



# CONTROLLED ENVIRONMENT SPECIALISTS



a CRC Engineering company

Excellence | Passion | Connectedness | Integrity



40 YEARS

OF ENGINEERING CONTROLLED ENVIRONMENTS



GERMANY

**CRC**

Clean Room Consulting GmbH

BELGIUM

**CRC**

E N G I N E E R I N G

INDIA

**PTd**  
Cleantech  
Solutions

a CRC Engineering company

120

EMPLOYEES

€ 20m

TURNOVER

>1800

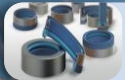
PROJECTS

# WE CATER OUR ENGINEERING SERVICES TO 55+ CLIENTS ACROSS VARIOUS SECTORS

## LIFE SCIENCES



PHARMACEUTICAL



MEDICAL PACKING



MEDICAL DEVICES



BIOTECHNOLOGY

## HI TECH



SEMICONDUCTOR



OPTOELECTRONIC



LASER TECH /  
PHOTO VOLTAIC



BATTERY / CELL

## FOOD & COSMETICS



STARCH  
PROCESSING



CHOCOLATES



MALT  
PROCESSING



SEMI SOLIDS

# EPCM-V Services for



## ENGINEERING

- Feasibility study
- Concept to Detail design
- Detailed 3D modelling
- Procurement support
- Construction management
- Project Management
- Clean rooms Class 1-8
- Sterile grade A-D
- Containment BL1-BL4
- Architectural
- Utilities (clean + dirty)



## COMMISSIONING SUPPORT

- Validation policies
- URS-GMP review analysis
- Risk – Impact assessment
- FAT/SAT commissioning
- Qualification support (DQ, IQ, OQ and PQ)
- Verification (IV,OV)
- Validation support (PV, CV, Media fill )





# BRINGING VALUE BY ENGINEERING UNIQUE SOLUTIONS TO CLIENT PROBLEMS

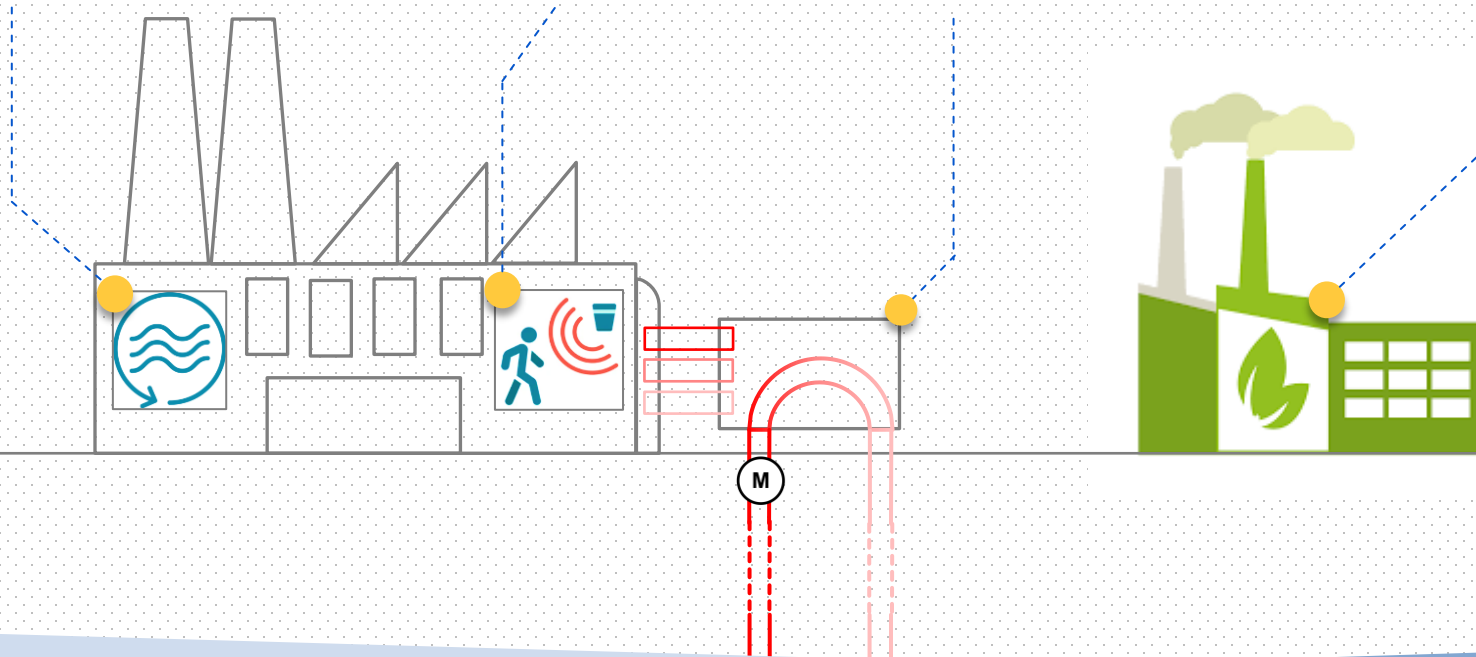


FIRST TO INTRODUCE  
FILTER FAN UNIT WITH  
INTEGRATED COOLER

ADAPTIVE AIR CHANGES AS  
A FUNCTION OF CR  
OCCUPANCY

DEEP WELL HOT WATER  
DISTRIBUTION IN 3 PIPE  
SYSTEM

DESIGNED SEVERAL  
CARBON FREE DESIGNS





# RECENT IMPLEMENTATIONS OF INNOVATIVE DESIGNS



## FILTER FAN UNIT WITH INTEGRATED COOLER

**What we did :** We pioneered in India, the implementation of filter fan units with integrated cooler

**Benefits :** Modularity in design and flexibility to upgrade ISO classification



## COOLING TOWER HEAT RECOVERY

**What we did :** We implemented heat recovery system in cooling tower and utilized the heat for preheating process warm water

**Benefits :** Energy optimization for boiler and addition towards carbon neutralization



## T GRID CEILING

**What we did :** We implemented the concept of T grid ceiling rather than conventional progressive ceiling

**Benefits :** Flexibility in terms of devices which can be installed on ceiling and modular design to easily change lux level and ISO classification

# Our Key Differentiators



Leveraging Multi  
- Discipline Expertise



Continued Investment  
in learning New Age  
Technologies



Translating Innovation  
to Engineering



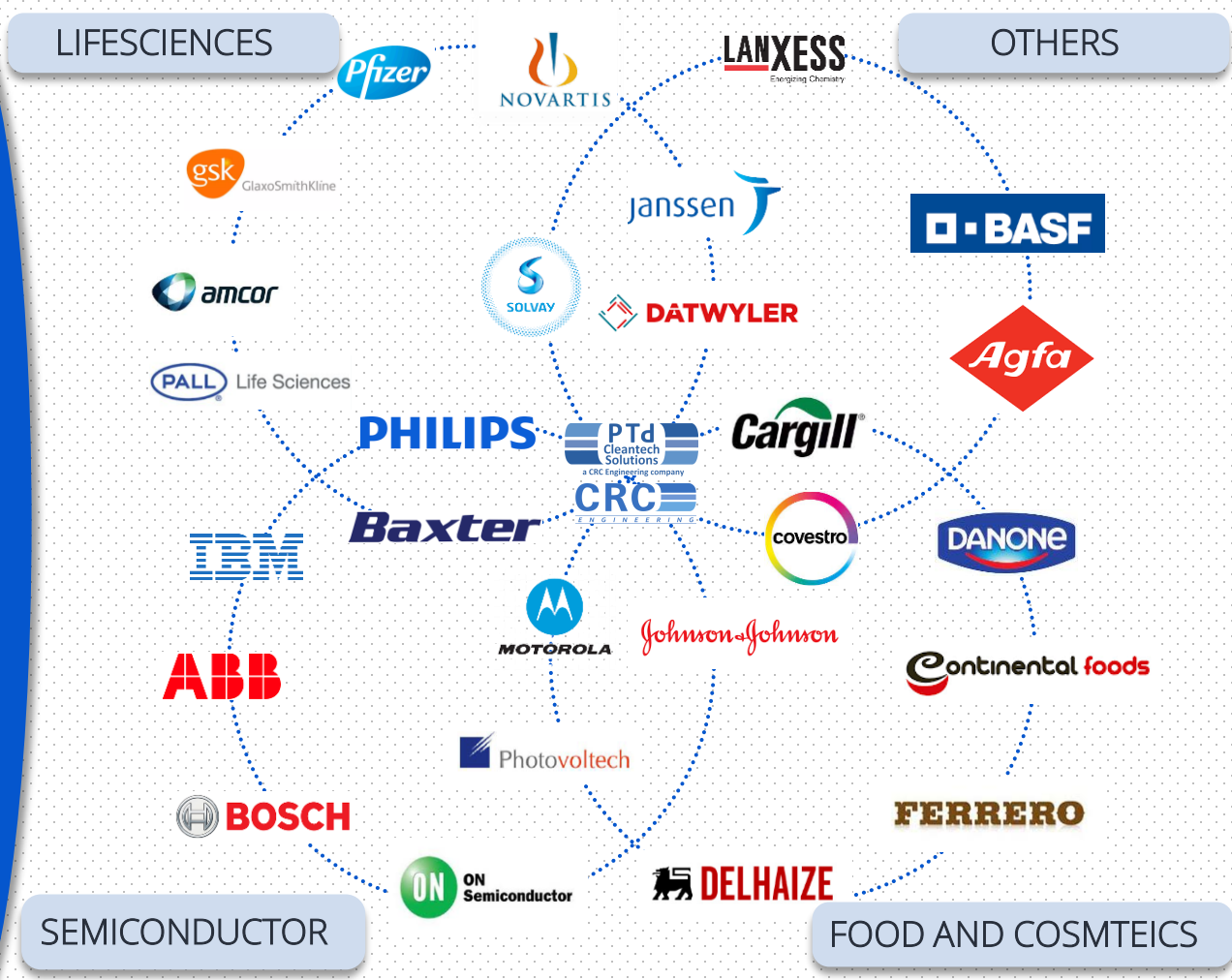
Handholding of customers  
from concept to execution



Default 3D design package to help  
visualize the concepts easily

WE DELIVER TO OUR CUSTOMERS AS ASPECTED BY THEM

55+ GLOBAL CUSTOMERS WITH 90% REPEAT BUSINESS



# PROJECT REFERENCES

Photovoltech – PVT production building, Belgium



Surface area  
1300m<sup>2</sup>

Clean room classification  
ISO 6 and 8

Budget  
€ 4,000,000

Datwyler – Pharma Packaging, India



Surface area  
35,000m<sup>2</sup>

Clean room classification  
ISO Class 5 and D,  
cGMP Class C

Budget  
€ 52,000,000

Cargill – R&D center Europe



Surface area  
4500m<sup>2</sup>

Budget  
€ 8,000,000

Ku Leuven – Nanoculture corelab, Belgium



KU LEUVEN

Surface area  
8800m<sup>2</sup>

Clean room classification  
ISO Class 5

Budget  
€ 14,890,000

# PROJECT REFERENCES

Pfizer – Formulation booth 5/6 – COVID vaccine



Confidential

Plasma Industries – Blood plasma separation facility, Belgium



Surface area  
11,425m<sup>2</sup>

Clean room classification  
ISO Class C & D

Budget  
€ 25,000,000

Danone – Yogurt production facility, Various Locations



Multiple locations  
And projects

SCK– Nuclear research lab, Belgium



sck cen

Nuclear research lab

Budget  
€ 500,000



# THANK YOU



a CRC Engineering company

L-Square, Office No. 11 &12  
3rd Floor Plot No. 8 Sanghavi Nagar,  
Aundh, Pune - 411007

Contact

Nisarg Shah : +91 9607931893

[nshah@ptd-cs.com](mailto:nshah@ptd-cs.com) | [contact@ptd-cs.com](mailto:contact@ptd-cs.com)

[www.ptd-cs.com](http://www.ptd-cs.com)

