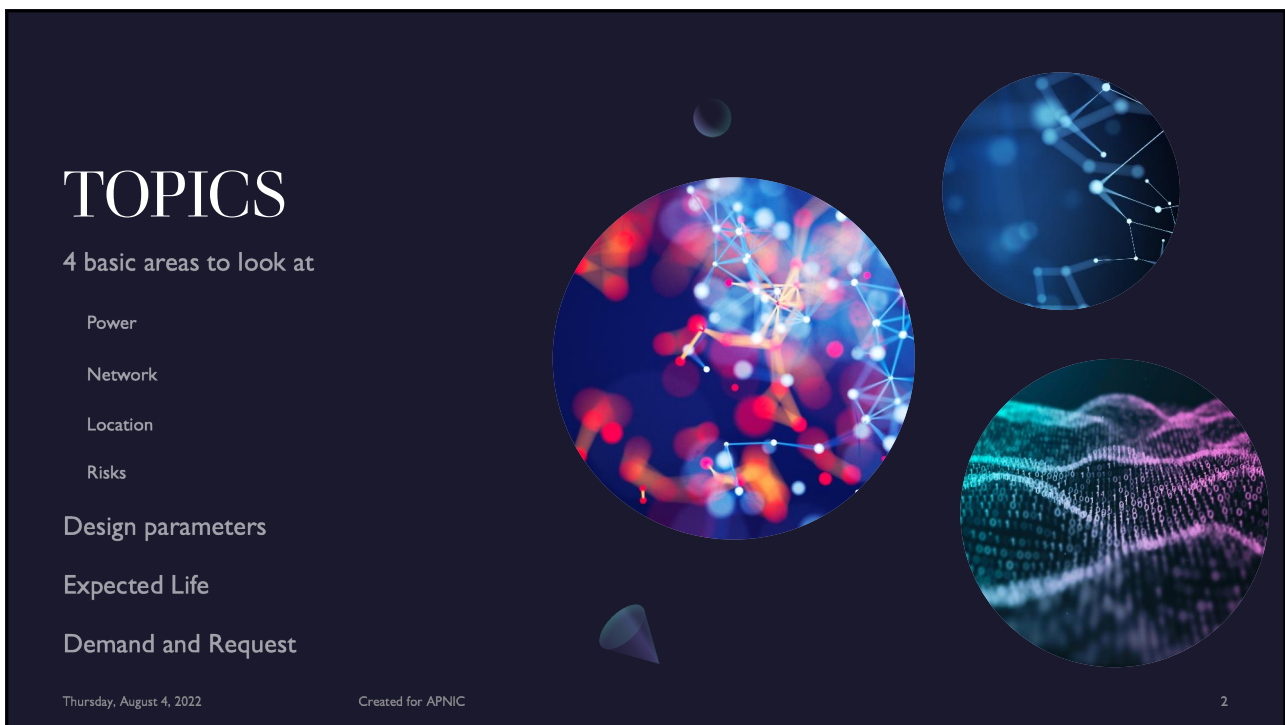


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# Introduction


Should I COLO with a partner, should I build a DC, from 1 rack to 1000 racks. A Data Centre can mean different things to different people. Whether you are looking to migrate equipment, or build your own, understanding the concepts of a Data Centre is vital. Data Centres are the new norm, with data being leveraged from these buildings to support our everyday lives. Being a 3% of energy world-wide, the core part of the technology stack is driving new options for innovation and technology growth. In this webinar, basic functions of a Data Centre will be discussed and start the thought process of should I build a Data Centre.

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# Disclaimer

- All information is of personal opinion and knowledge
- 15 years of Data Centre experience
- High Level points and information that allows an introduction into the decision of which path to take
- Understanding each idea comes with a business case
- Data Centres are a costly business and require a dedicated 24/7 team to support
- Be appreciative of the teams behind the scene



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# The Basic 4


- Power
- Network
- Location
- Risks

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# Power

- Depending on the size of the DC determines the power required for IT and Building.
- There will need to an Uninterruptible Power Supply (UPS) and Generator to ensure a continuous power option when the mains supply is unavailable.
- Power is a core function to the DC. Without power you cannot cool the infrastructure or deliver services. Without clean consistent (and potentially Green) there is a risk to the Customers and to the Service Level Agreements. (SLA)



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# Network

- Either doing a Dial Before You Dig survey or working with a few different network/carriers to ensure of a path of redundancy is creating.
- Multiple access points into the building
- Options for dark fibre
- Options for transit
- Cloud access/on ramps
- Understanding network into the building – riser access, cross connects and fibre termination panels

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# Location

- Choosing a location that is beneficial to you
- Close proximity to the Operational staff or look at ways to have remote hands support you
- Plentiful power options
- Options for Network by multiple providers
- No issues with water ways near by and understanding mother nature concerns
- Enough space for the design to work from a cost and energy efficient manner

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# Risks

- With having an idea of Power, Network and Location. Are there risks with building or placing your hardware there.
  - Can you access the site from multiple ways?
  - Are there issues with flooding?
  - Is it in the flight path?
  - Near a Petrol/Service Station
  - Close to a railway/small aircraft hanger/Military area
  - Known issues with bush fires?
  - Ownership of land or building or the sovereign position?
  - Major constructions plans that may cause issues with the site.
  - Security controls

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# Design parameters

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# Position

- Is there a design in mind, are you able to see the business workflow for the site.
- Are you building 1 rack, pod or racks or a full data hall?
- Think about the options for storage of spare parts, the building of the equipment.
- There will be rooms for Power, Cooling, Security and Office space. Ensure that everything has a thought for expansion or change.
- Water cooled equipment has been introduced into the small to medium hardware market is this something you want to include in the design?



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# Expected Life

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# Position

- The common goal is for a Data Centre to have a 25-year life expediency
- There are milestones both major and minor that will be included into the timeline of operation
- Whilst the IT hardware has a much shorter timeline, the mechanical and electrical equipment is designed to withstand a longer period of replacement.
- Different climates will change the timing on certain parts. With a monthly checks for general servicing along with biannual or annual servicing there are options to increase the life of the equipment.
- With the constant growth in efficiency and reduction of costs, there will be times that a new upgrade is introduced to enable a function of such



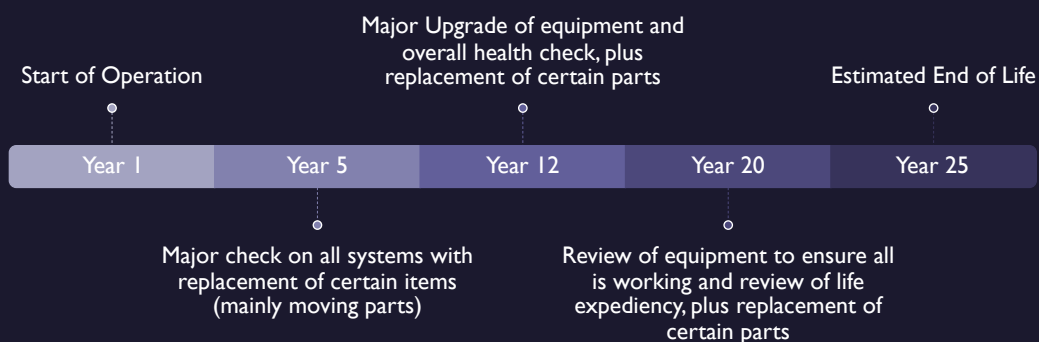
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# Timeline



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# Demand and Request

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## Position

- Regions around the world have a reason why they built the scale of site, whether is it due to proximity to a business hub, or subsea internet capacity, or even to be allow a second site for redundancy. The demand is always a major factor when building the business case.
- Not all sites are built for the theory “build it and they will come”
- Creating a customer base to leverage the concept is beneficial. This can be internal customers or partners.
- Some of the demand can also be a major stake holder in how the site is design and built.
- Be understanding that not all sites are the same and even can have multiple vendors this is okay.




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# Summary

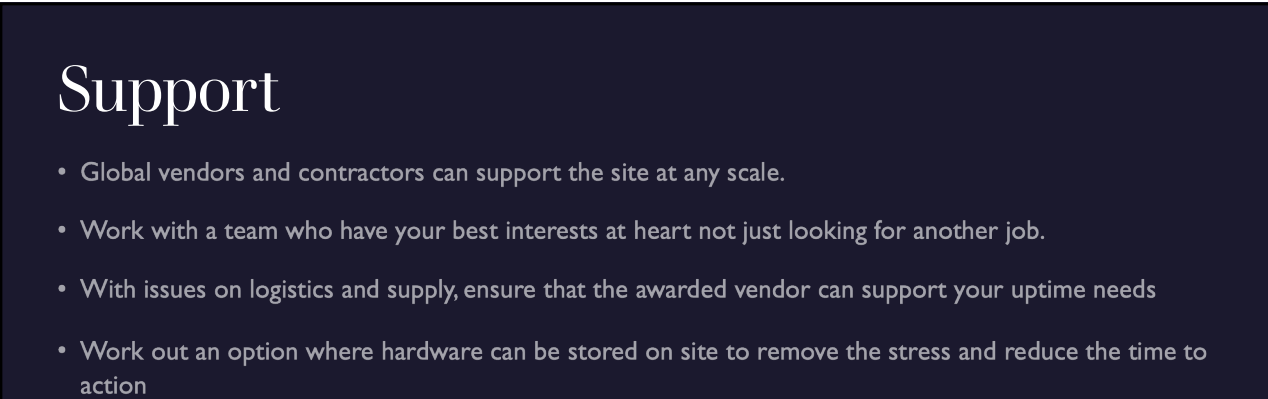
Moving your equipment into a controlled environment whether being yours or third party is the best for the data and security. Always ensure that the data is protected with backup and fault tolerant options.

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# Support

- Global vendors and contractors can support the site at any scale.
- Work with a team who have your best interests at heart not just looking for another job.
- With issues on logistics and supply, ensure that the awarded vendor can support your uptime needs
- Work out an option where hardware can be stored on site to remove the stress and reduce the time to action
- Enable a simple process for access with security.
- They are there to help you



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# Thank You

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