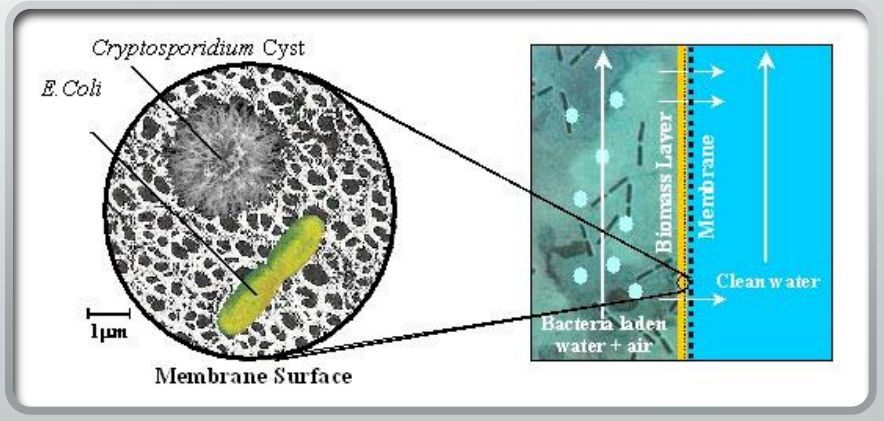


TYPICAL BIOLOGICAL TREATMENT



Membrane Bio Reactor (MBR)

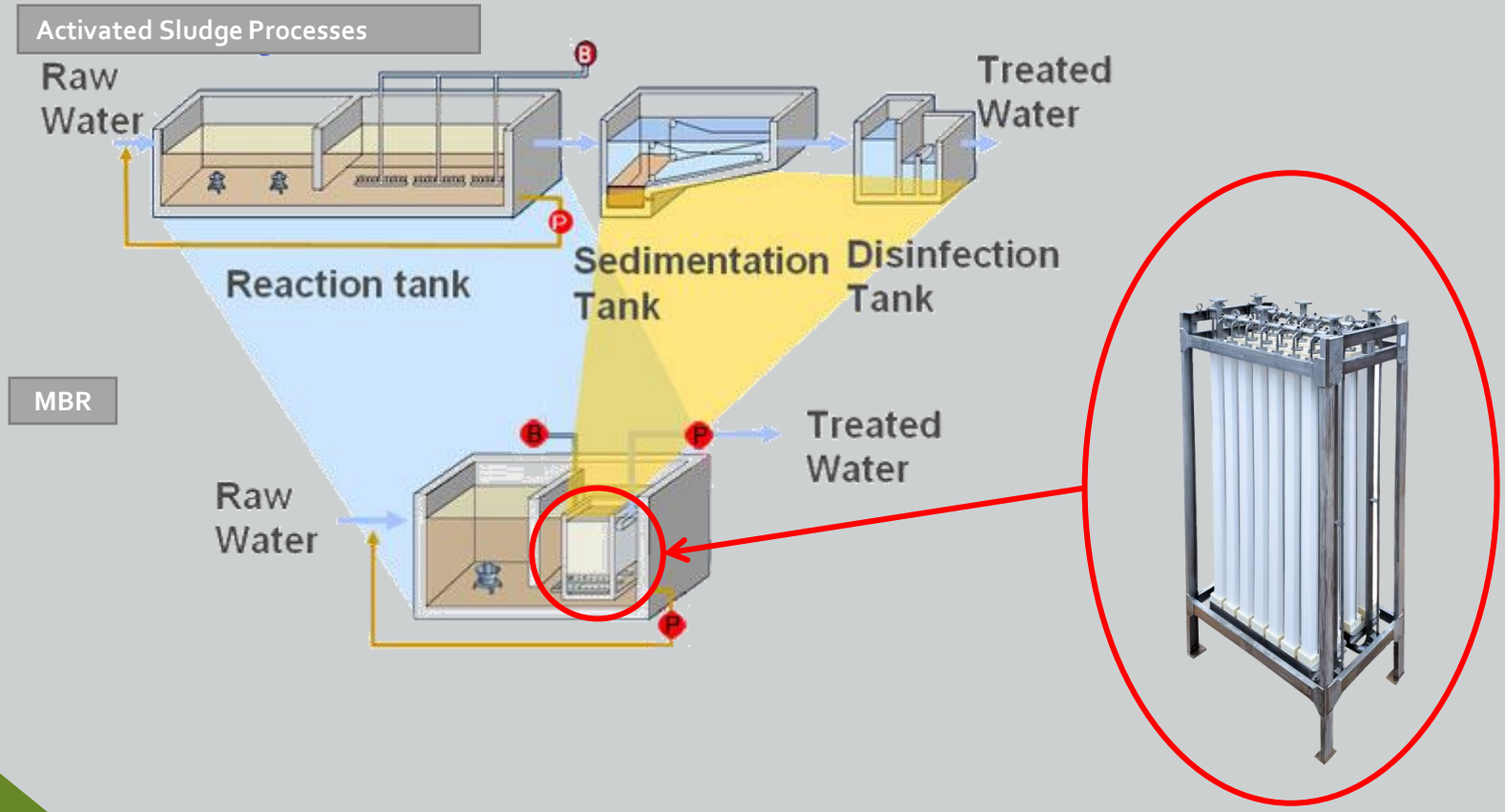
SUMITOMO ELECTRIC



- The Technology
  - MBR technology utilizes hollow fibers ultrafiltration submerged membranes integrated in a biological process.
  - The MBR Module is submerged directly into the aeration tank. The filtrate is drawn through and out of the membrane filter by a slightly negative pressure.
  - A low suction applied to the internal section of fibers, it is possible to achieve an efficient solid separation (outside-inside) without further clarification and tertiary treatments.

Membrane Bio Reactor (MBR)

MBR Vs CAS



MBR Advantages

Small Foot Print

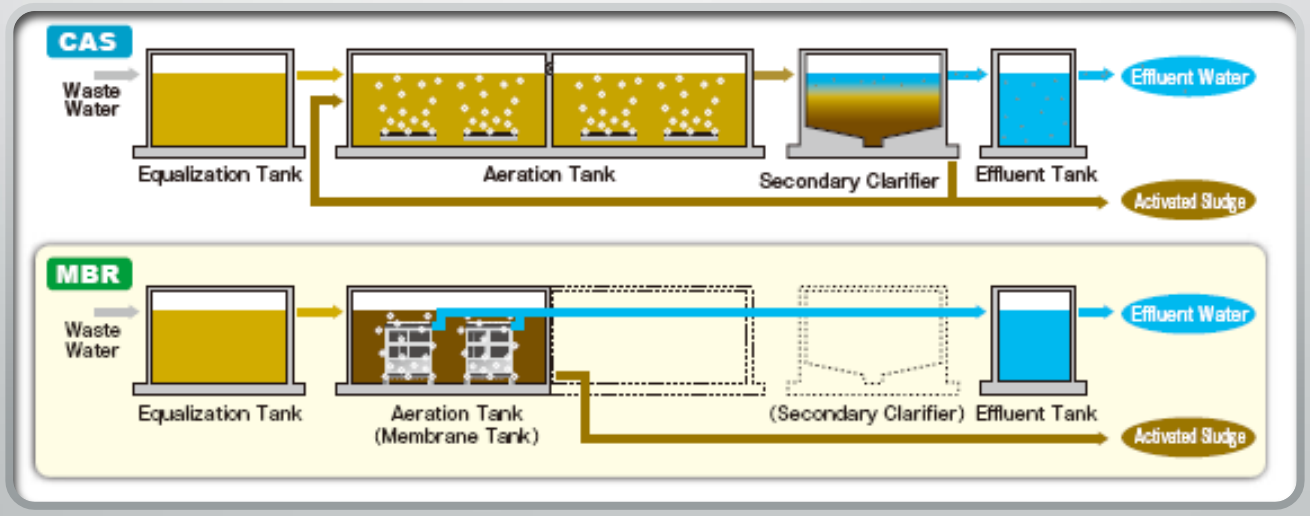
- MBR footprint is 75% smaller than that of a conventional activated sludge (CAS) system
- MBR operate upto **4.4kg BOD/m³/day** compare to CAS 0.7kg BOD/m³/day i.e. Aeration tanks for MBR is only 15-25% of CAS.

Excellent Treated Water Quality

- MBR Permeate COD < 50ppm, BOD < 20ppm

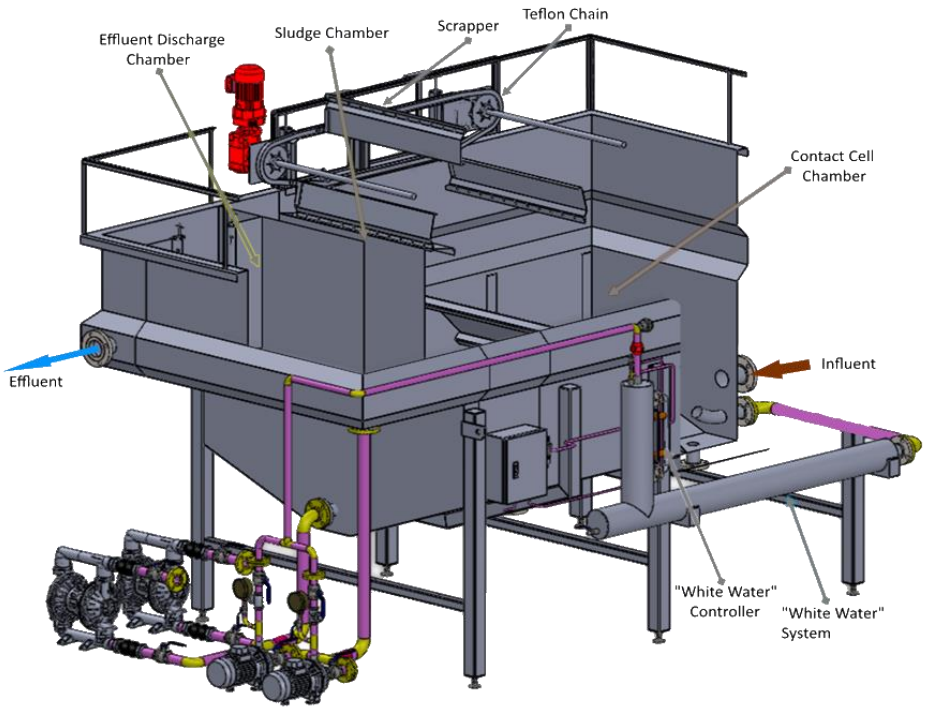
Stable biological operation

- Able to receive high COD shock load without upset



Dissolved Air Floatation (DAF)

- The Technology
  - DAF is the process of removing suspended solids, oils and other contaminates via the use of air bubbles floatation.
  - The bubbles and contaminants rise to the surface and form a floating bed of material that is removed by a surface skimmer into an internal hopper for further handling.
  - A percentage of the clean effluent is recycled into the saturation vessel, where it is mixed together with air; the mixture is pressurized until reached certain level and then it is injected into DAF separation chamber where the dissolved air is released in the form of micro bubbles that attach to the contaminants.



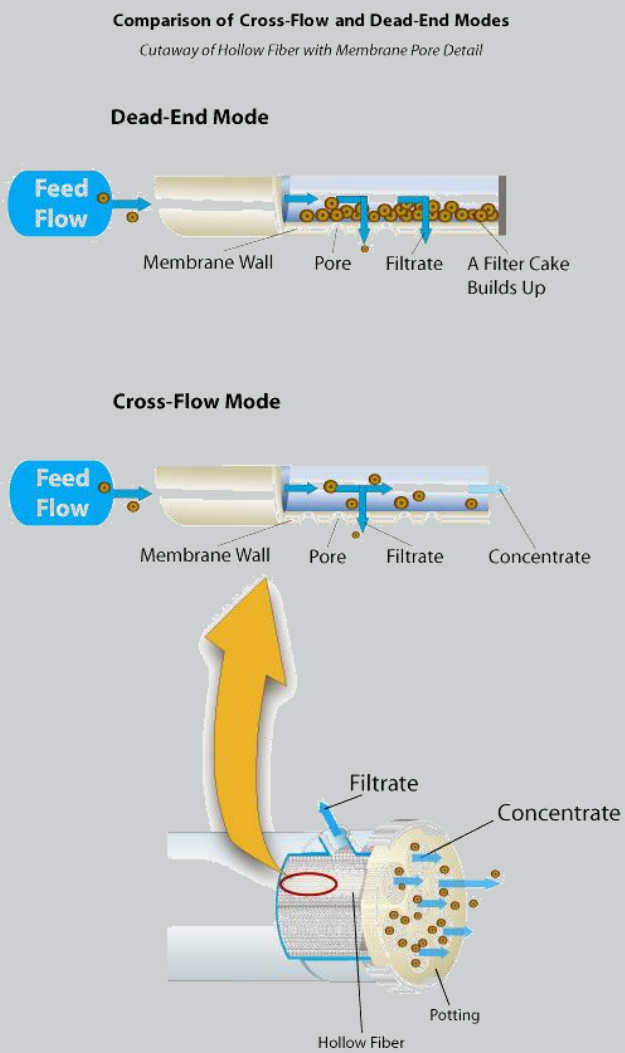
Dissolved Air Floatation (DAF)

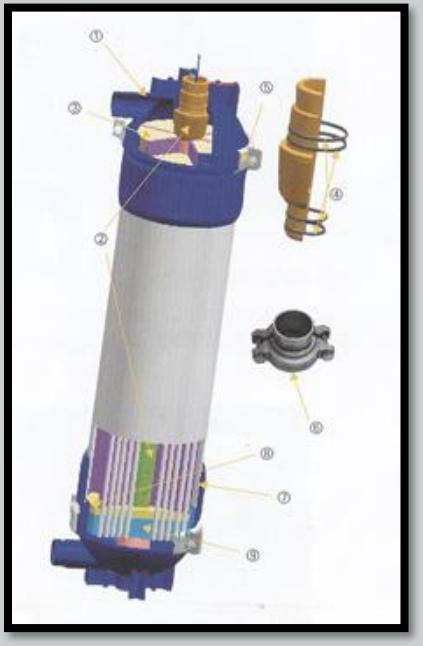
- Clarification rates **as high as 97%** or more can be achieved using DAF systems combined with the right allocation of chemicals.
- From previous projects the following reductions have been achieved:

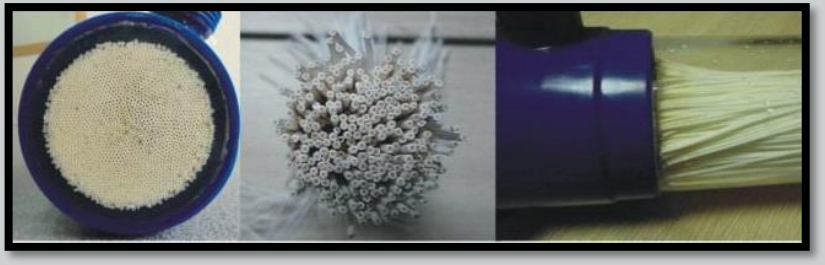
Variables	% Reduction
BOD	20 – 70%
COD	20 – 70%
SS	70 – 95%
O&G	70 – 95%

DAF Advantages

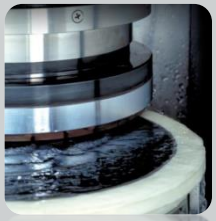
- Very small or light particles that settle slowly can be removed more efficiently and much shorter time leading to an increasingly smaller tank volume and footprint;
- Smaller foot print compared to clarifier
- Suitable for oily sludge or natural floating sludge nature.
- Can be started up quickly;
- Simple to operate and maintain;
- Excellent quality result.

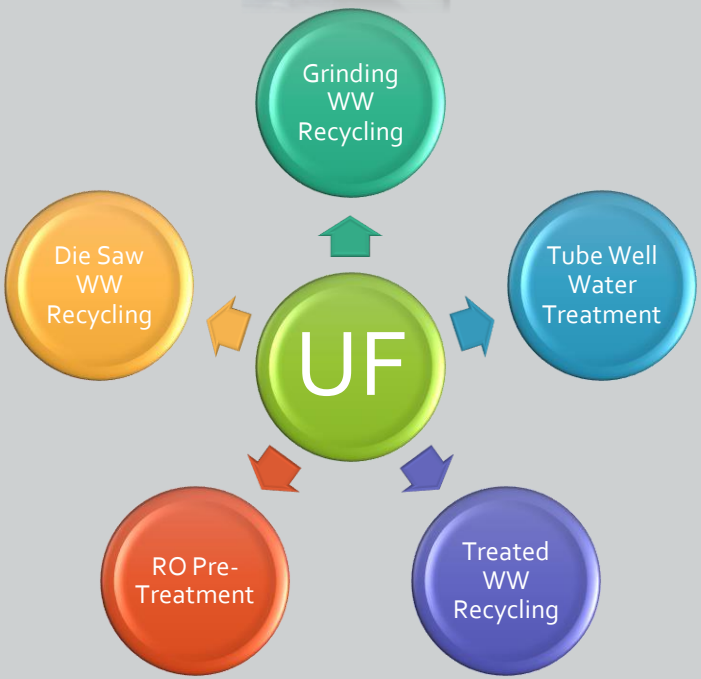






Ultrafiltration System





UF Application

T500

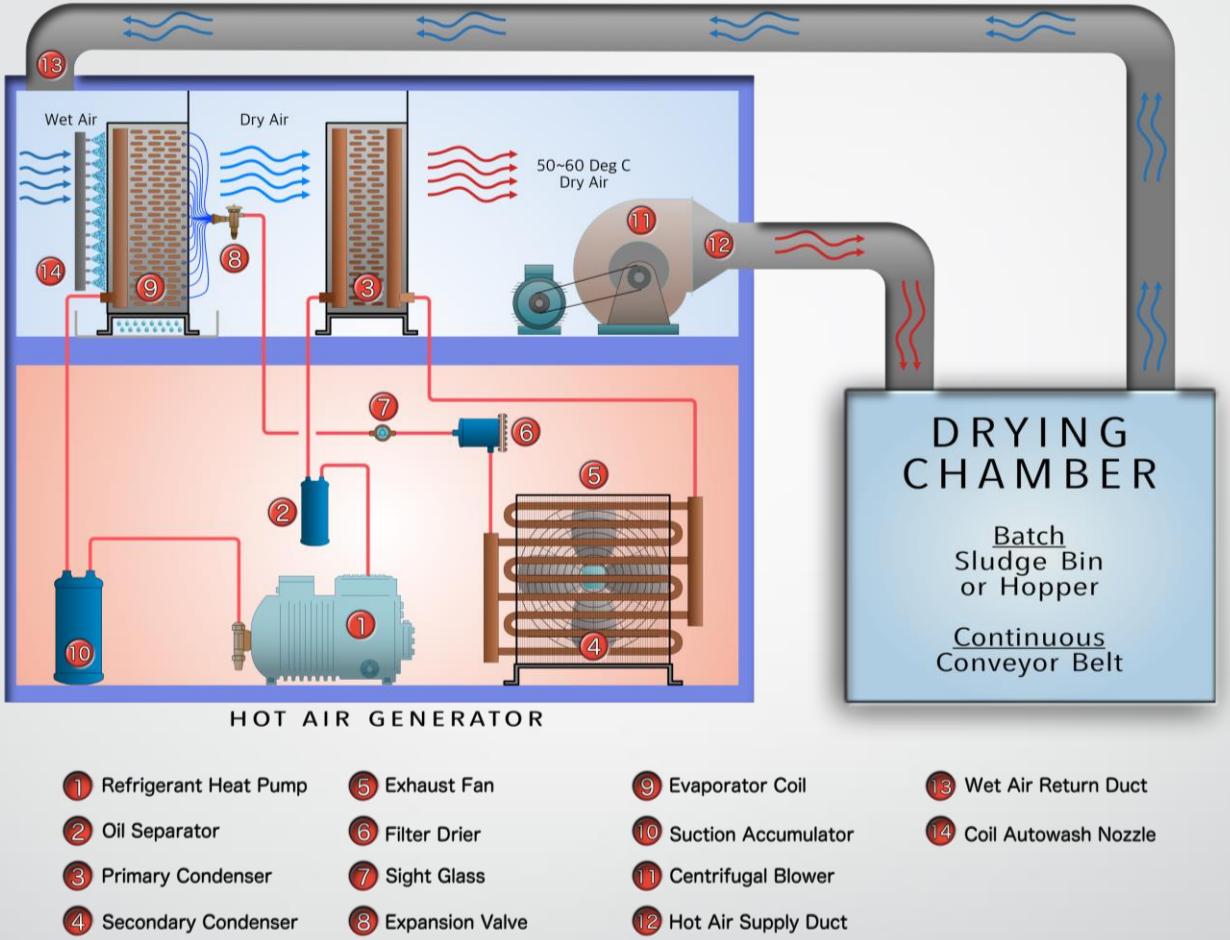
T1500

C3000

Sludge Dryer

PROJECT REFERENCES

Application of Sludge Dryer



Hot Dry Air by Refrigerant Heat Pump

Okada Drying Concept