



Data Center Business

BPS Tech

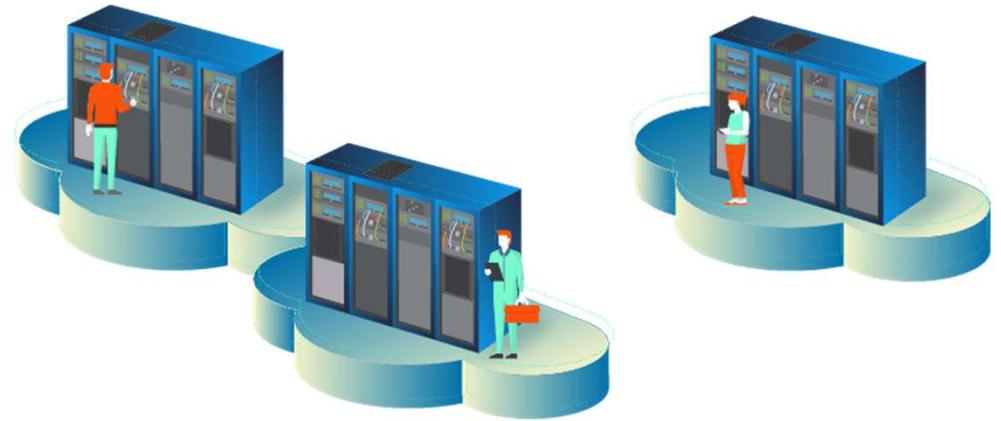


Data Center Business

Topic

- Site Assessment & Design
- Built
- After Sale Service
- Data Center Facilities Management Outsourcing Service (DCFMos)

Site Assessment



Site Assessment; Check all environment of Data Center such as....

- Site selection/Location
- Capacity including IT and non-IT load
- Design PUE
- Current system as power supply system, Cooling system and strong/weak point
- Etc.

Design

Design datacenter will refer to favorite standards as Uptime and TIA942. Local standards is Thailand Data Center Standards by DTEC is also comply by our designer.

- **No World-Wide Recognized Standard / Specific for industry.**
- **But have Best Practice / Semi-Standard , Proprietary Standard and Sub-Components Standard.**
- 1. **Best Practice / Semi-Standard (Issue by Standard Organization)**
 - **The Uptime Institute**
 - Focus on : Power and Cooling (Critical Systems Infrastructure) (Tier Standard: Topology)
 - **ANS/TIA-942**
 - Focus on : Data Center Cabling , Space Planning and Telecom Infrastructure Architecture
 - **ANS/BICSI-002**
 - Focus on Design, Site Selection, Operations, Commissioning, and Maintenance.
 - **EN-50600**
 - To compensate the lack of a Standard for data center facilities and infrastructures within Europe.
- **2. Proprietary Standard**
 - UTI, Oracle, IBM , APC-Schneider and etc.
- **3. Subcomponent Standard**
 - UNE-EN 50160 (Electrical STD.), BS/EN 12825 (Raised Floor), NFPA-75 (Fire Protection STD.), etc.

Favorites Standards in Thailand



Uptime
Institute®



TIA® Telecommunications
Industry
Association



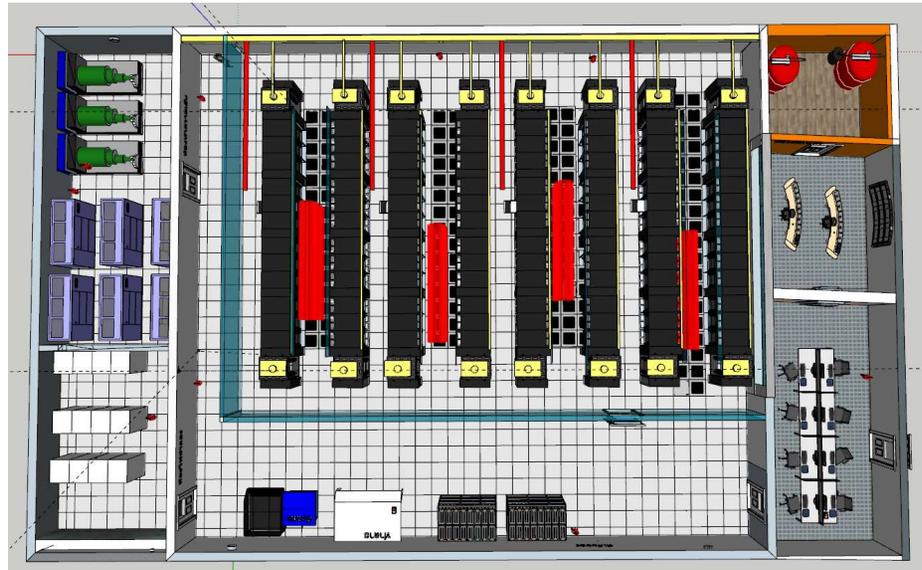
DTEC

สถาบันประเมินและรับรองเทคโนโลยีดิจิทัล (ปตจ.)
Digital Technology Evaluation and Certification Institute (DTEC)

Design

• Power System

- Power Receiving (MEA/PEA)
- Main Power Receiving System
 - Ring Main Unit (RMU)
 - Transformer (Tx)
 - MDB
- Emergency Power Backup
 - Diesel Generator (DG)
 - Fuel Storage
 - Uninterruptible Power Supply (UPS)
 - Generator Control Panel (GCP)
 - Automatic Transfer Switch (ATS)
- Static Transfer Switch (STS)
- Power Distribution Unit (PDU)



• Network and Monitoring System

- Building Management System (BMS)
- Data Center Infrastructure Management (DCIM)
- Access Control System
- CCTV

• HVAC System

- Water Cool Chiller System
 - Chiller Plant Management System (CPMS)
 - CHP/CDP Pump
 - Thermal Storage Tank
 - Cooling Tower
 - Softener Water Treatment System
- Air Conditioner
 - Precision Air Condition (CRAC, CRAH, Dx)
 - Outside Air Condition (OAU)
 - Air Handling Unit (AHU)
- Fire Suppressions System
 - Fire Pump
 - Fire suppression gas

Built

Critical & non-critical system is our service including project management team that to built new or renovated old Data Center. Below system are main critical system that we can serv in Data Center business by using favorite product in the market.



Ring Main Unit



Generator



UPS



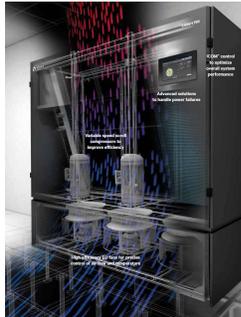
Transformer



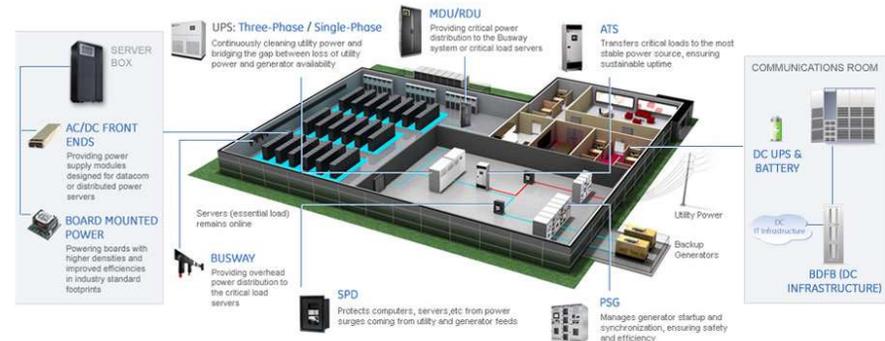
Chiller



Computer Room Air Condition



DCIM

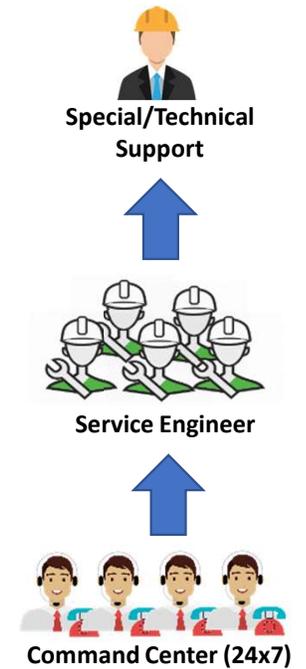


Building Management System

After Sale Service



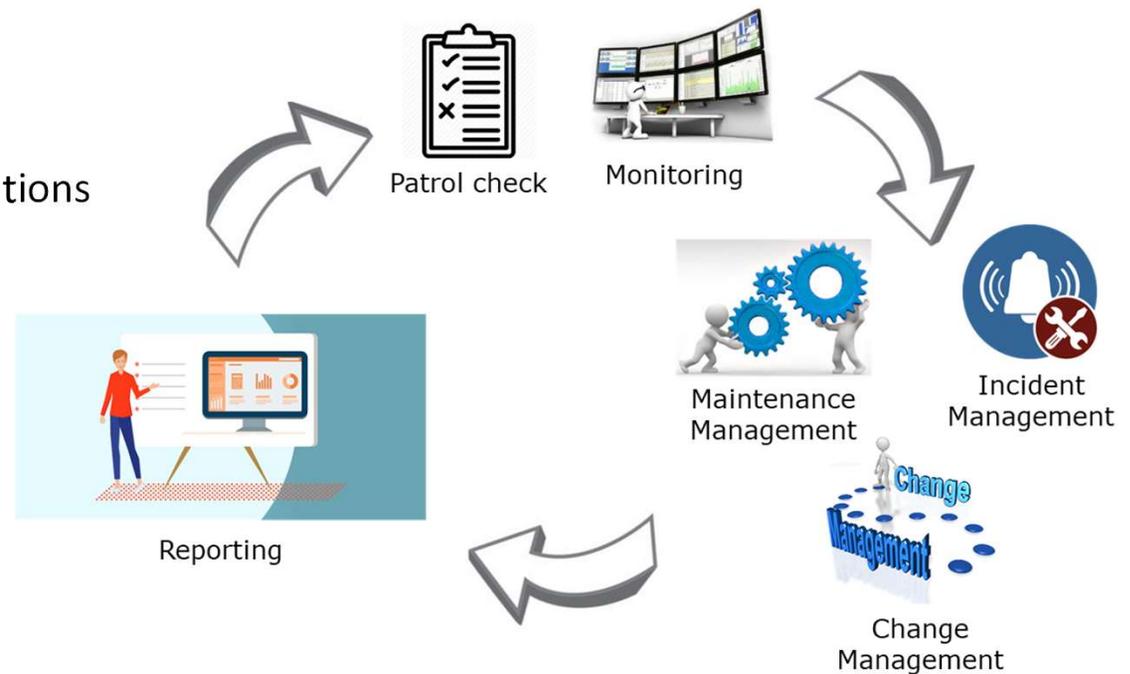
- Call Center 24x7
- Technical consultant by phone 24x7
- On site service will be provide within 6 hours after call for emergency case (Near Bangkok)



Data Center Facilities Management Outsourcing Service (DCFMOs)

Onsite service

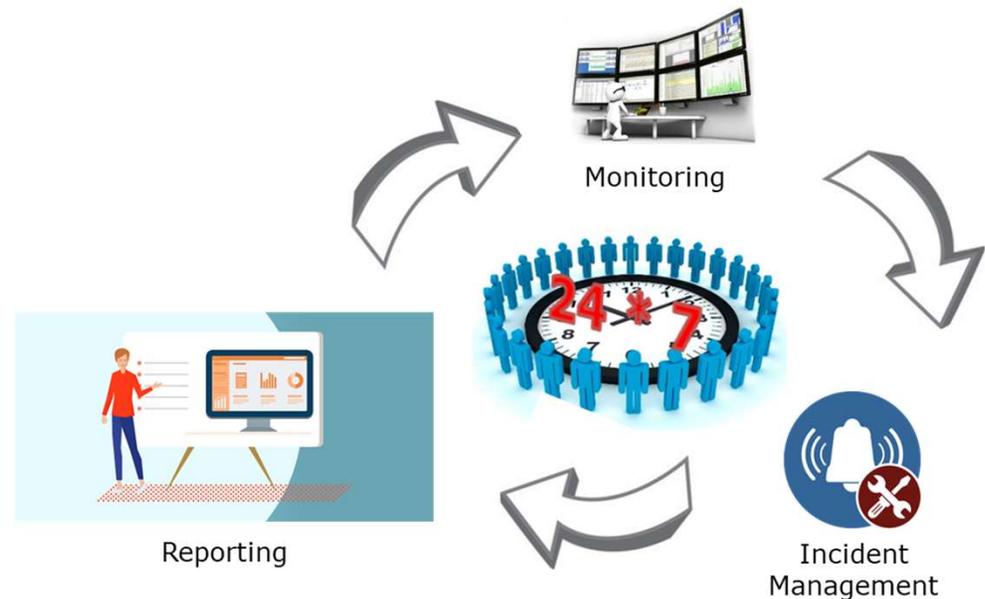
1. Day-To-Day Data Center Facilities Operations
2. 24x7 Monitoring
3. Preventive Maintenance
4. Report weekly and monthly basis
5. Technical support



Data Center Facilities Management Outsourcing Service (DCFMos)

Offsite service

1. 24x7 Monitoring
2. Emergency onsite service
3. Report weekly and monthly basis
4. Technical support





Q&A
Thank you