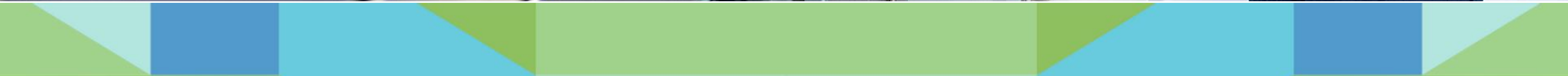




AAD TECH GROUP

ENERGY EFFICIENT NABH COMPLIANT RETROFIT SOLUTIONS

HOSPITALS



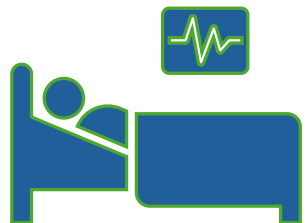
HOSPITAL INSTALLATIONS & ENERGY SAVING



150+ INSTALLATIONS



**52% ENERGY SAVINGS ON AVERAGE ACROSS
INSTALLATIONS**



SPECIALIZED APPLICATION FOR OPERATION THEATERS

KEY CHALLENGES IN HOSPITALS



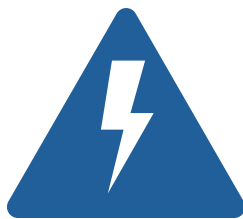
NABH Compliance: Meeting NABH-mandated air changes, humidity, and filtration



Over-Ventilation & Poor Control: Belt-driven fans lack modulation, causing inefficiency in varying occupancy



Frequent Maintenance Issues: Belt and bearing failures lead to downtime & high maintenance costs.



Excessive Energy Consumption & High Carbon Footprint



AAD TECH SOLUTION

- **NABH-Compliant Ventilation:** Maintains HEPA filtration, humidity, and airflow standards.
- **Dynamic Speed Control:** EC fans adjust airflow per hospital requirements.
- **Direct-Drive System:** Eliminates belt/pulley losses and maintenance.
- **IoT-Based Optimization:** Smart controllers ensure real-time energy efficiency.
- **Lower Carbon Emissions**
- **Over the Air Maintenance** for least downtime



BENEFITS OF AAD TECH SOLUTION

- **Air Changes Per Hour (ACH):** Maintained as per NABH for each zone
- **Temperature & Humidity Control:** Optimized within 18-25°C & 40-60% RH
- **HEPA Filtration Efficiency:** Improved airflow for OT, ICU, and isolation rooms
- **Noise Levels Reduced by 30%** – Improved patient comfort
- **Reliable 24/7 Operation** – IoT-enabled predictive maintenance

ABOUT US



EXPERIENCE & TEAM

30+ Years of Expertise



PROJECT EXECUTION

750+ Successful projects with
20,000+ EC fan installations



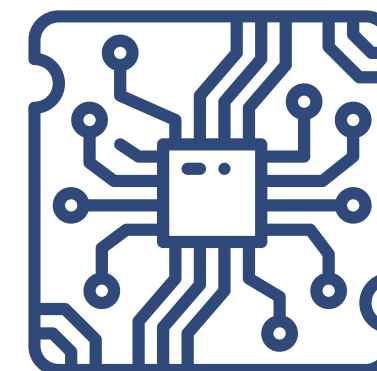
ENERGY SAVINGS

Up to 70% Energy
savings achieved



SUSTAINABILITY

150+ million tons of CO2
saved



TECHNOLOGY & AUTOMATION

World's best EC technology with
specialized Controllers & Automation

GROUP COMPANIES



Established in 2008, AAD Tech India Private Limited, is a pioneer in Energy efficiency Retrofits of EC Fans in Air handling units and cooling towers, achieving substantial energy savings across multiple industries



Established in 1991, Melfrank Engineers LLP has extensive experience in designing & building cooling towers of varying capacity. The company specializes in converting timber to pultruded FRP tower & retrofits with EC axial fans, achieving energy savings & efficiency



Established in 1992, Airpac Cleantech Private Limited specializes in design & execution of cleanroom equipment's, adhering to global standards. Products include Fan filter modules, laminar flows and pass boxes



AAD Tech Environ Private Limited is the global arm of AAD Tech India Private Limited & has executed projects in Bahrain, Turkey, Oman, Egypt, Thailand, Indonesia, Saudi Arabia and Nepal

PRODUCT PORTFOLIO



AHU, AWU, FAHU, Air
Refinery Unit



Centrifugal fan



Axial fan



Fan Array



FRP Cooling Towers



Motor Control



BLE Controller

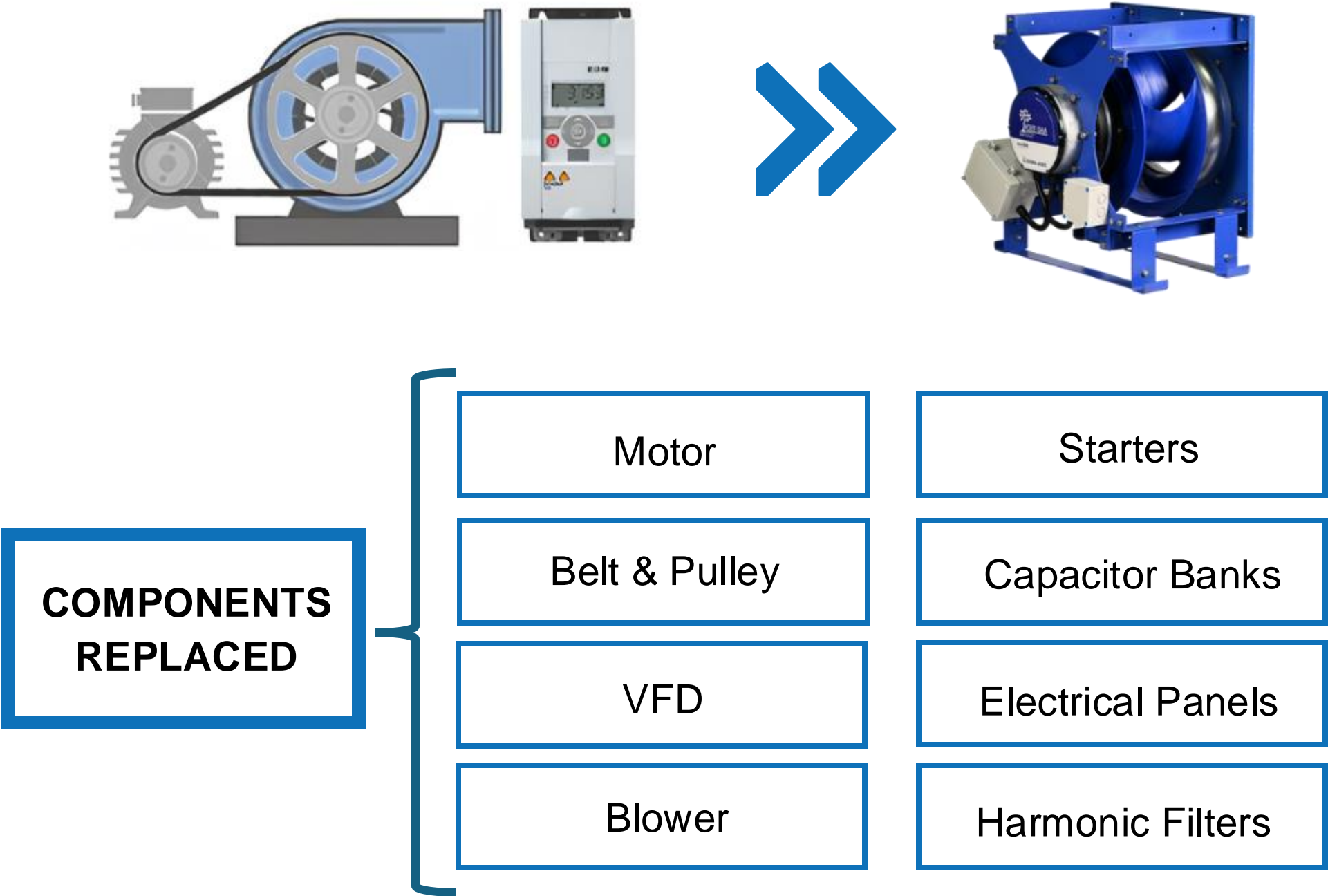


Cleanroom Products




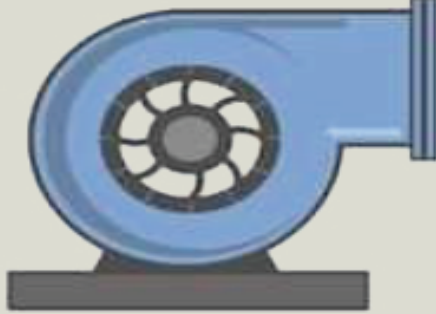
TECHNOLOGY: EC FAN RETROFIT



PLUG & PLAY INSTALLATION

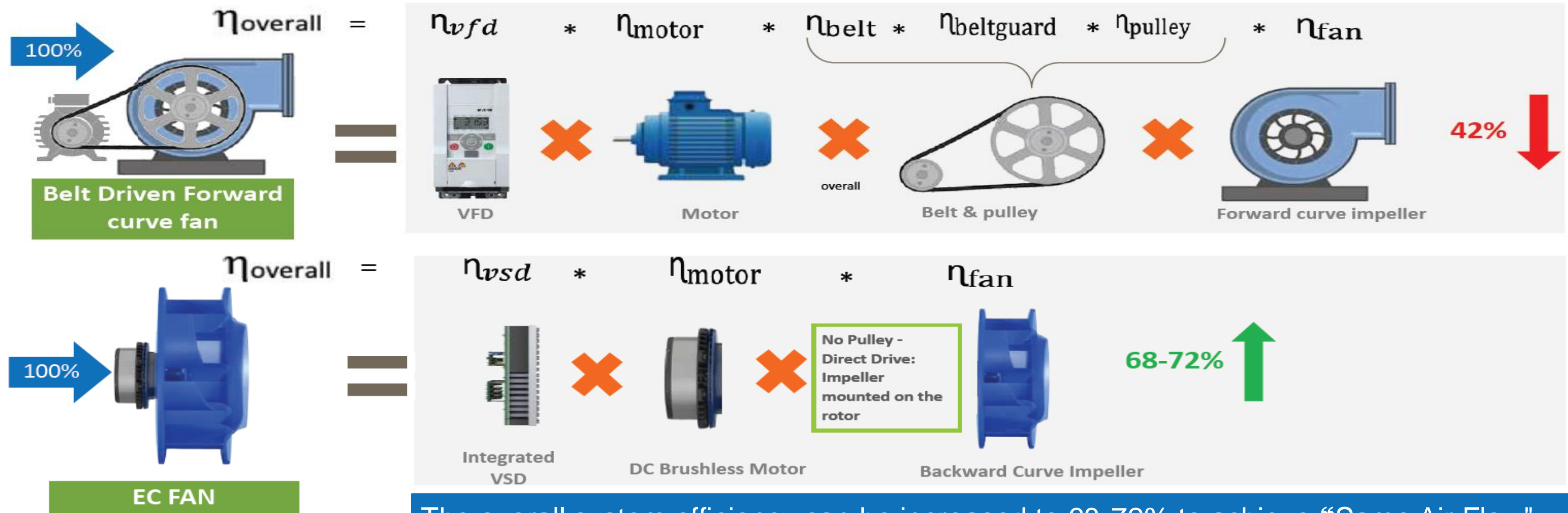


CONVENTIONAL AIR HANDLING SYSTEM EFFICIENCIES

SCENARIO	 DRIVE LOSSES	 BELT & PULLEY DRIVEN LOSS	 MOTOR EFFICIENCY	 BLOWER EFFICIENCY	CALCULATION OF EFFICIENCY	OVERALL EFFICIENCY
1. Designed efficiency	3-5%	5-8%	85-90%	70-75%	$0.97 \times 0.92 \times 0.85 \times 0.7$	50-55 %
2. Running efficiency	3-5%	5-8%	75% (running efficiency of motor part load)	60-65%(running efficiency of blower is only)	$0.97 \times 0.92 \times 0.75 \times 0.65$	40-45 %

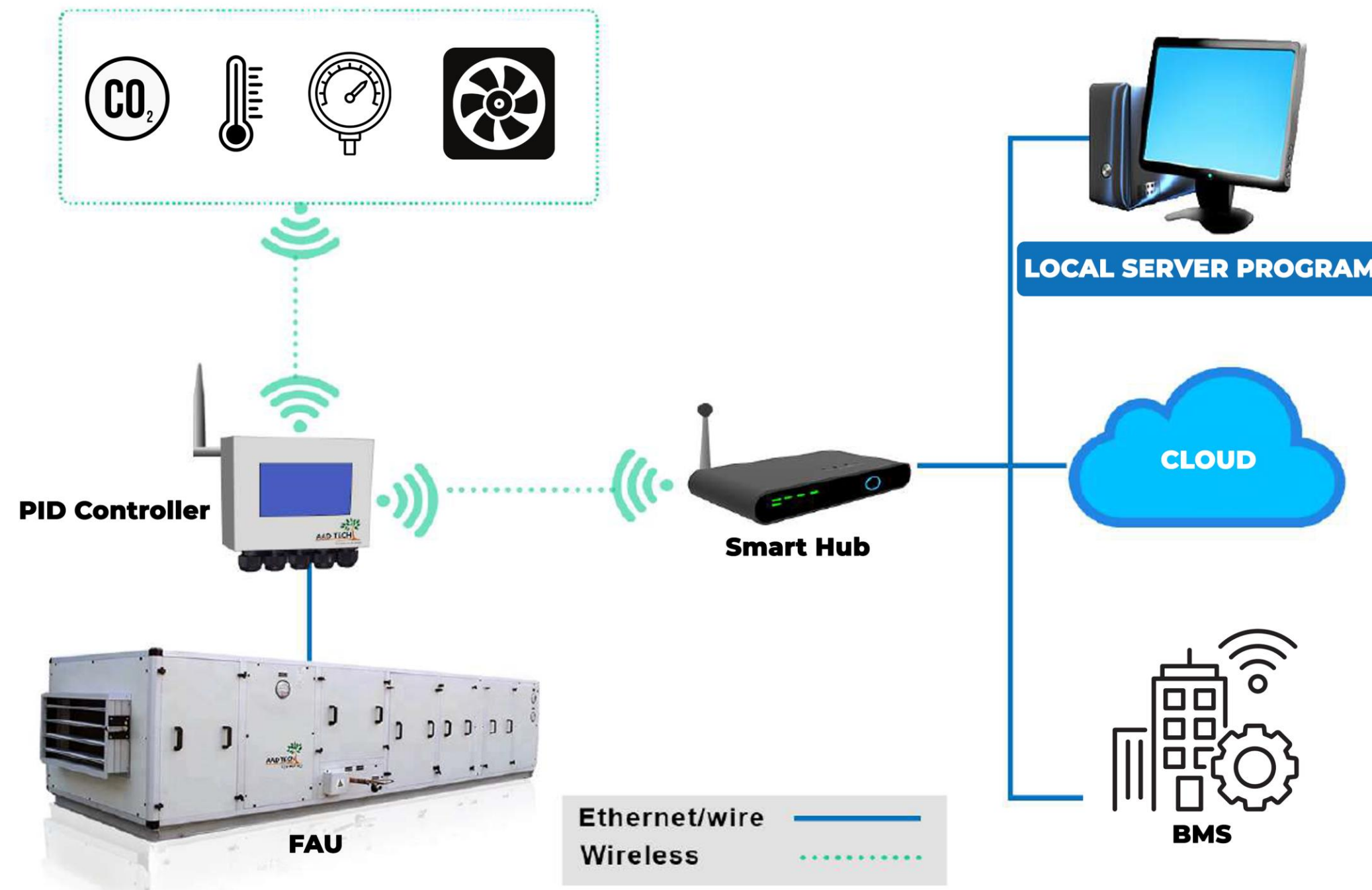
SYSTEM EFFICIENCY

MULTIPLE SYSTEM EFFICIENCIES COMBINE TO GIVE STATIC SYSTEM EFFICIENCY



The overall system efficiency can be increased to 68-72% to achieve “Same Air Flow” @ “High Efficiency” and “Lesser Power”

AUTOMATION: CONTROLLERS, SENSORS & IOT



OVER THE AIR MAINTENANCE

MOTOR CONTROLLER

IOT/BLE/BLUETOOTH INTEGRATION

TEMPERATURE, VIBRATION & CO2
SENSORS

SEAMLESS BMS INTEGRATION

BLE & OTHER CONTROLLERS

RETROFIT IN AIR HANDLING UNIT: BEFORE AND AFTER



RETROFIT: DISMANTLING & INSTALLATION



FEW MORE INSTALLATION PICS



CASE STUDY:HOSPITAL 1

HOSPITAL 1 INSTALLATION SAVING REPORT 2024

NOS. OF PO.

2

TOTAL NOS. OF AHUS TO BE INSTALLED

33

TOTAL NOS. OF FANS TO BE INSTALLED

43

TOTAL AHU DISPATCHED

33

TOTAL FAN DISPATCHED

43

NOS OF FANS INSTALLED

43

NOS OF AHUS INSTALLED

33

SAVINGS

CUMULATIVE ENERGY SAVED
(KWH)

Till(23/03/25)

19,77,476.16

ABSOLUTE SAVED
ENERGY(KW)

38.399

AVERAGE SAVING IN PERCENTAGE

52%

**PROJECTED
SAVINGS**

PROJECTED SAVING PER
MONTH(KWH)

26,689.68

*Assumed 30 days in a months

PROJECTED SAVING PER
ANNUM(KWH)

3,20,276.16

*Assumed system runs 365 days

SAVING INR ANNUALLY

₹25,62,209.28

CASE STUDY: HOSPITAL 2

HOSPITAL 2 INSTALLATION SAVING REPORT 2024

NOS. OF PO.

1

TOTAL NOS. OF AHUS TO BE INSTALLED

11

TOTAL NOS. OF FANS TO BE INSTALLED

17

TOTAL AHU DISPATCHED



TOTAL FAN DISPATCHED



NOS OF FANS INSTALLED



NOS OF AHUS INSTALLED



SAVINGS

CUMULATIVE ENERGY SAVED
(KWH)

Till(23/03/25)

5,94,430.66

ABSOLUTE SAVED
ENERGY(KW)

25.54

AVERAGE SAVING IN PERCENTAGE

48%

**PROJECTED
SAVINGS**

PROJECTED SAVING PER
MONTH(KWH)

15,822.60

*Assumed 30 days in a months

PROJECTED SAVING PER
ANNUM(KWH)

1,89,871.20

*Assumed system runs 365 days

ROI

≈ 0.91 years

CASE STUDY: HOSPITAL 3

HOSPITAL 3 INSTALLATION SAVING REPORT 2024

NOS. OF PO.
1

TOTAL NOS. OF AHUS TO BE INSTALLED
16

TOTAL NOS. OF FANS TO BE INSTALLED
18

TOTAL AHU DISPATCHED



TOTAL FAN DISPATCHED



NOS OF FANS INSTALLED



NOS OF AHUS INSTALLED



SAVINGS

CUMULATIVE ENERGY SAVED
(KWH)

Till(23/03/25)

8,36,527.20

ABSOLUTE SAVED
ENERGY(KW)

41.34

AVERAGE SAVING IN PERCENTAGE

52%

**PROJECTED
SAVINGS**

PROJECTED SAVING PER
MONTH(KWH)

29,764.80

*Assumed 30 days in a months

PROJECTED SAVING PER
ANNUM(KWH)

3,57,177.60

*Assumed system runs 365 days

ROI

≈ 0.52 years

OUR SOLUTION VS CONVENTIONAL BELT FAN

PARAMETER	CONVENTIONAL FAN	AAD TECH SYSTEM
MOTOR EFFICIENCY	70-85%	93-95%
BELT MAINTAINANCE	Required	Not Required
BEARING MAINTAINENCE	Required	Not Required
COPPER LOSS	High	Non-Existent
SLIP LOSS	Yes	No
BELT AND PULLEY LOSSES	Yes	No
BLOWER WEIGHT	Heavy	Light
CORROSION RESISTANCE	No	Yes
VIBRATION PADS	Required	Not Required
SOFT START	Additional Equipment Required	Built In
MOTOR HEAT LOSS	Yes	No

OTHER INDUSTRIES CATERED



AUTOMOBILES



AVIATION



CONSUMER GOODS



PHARMACEUTICALS



OFFICE
BUILDINGS/IT/BANKING



MALLS/HOTELS

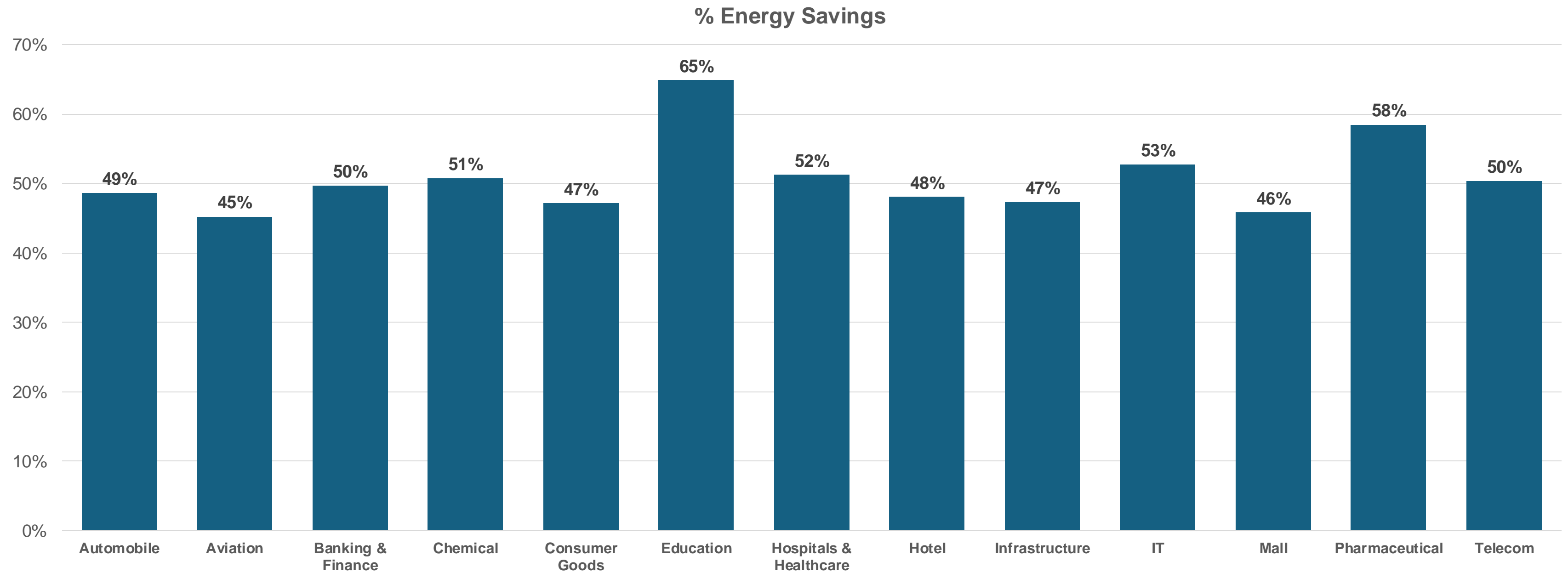


INFRASTRUCTURE



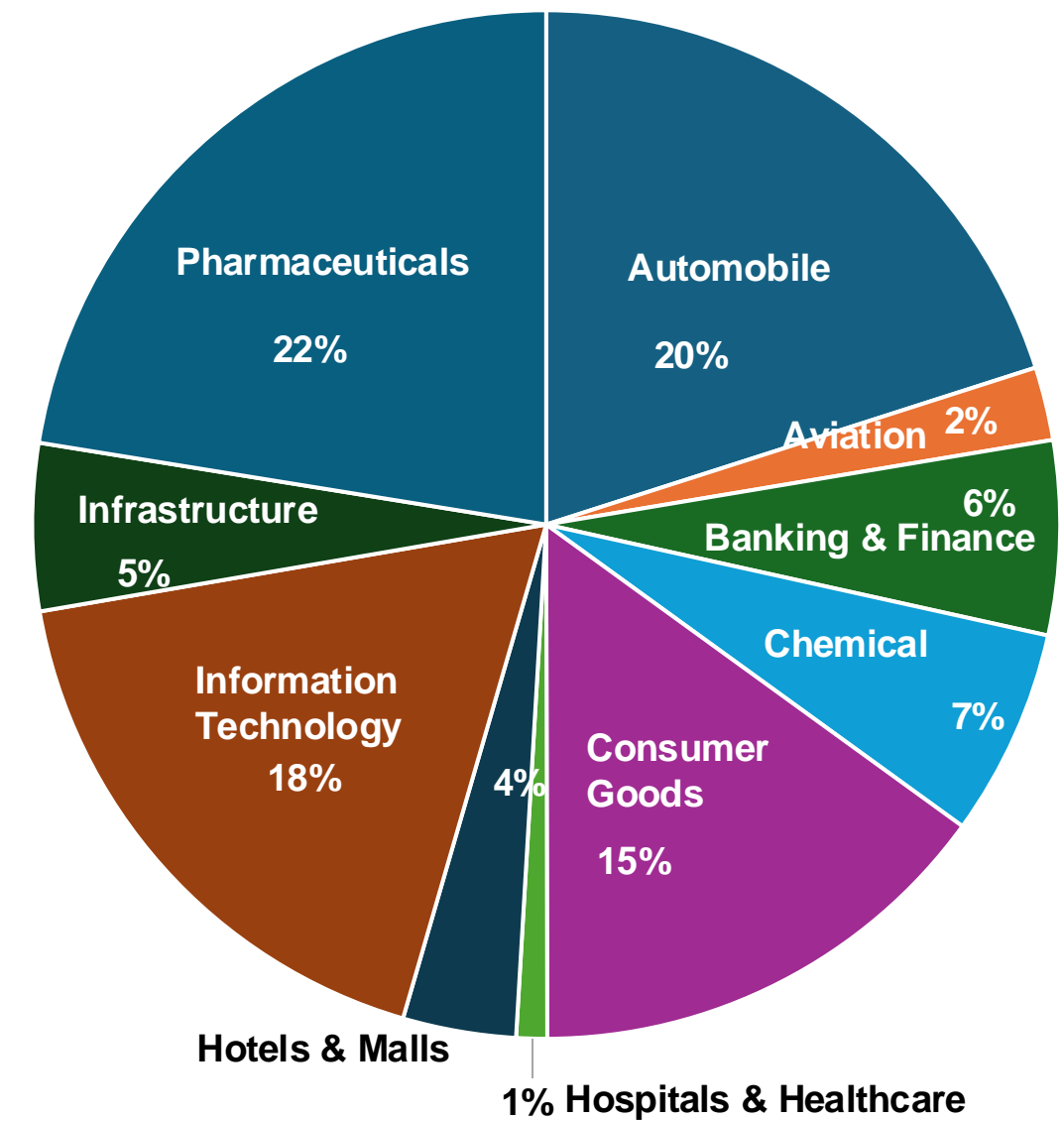
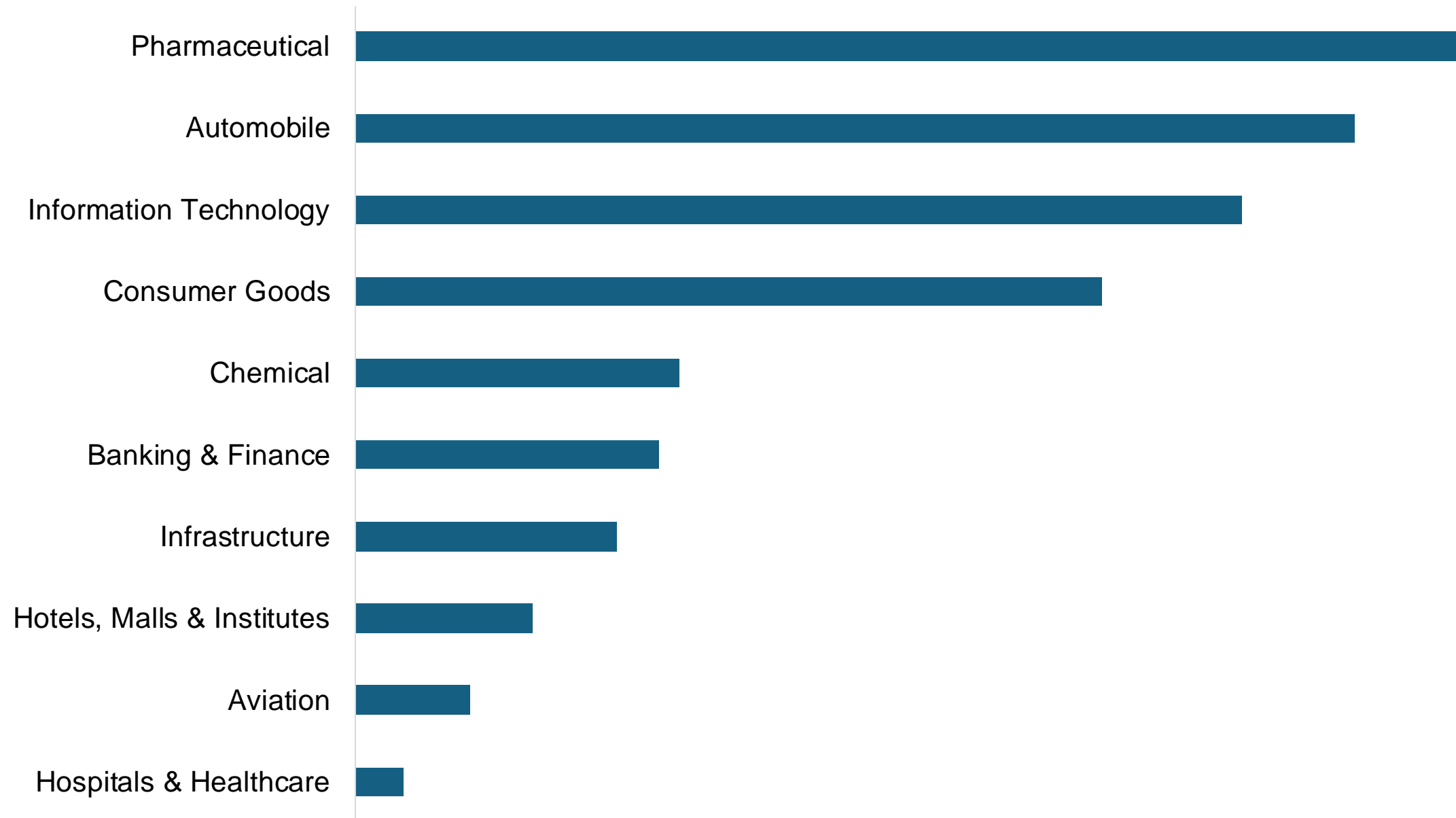
CHEMICALS

ENERGY SAVINGS BY INDUSTRY



WORK DONE BY INDUSTRY

EC Drives Installed



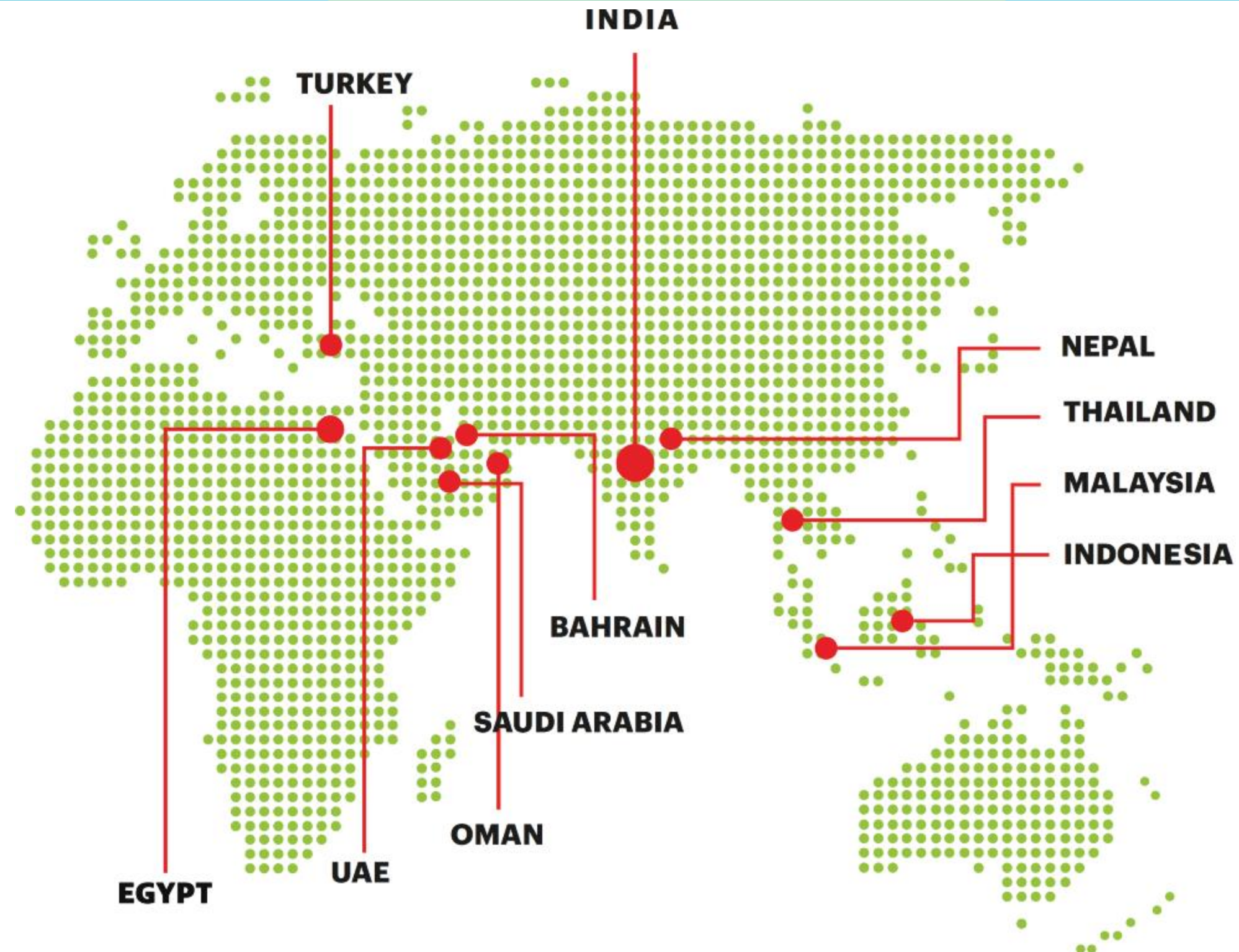
DOMESTIC PRESENCE



TRACK A PROJECT

[Project Tracker](#)

GLOBAL PRESENCE



TESTIMONIALS



"I recently had the pleasure of working with Aadtech on AHU work, and I was thoroughly impressed by their professionalism and expertise. Their team went above and beyond to ensure that everything was done to the highest standard, and the results were fantastic. I would highly recommend their services to anyone in need of AHU work."

- Project Manager, Cipla

"AAD Tech recently installed EC fans across our 23 AHU for plant air conditioning. Overall, it was a positive experience, where the team was professional, knowledgeable, and committed to quality."

- Engineering Head, Mondelez, Bahrain

SUMMARY OF BENEFITS



THANK YOU



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