



Administrative Excellence

UNIVERSITY OF WISCONSIN-MADISON

Shaping our Future

DATA CENTER AGGREGATION

Context

- Users rely on different types of technology to support their work, which requires significant infrastructure to host (web servers, storage servers, etc.).
- The industry trend is to consolidate servers and data centers to:
 - Realize significant management and energy savings
 - Reduce security risks
 - Enhance services by creating “on demand” services.

Analysis

- Interviewed divisional IT leads and surveyed several colleges and administrative units to understand the distribution of servers
- Built a cost model to explore efficiency opportunities and estimate costs that might be relevant to the whole campus
- Reviewed centrally provided services, service levels, pricing, and utilization, and compared those to peer institutions

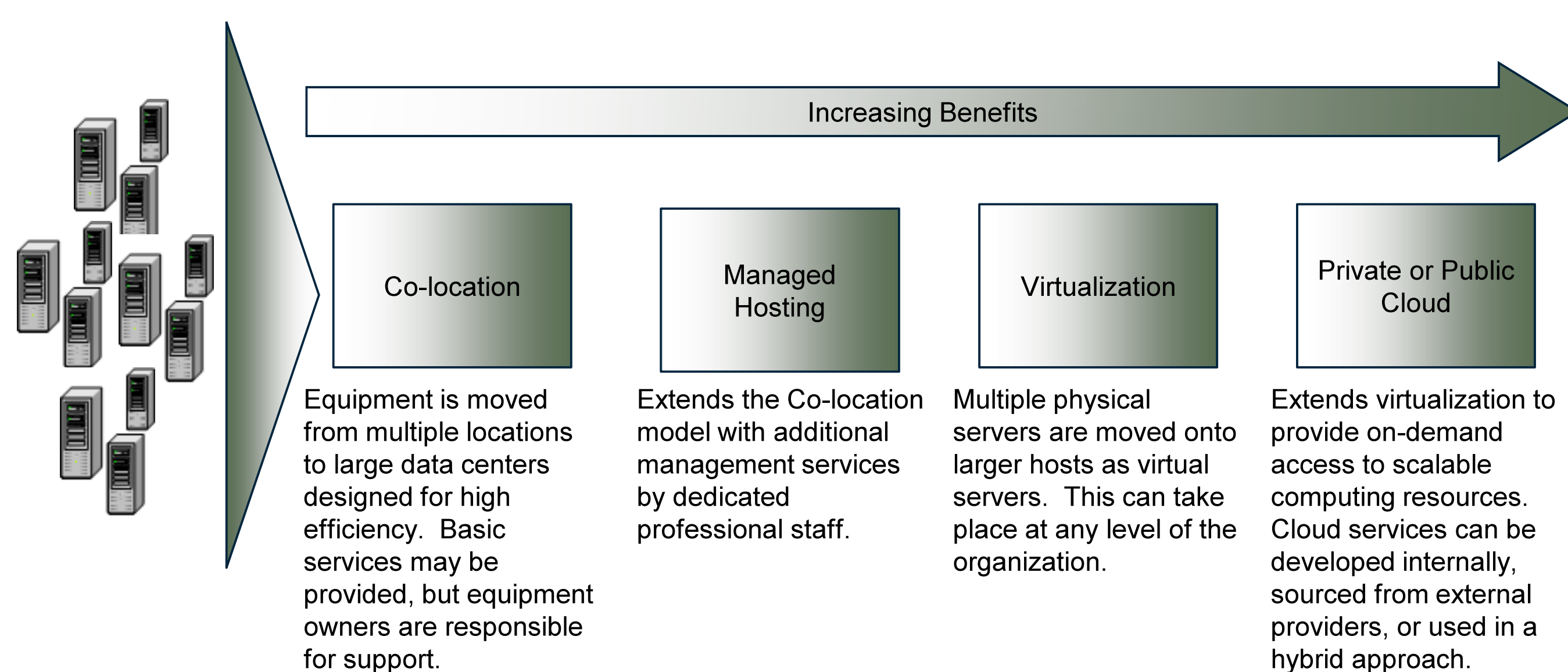
Findings

- UW has at least 4 major data centers, several dozen dedicated server rooms, and hundreds of single servers spread throughout campus.
- Centrally-offered services are expensive relative to the costs of building local capacity, which appears to have encouraged divisions to build their own capacity.
- Several peers operate with servers and data centers provided centrally or funded on a marginal cost basis.
- Virtualization software used across the University appears to be the same, reducing implementation challenges.

Opportunities

- There are potential savings of upwards of \$5M annually, based on industry benchmarks.
- Data center aggregation can take several forms including co-location, managed hosting, “virtualized,” (shared by different user groups), or even outsourced.
- Additional analysis is required to get a more accurate understanding of server distribution across campus and its related costs.

Benefits of Aggregating Data Centers



This diagram shows a progression of benefits as an organization moves towards increasing aggregation. It is not intended to represent a linear implementation path.