

# Design Solution & Engineering

- BIM Design
- 2D/3D CAD
- FEM Analysis
- Piping design
- Fire Fighting
- HVAC
- Cold/hot water
- Electrical



**NORDITEC**

# ABOUT US

- **Design & Engineering Solutions** is an organization emerging world class services and solution provider in the fields of Product Design & Plant Engineering .
- **Product Design :** DSR strongly believes that any engineering task should be preceded by a solid feasibility analysis, whose basic foundation is laid down by Engineering & Design modeling. Our engineering design validation services provide sustainable solutions for projects across industries ,We have performed large variety of complex Product Design.
- **Plant Engineering :** DSR is an MEP Design & BIM service provider with Architectural, Structural, and MEP Designing consulting across the globe. We have structure combined with more experienced engineers with Certified BIM engineers. We offer a complete range of Building Services design and BIM modeling to support our clients.
- **WHO WE ARE :** DSR is a pioneer in establishing Product Design, MEP Design & BIM Services and the company is based in Hyderabad, India. Our company is efficient in offering essential technology services to various national and international clients.
- **OUR VISION AND MISSION & VALUES:** Our Vision is to become one of the best CAD- designer in the world. Our mission is to provide quality services in the field of CAD and achieve customer satisfaction and adding value to the business.

# Our Strengths

## We're Creative

DSR is an acknowledged leader in the building engineering services, with clients widespread all over the world. Efficient and creative in providing finest quality engineering designs to our clients.

## Excellent Services

Our client focused services always strive to develop strategies tailored to specific client needs in order to provide solutions with highest quality and best value.

## We're Creative

We have a team of experts who are experienced in executing diverse spectrum of projects, across the world, from inception till handover. Guided by the knowledge and experience of our team, clients benefit with taking right approach through all design and modelling stages.

## Excellent Services

Adapting to the latest technologies makes us competitive in the market. Continues support to our clients with quality engineering services. Expert in providing considerate business models based on latest technology trends.

We provide end-to-end Engineering & Building Information Modeling (BIM) services, allowing clients to get complete control of the Construction projects. Our models will empower our clients in Project Planning, Cost Estimation, Collaboration & Risk mitigation. Our Engineers manage the engineering process across the entire life cycle of the design process from initial design development (0% DD) to As built.



**DESIGN ENGINEERING SERVICES** • HVAC • PHE • FIRE FIGHTING • ELECTRICAL • ELV



### **BIM & VDC SERVICES**

- Model Development for Architectural, Structural & MEP Services from Design Intent
- Design development from LOD 200 to LOD 300, 350 & 400
- Site Coordination and As built model Development at LOD 500
- Quantity Takeoff & Extraction of Material Quantity as per required Format.
- Clash detection & Final Shop drawing generation in MEP
- 4D Time line Simulation



- **Scan to BIM**, Point cloud to Model
- Drawings to 3D Conversion
- As Built Model Development
- As Built Drawing generation
- Site Modelling for Existing Conditions with Topography & Contour Data
- Infrastructure Modelling from laser scans to reconstruct Existing conditions virtually

## DESIGN SERVICES

### HVAC

Basement Ventilation.  
 Heat Load Calculation & Load summary.  
 Preliminary & updated design with proposed shafts.  
 Selection of HVAC Equipment's. Location of Equipment, Duct design & routing, Section and Details.  
 Plant room layout, detailed sections. HVAC shop drawings.

### FIRE FIGHTING

Stand pipe systems.  
 Fire hydrant and Sprinkler systems.  
 Fire alarm and smoke detection systems. Dry pipe and pre-action sprinkler systems. Fire Detector and Alarm Layout.

### ELV

Fire Alarm , Access Control  
 CC TV, IT Networking System  
 Public Address System

### PHE

Hot / Cold water demand calculation. Cold & hot water pipe sizing calculation. Building external sanitary piping system. Basement drainage system.  
 Drainage discharge, pipe sizing & slope calculation. Water storage Tank sizing.  
 Pressure drops calculation & pump sizing/selection. Storm water drainage system.

### ELECTRICAL / ELEV

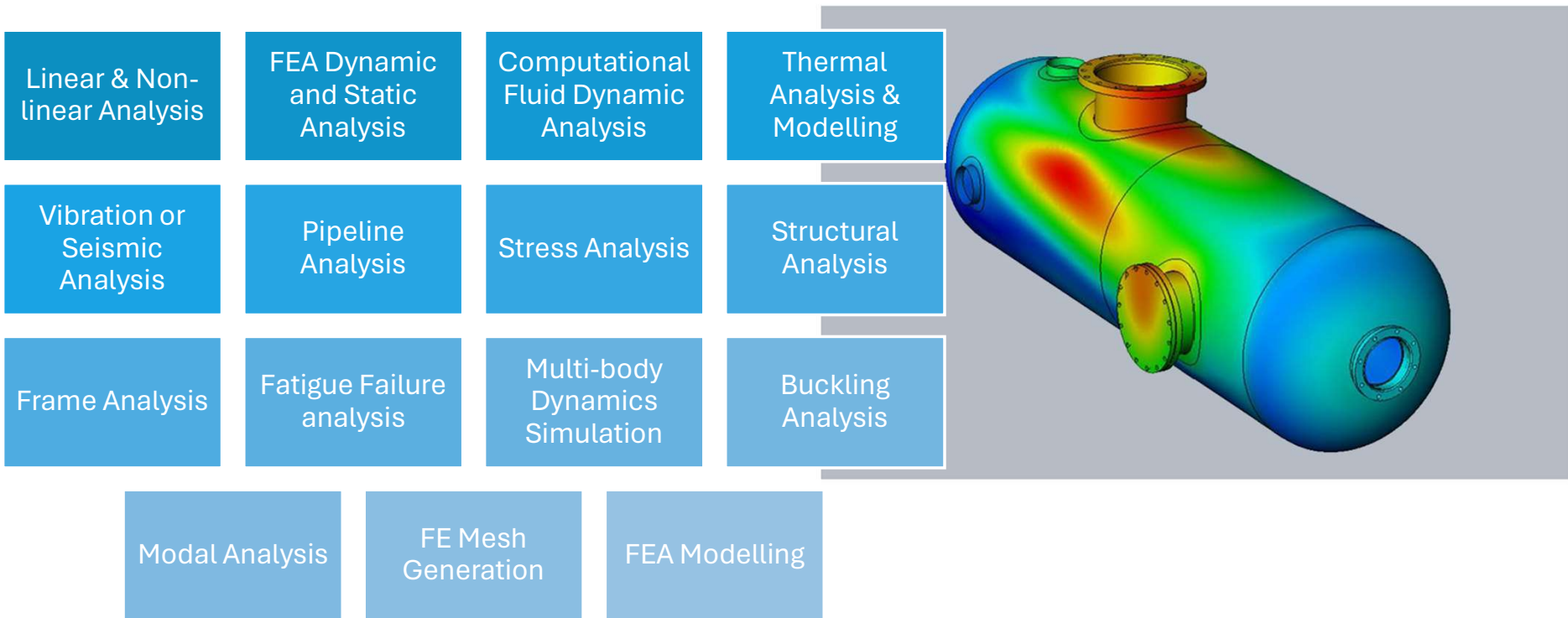
Electrical Load Calculation.  
 Selection and Sizing of Transformers.  
 Single Line Diagram.  
 LT Distribution systems. Lighting Calculations.  
 Lighting Control systems. Lighting layout.  
 Electrical Tray and wire or Cable sizing. Power distribution layout.  
 Emergency power supply systems through DG sets.  
 Schematic drawings. Earthling System.





# CAD Analysis (FEA & CFD)

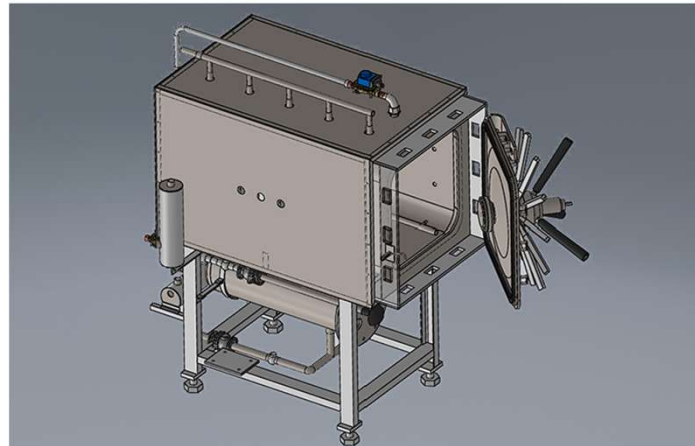
- We use the latest analysis tools to optimize the design and verify its integrity & ensures it surpasses all the required design parameters. We use both FEA (Finite Element Analysis) and traditional hand calculations for the following:



# CAD 3D Modeling

We have performed large variety of complex 3D Modeling & 2D drafting for a large pool of client from across the World. We have a great experience in the field of machined parts, castings, weldments, plastic components, mechanical assemblies, etc. We have wide experience in:

- Developing 2D/3D CAD models
- 3D parametric feature based modeling
- 3D Visualization and Rendering
- Design of assemblies
- Creation of Engineering drawings from the solid models
- Validation/verification of designs against specifications and design rules
- Import/Export routines to exchange data with different high-end software packages
- Calculation of mass properties of parts and assemblies







# CAD 2D Drafting & Detailing

- We provide 2D CAD drafting and 3D CAD drawings services at affordable rates. We are a group of professionals providing mechanical CAD drafting drawings services to all different kinds of clientele including Manufacturers, Engineering Companies, Steel Fabricators and Consultants.
- We provide professional CAD services like 2D CAD Drawing, 2D CAD Drafting, CAD Conversion, 3D Modelling, and Paper to CAD Conversion services for technical drawings.
- 2D Drafting is the creation of accurate representations of objects for manufacturing and engineering needs. It is used to fully and clearly define requirements for concepts or products so as to convey all the required information that will allow a manufacturer to produce that component.
- Drawing production is the process of formally documenting the design of a part or assembly. You can create associative drawing views of 3D parts and assemblies that you can quickly update when the part or assembly changes. You can also create drawing views that consist of 2D elements drawn from scratch that you can quickly change without making changes to a part or assembly document., you can convert the associative drawing view to a 2D element drawing view. The 2D drawing can contain dimensions and other annotations that describe the size of a part or assembly, the materials used to create it and other information.
- DSR Design is committed to providing innovative mechanical drafting services to all kinds of industrial, commercial and residential industries. We always double check our drawings and ensure that our team follows standards and style as per client preferences

# Mechanical Process Consultant


- process consultant is a highly qualified professional that has insights into and understands the psychosocial dynamics of working with various client systems such as whole organizations, groups and individuals,
- Given the complex nature of intervening, a process consultant's expertise includes the following (and many other) aspects:
- works concomitantly with groups and individuals (managers/directors) towards a larger change process such as strategic visioning, strategic planning, etc.
- based on the context, selects from a variety of methods, tools and change theories a 'facilitative intervention' that will most benefit the client system;
- stays aware of covert organizational processes, group dynamics, and interpersonal issues
- **Role In Organizational Level:**
- In organization development, a process consultant is a specialized type of consultant who acts as a facilitator to help groups deal with issues involving the process in a meeting, rather than with the actual tasks themselves.
- **Role In Small Group Development:**
- A process consultant may be used at any time during the Stages of Group Development. Occasionally, a process consultant is used when a group is either in its formative stage, or normative stage. However, more often than not, they participate when the group is in conflict.



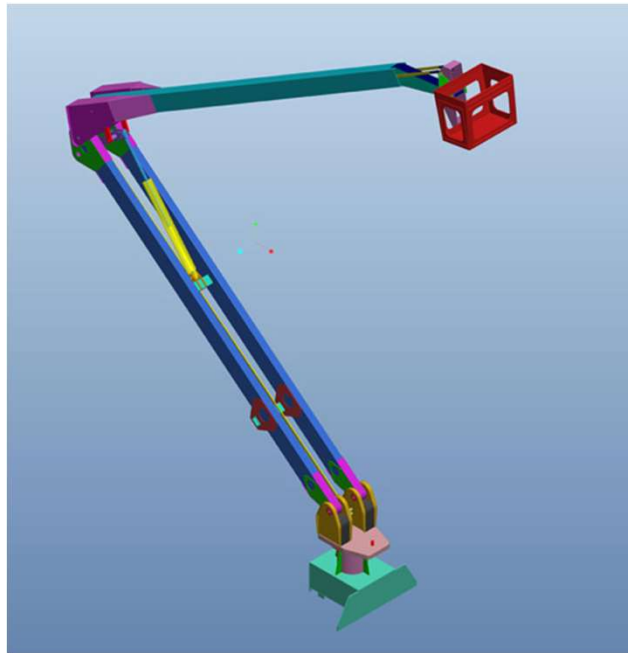
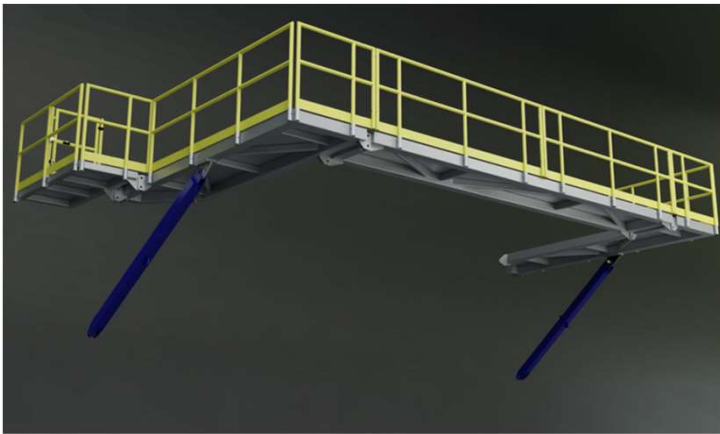
## Market – Solutions

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MEP(Mechanical,  
Electrical,  
Plumbing) - HVAC

- Fish Industry
  - Oil & Gass
  - Industry
  - Waste waster
  - Drinkable water
  - Biogas
  - Energy
  - Sprinkleranlegg
- 

# Offshore



# Weeder concepts

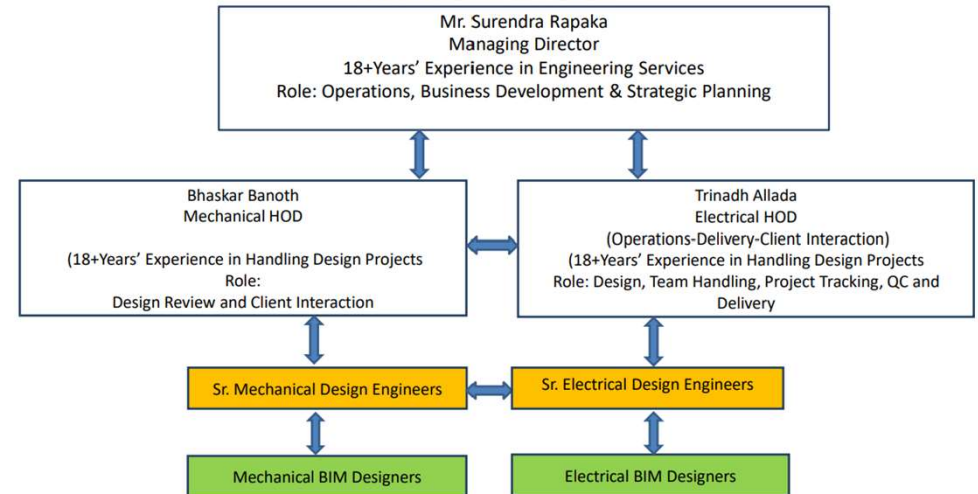
- Design
- Prototyps





# TEAM

## ORGANISATION CHART





# Engagement Methods & Practices



Robust Quality Systems in place through out the Project Delivery Cycle

Efficient Resource Management

Employee Centric Management



Dedicated Server Room with 24/7 Support

High End Work Stations Powered by Intel XENON

Solid State Drives for Wrap Speed

High Speed LAN & Broad Band + Added data Security



Communication Platforms like Skype, Team Viewer, WebEX Zoom

Dedicated Conference Room enabled with latest Video and Audio Capabilities

Interaction with Clients on Daily & Weekly basis as per the project Requirements



End – to – End work break down structure

Checklist and QA & QC layers at Each Level of Project Execution.

Internal Query management System

Training & Upskilling

## Earlier conflict and error detection

Up to **10%** savings in budget due to collision management



## Improve budget reliability

Up to **40%** decrease in non-budgeted change orders



## Fewer accidents on job sites



## Faster project delivery

Project timeline shorted by up to **7%**



## Basis for lifecycle cost optimization

Operation costs lowered by up to **9%**



## Higher building quality

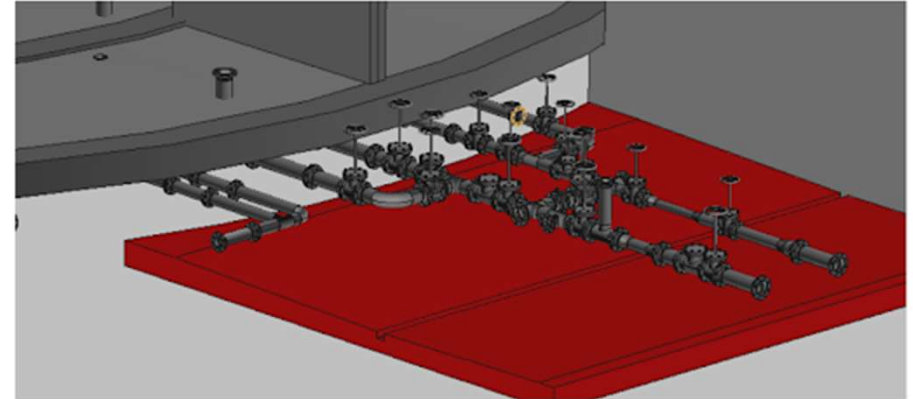
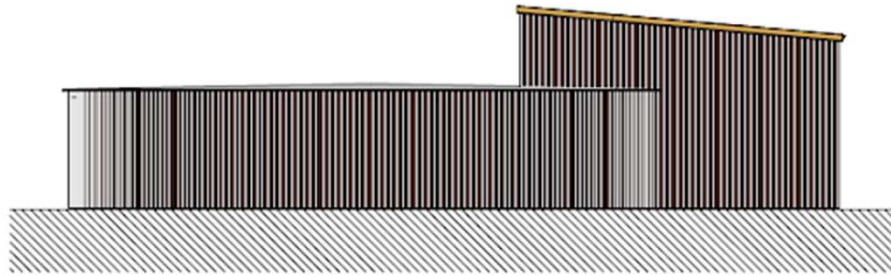
Up to **3.5%** more efficient occupancy



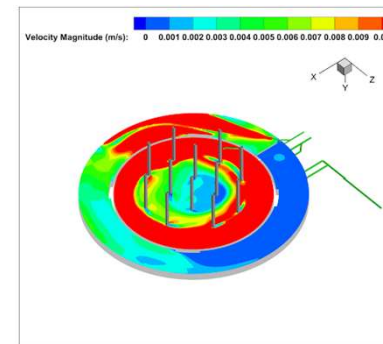
BIM gives you more insight – and makes planning, building and operating your buildings easier

Source: CIFE, Center for Integrated Facility Engineering, Stanford University



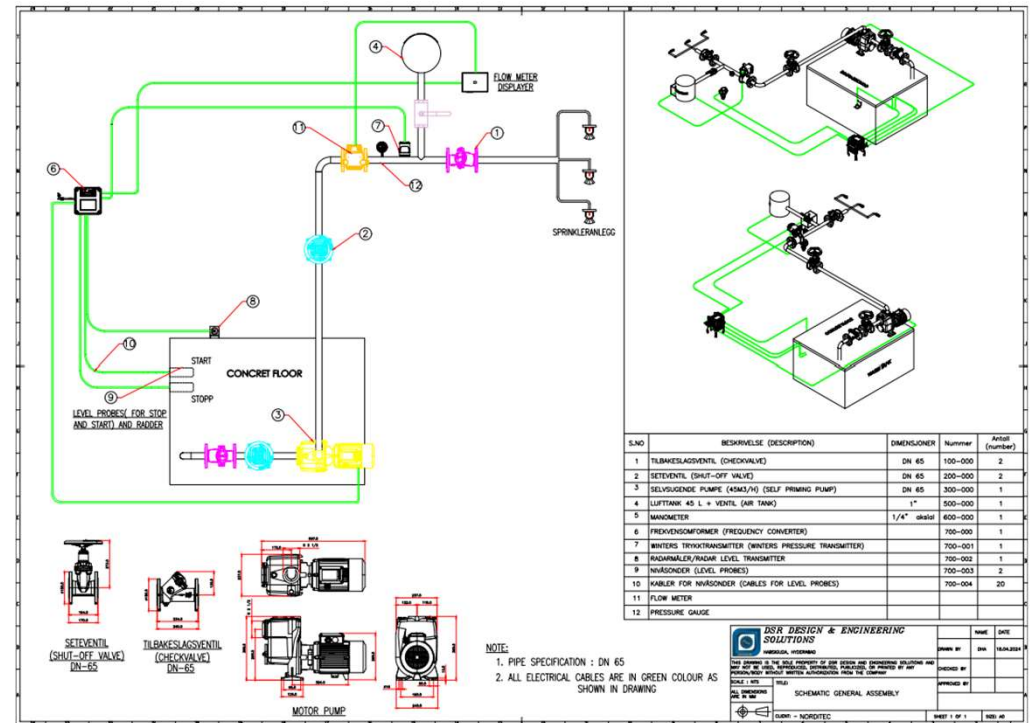


NORWAY  
3D Design & CFD ANALYSIS  
Drinkable water





# BERGEN MUNICIPALITY



## Data Centers

- Amazon Data Center (30 MW), USA (Northern Virginia)
- Datacenter in SMRC (1 MW), Qatar

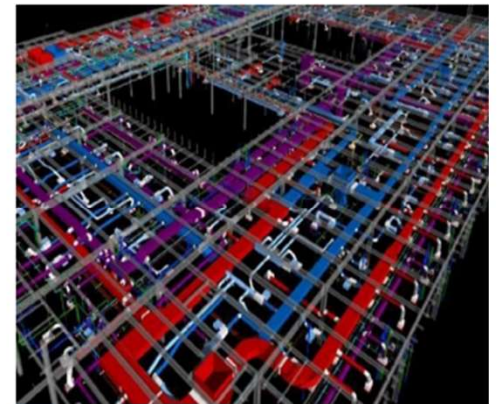
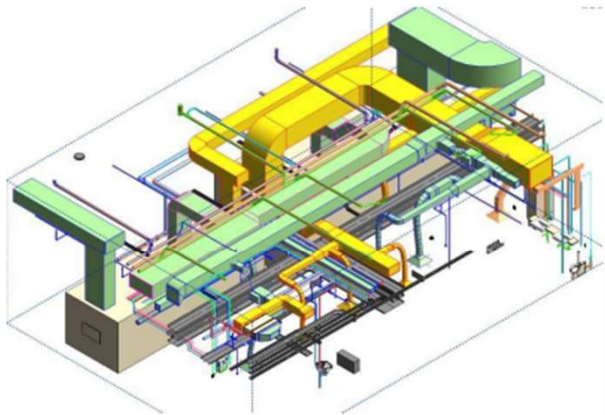
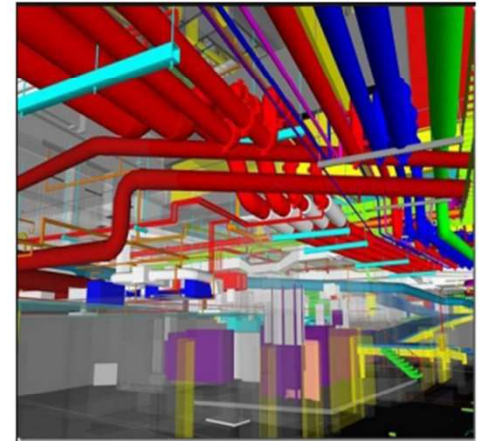
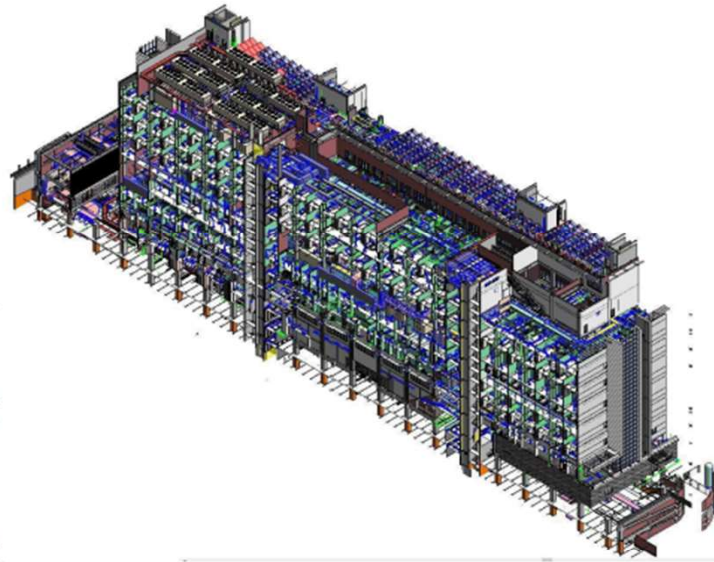
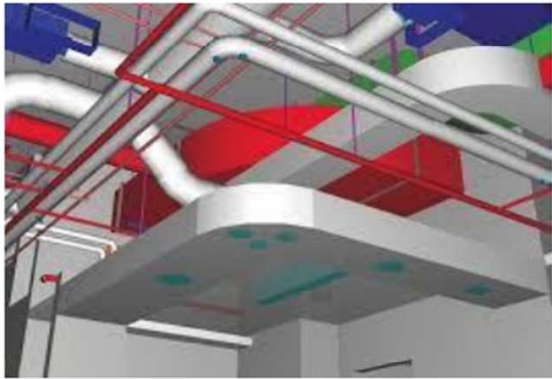


Amazon Data Centre, USA (Northern Virginia)



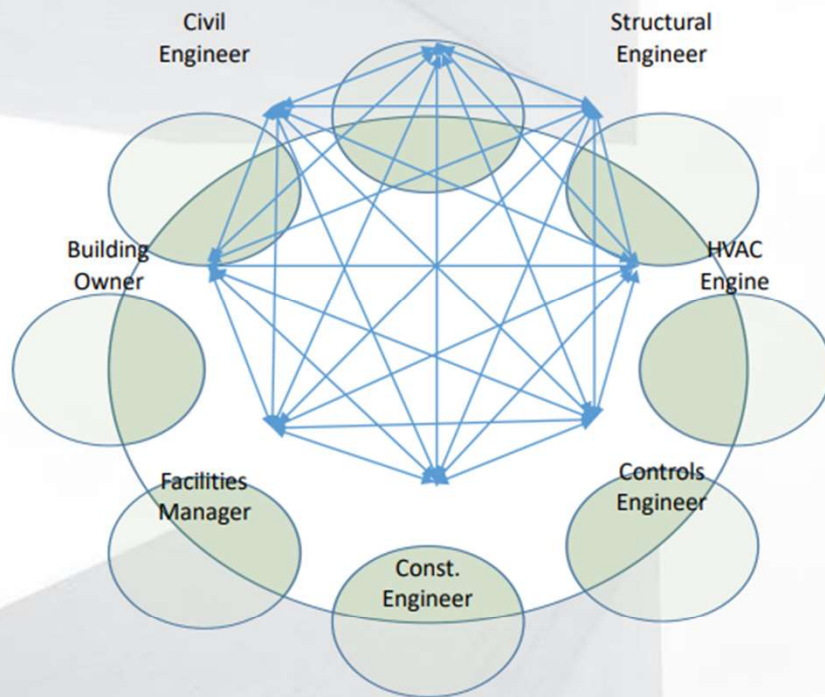
Data Centre In SMRC, Qatar





## Without BIM

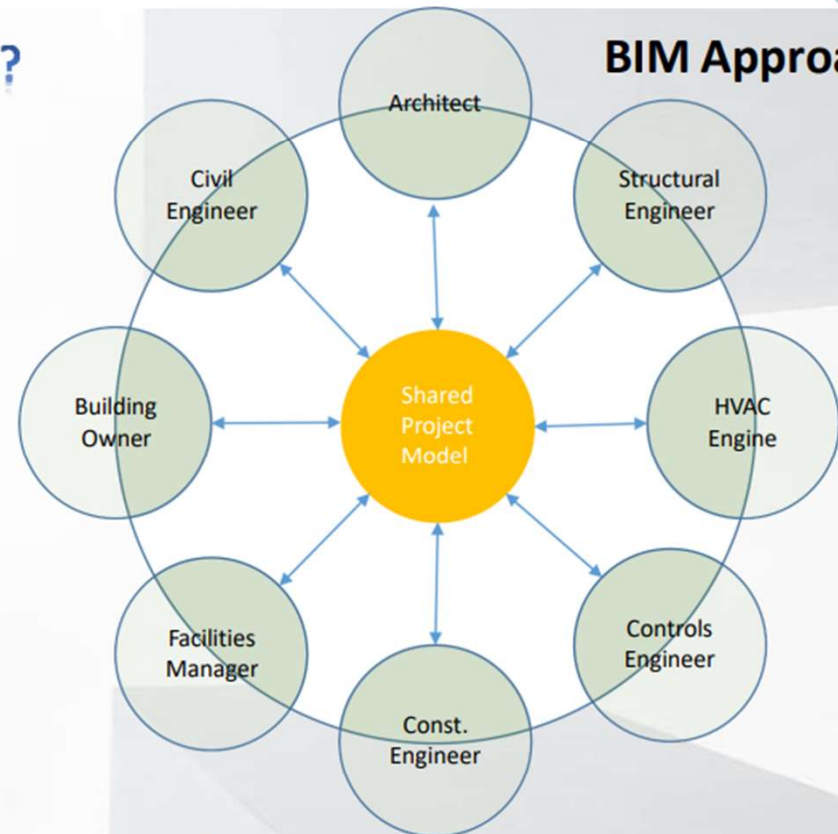
Architect



**Disarrayed Information transfer**

## WHY BIM?

## BIM Approach



Simplified exchange with creation of central repositories for information

**Organised Flow**

# Certification

**Certificate of Registration**

This is to certify that Quality Management System of

**DSR DESIGN & ENGINEERING SOLUTIONS**

P-8/8,Road No.5,I.D.A.,Nacharam, Hyderabad-500076,  
Telangana, India

is in accordance with the requirements of the following standard

**ISO 9001:2015**  
(Quality Management System)

**SCOPE OF CERTIFICATION**

"Providing the Following Services of 2D 3D CAD Drawings, 3D Modeling, Engineering Consultancy (Mechanical Engineering, Civil Engineering and Architectural), Designing of (Tool / Product / Pipe / Solar Power Plants), Prototyping, Reverse Engineering, Miniature Model and Any Other Design Related Works And Post Design Support.

Certificate Number : 170221019104

*To verify certificate, visit at :*  
[www.arscert.com](http://www.arscert.com)  
<https://uafaccreditation.org>

Initial Registration Date : 17-Feb-2021  
1<sup>st</sup> Surveillance Date : 17-Jan-2022  
2<sup>nd</sup> Surveillance Date : 17-Jan-2023  
Certificate Expiry Date : 16-Feb-2024

Accreditation No. : 51901390123

Issued by ARS Assessment Private Limited

*Abhishek*  
Managing Director

ARS  
UAF  
IAF

UAF IS A MEMBER OF INTERNATIONAL ACCREDITATION FORUM (IAF).

UAF Address : 3510, Clinter, Norfolk, VA 23509, United States of America :

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