Monetize your services with
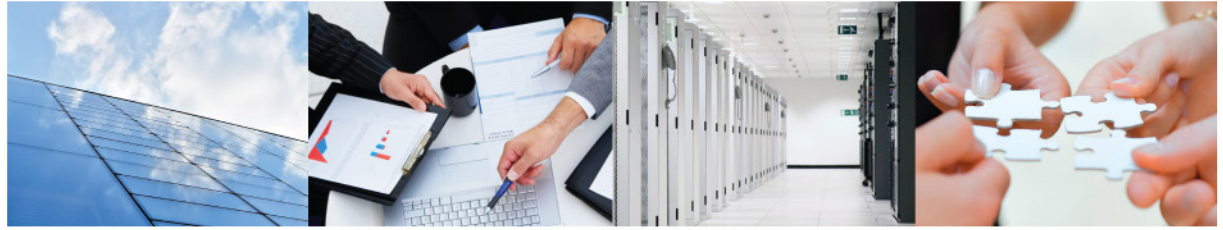
Globill
Billing and Chargeback Solution

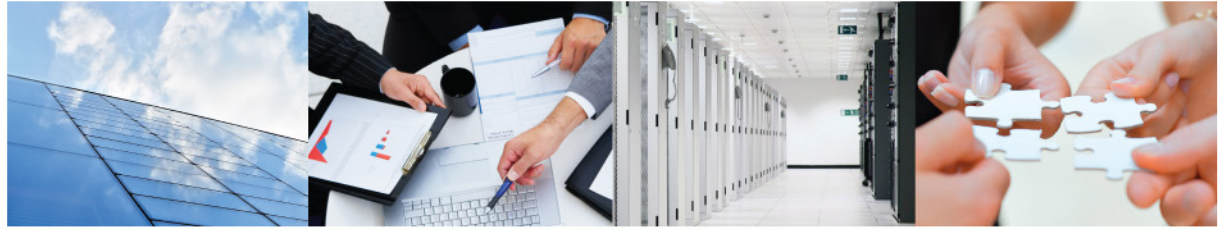**Globill Chargeback and Showback**

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Introduction

- Moving to a private cloud comes with many benefits:
  - **Multi-tenancy**
  - **Scalability and Elasticity**
  - **Frees Up Internal Resources**
  - **Lower Costs**
- A major advantage that is monitoring the **cost of IT**
- In a cloud model, the budget responsibility of an IT environment can now placed in the hands of the IT department. IT is responsible, and therefore IT is accountable.
- Chargeback and showback allows the IT department to monitor, analyse and assign accountability to users

Billing and Chargeback Solution

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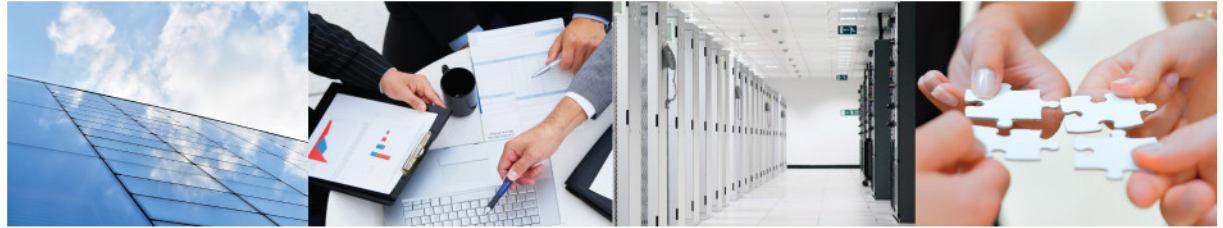
Information Technology as a Service (ITaaS)

- The IT department controls all IT in the cloud and provides Infrastructure As A Service to departments and users requesting them.

- **Charge back**
  - *is the means of calculating the cost of operation of a server, and then producing an invoice for the user departments to pay which will go through the normal financial process.*
- **Show back**
  - *is the means of calculating the cost of operation of a server, and then notifying the user departments of their overall involvement in that cost.*
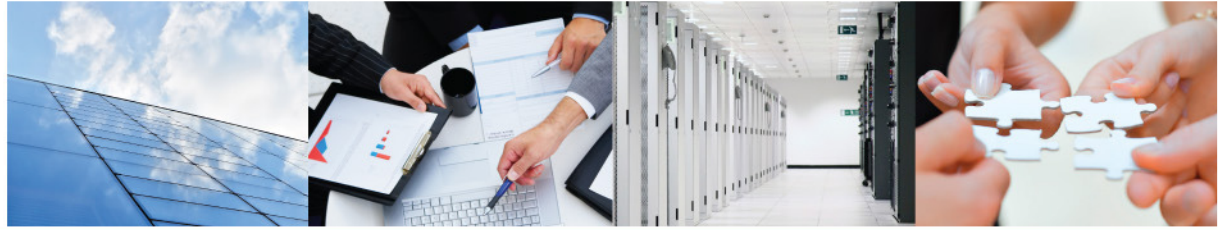
Total Cost of Ownership

- Virtual Machine Costs
- Software Licences
- Staff Costs
- Utilities
- Additional Costs
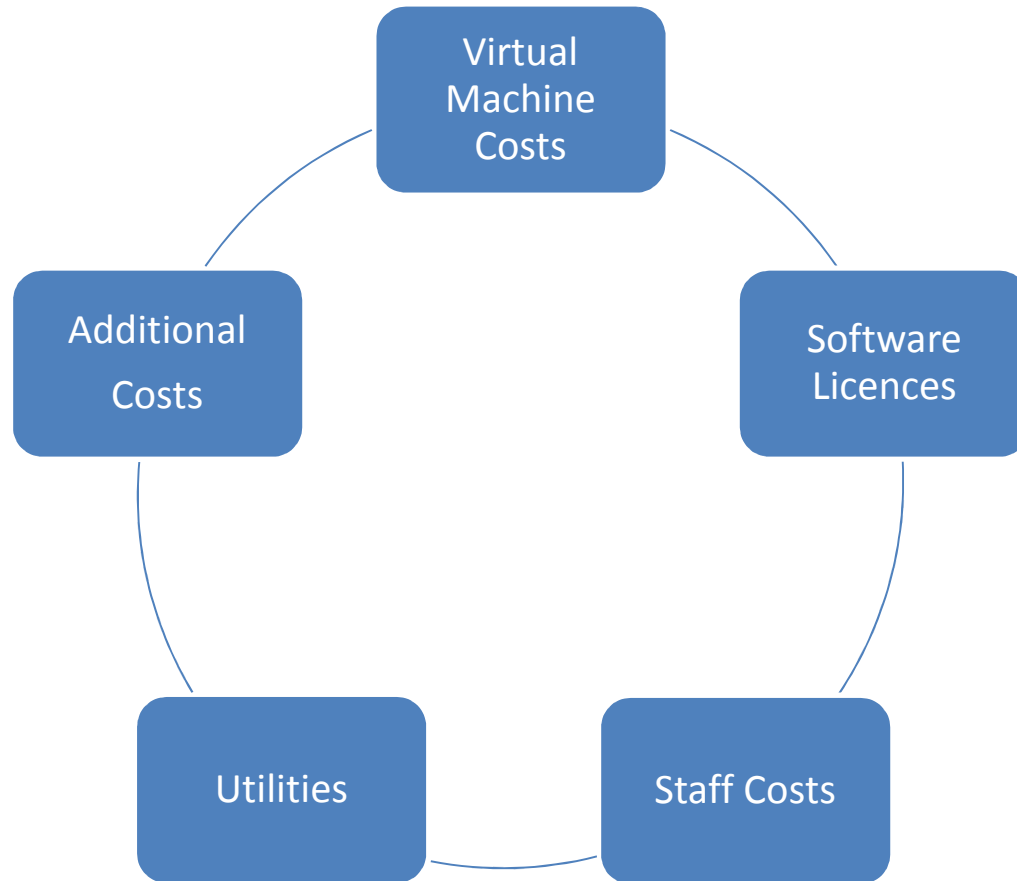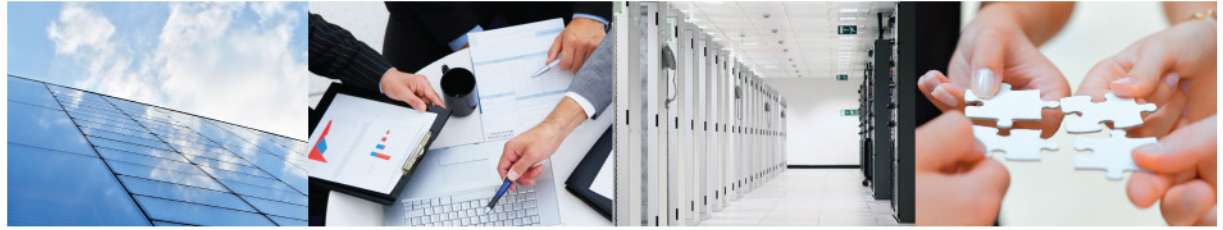
Total Cost of Ownership

- **Virtual Machine Costs** include CPU, RAM, storage, bandwidth based on actual usage on those virtual machines.
- **Software Licenses** is the fee charged by a vendor per user for a piece of software.
- **Staff Costs** refers to the cost incurred by labour required to maintain the cloud environment.
- **Utilities** are normally indirect costs associated with maintaining server infrastructure. These include premises, electricity, security, etc.
- **Additional Costs (ad hoc costs)** are for unexpected costs that arise that affect IT. These can include costs for consultants.
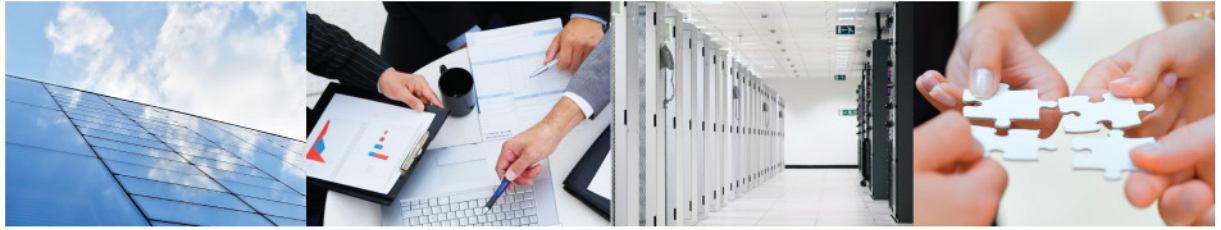
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Why Chargeback?

Influence Business Strategy

Assign responsibility fairly across the organization

Cost of IT

Accurately predict and review costs

Understand where and when costs occur
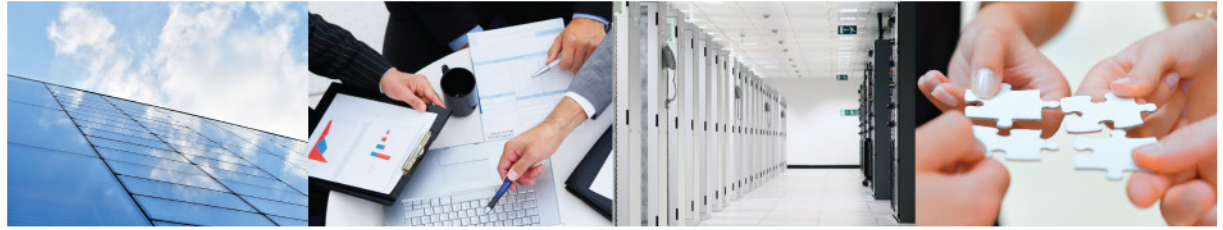
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Chargeback Models

Billing Model

Fixed-Ratio Model

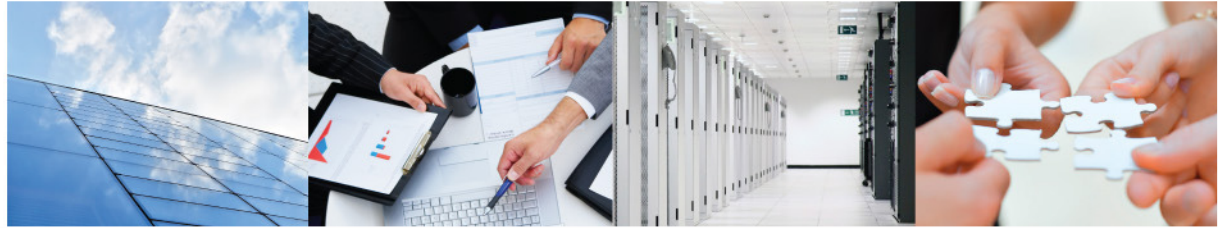Usage-Based Model

Activity-Based Model

Model Methodology

- **Billing based** is the means of applying a service catalogue/pricing catalogue charges to apply charges to virtual machines. These charges apply:

    - Subscription charges: The overall cost of running the infrastructure.

    - Once off charges: Miscellaneous ad hoc charges such as support and maintenance fees.

    - Service charges: Additional recurring costs defined in the service catalogue.

    - Usage costs to include (where defined):

        - Bandwidth (in/out)

        - CPU utilization

        - Memory utilization

   - Storage costs

    - Licence fees
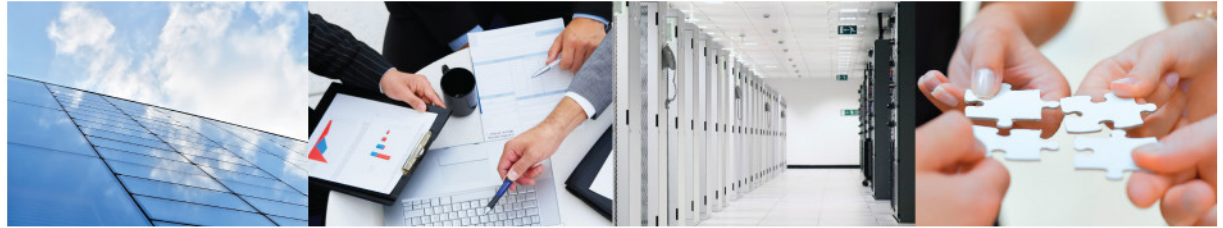
Model Methodology

- **Fixed-Ratio based** is the means of charging each department for the total cost of ownership for a server based on a cost model. The fixed ratio model is created by assigning a fixed percentage that will be allocated to each department. The department is therefore charged an amount that is a ratio of the total cost of utilization of the server.

- **Usage based** is the means of charging each department for the utilization of the server by actual network usage statistics. This incorporates parameters such as connection time, bandwidth in/out, machine count, user count, etc. to determine the ratio in which the cost should be split amongst the departments. The ratio is determined by the aggregated usage statistics for each department.

- **Activity based** is the means of charging users per transaction for an application server. This means that a business unit will determine the cost of a transaction on an application server, then this cost will be assigned to each department as its users perform transactions The total transaction count could be also used to determine the ratio for activity per a department, where other costs could be assigned to the department.

Globill: ITaaS Structure

- An ITaaS structure is any real or logical representation of an organization to which TCOs are assigned for chargeback to be calculated.
- The flexibility of an Globill's ITaaS structure is reflected by being able to represent ANY configuration of an organizational structure.
- For example an ITaaS structure can represent an organizational structure directly as it exists in the real world, geographically or by department.
- Once an ITaaS structure is created, any virtual machine can be assigned to it and virtual machines can be assigned to multiple structures, allowing meaningful results across a range of structures.
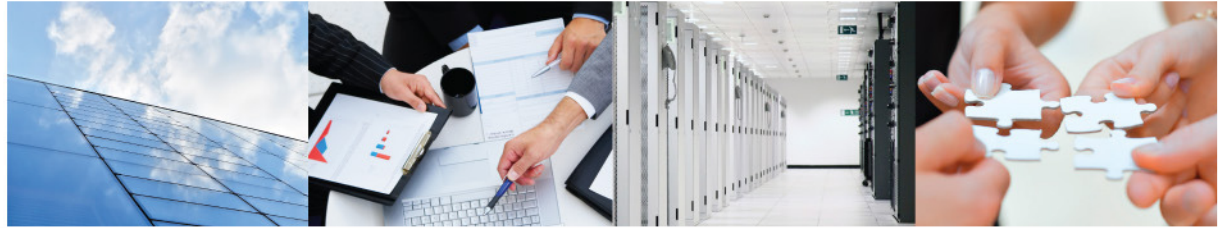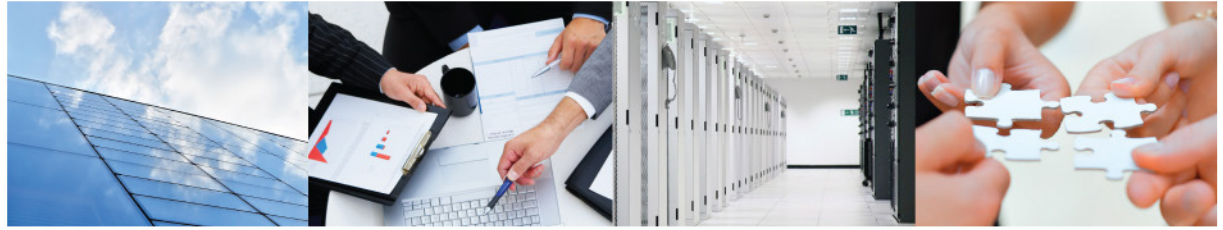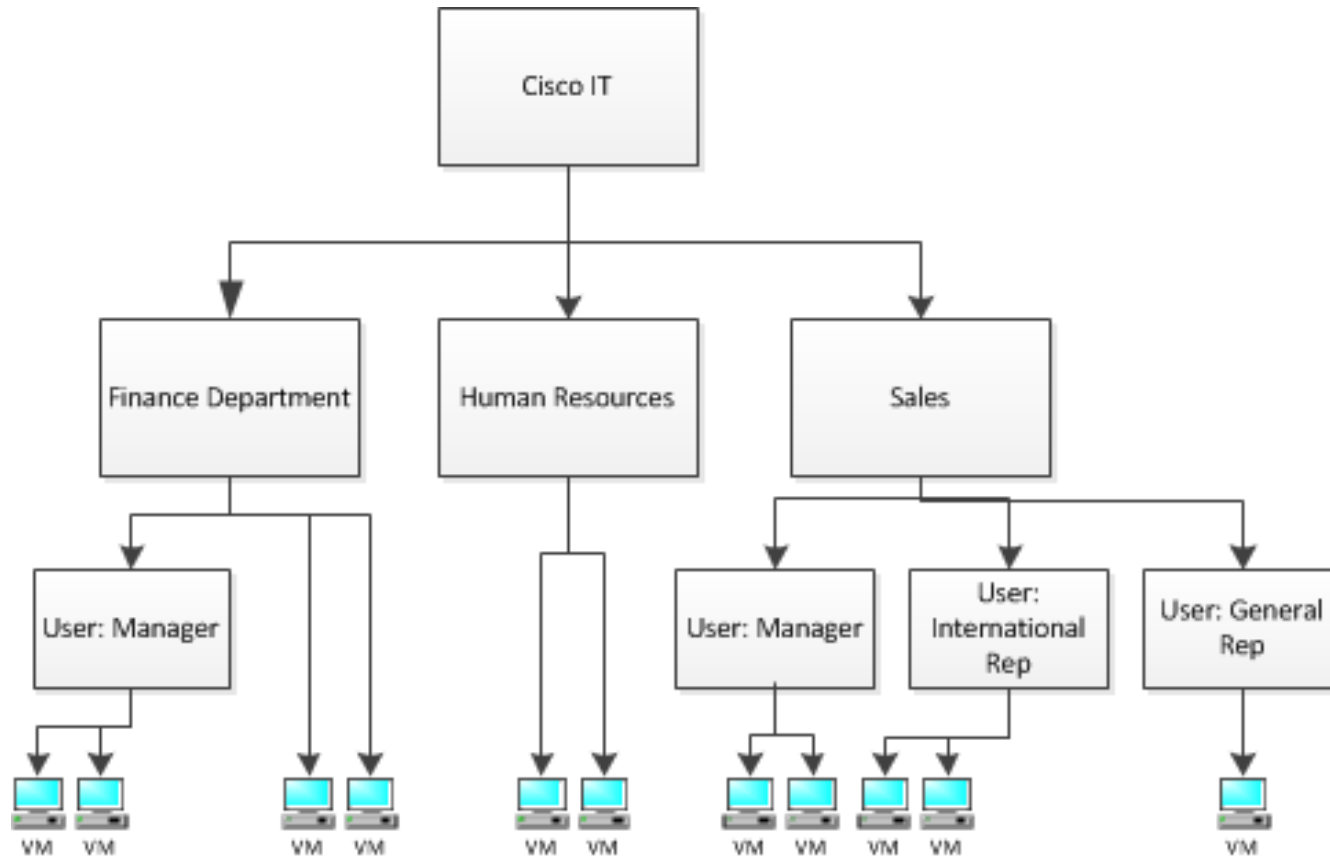
Globill: Billing Model Structure

- The billing model structure is a simpler model as it only reflects the organizational structure as it is captured in the system.
- This represents a n-level parent-child relationship to map to an organizational structure, which would relate directly to an organizational structure.
- The advantage of this is a direct showback/chargeback model without any additional administration.
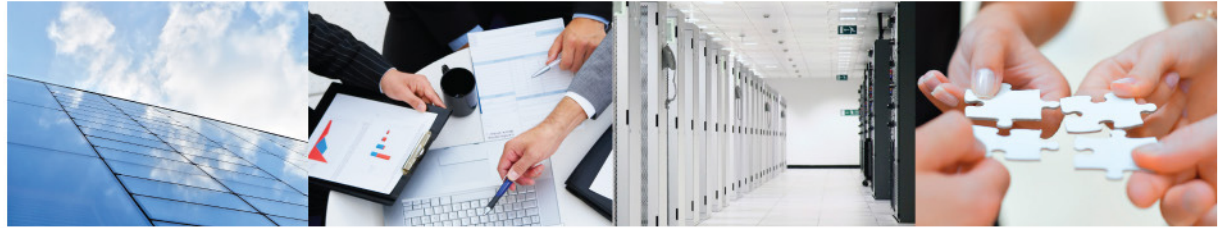- This model relies on TCO costs to come directly from the service catalogue.
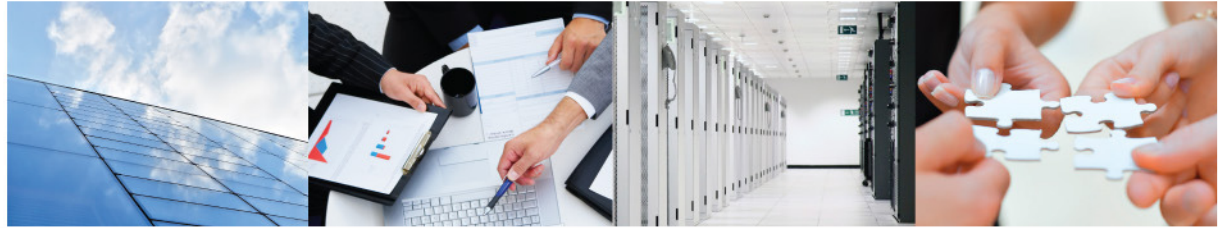
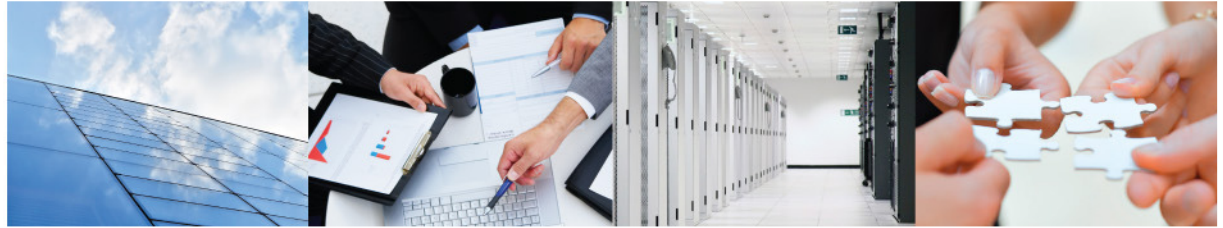# Example: Billing Model Structure

Billing Model Structure Example

- In the above example, each entity will be mapped in the chargeback solution.
- Each virtual machine will generate costs from recurring charges, once off charges and usage costs calculate for a period.
- Virtual machines, as shown can be commissioned directly to a department (Human Resources) or specifically to a user.
- Virtual machines can be assigned to any entity in the hierarchy including the nth parent, for example directly to Cisco IT (not shown in diagram).

- Based on a service catalogue definition, each virtual machine will generate a cost based on usage, subscription fees, once off fees etc.

- Showback is the ability to view the total cost of ownership at the highlest level (Cisco IT) and drill down that cost throughout the hierarchy. For example, Cisco IT will see the total cost of all virtual machines and be able to view the cost per department and drill down to a per user level.

- The ability to view detailed breakdowns of each cost will also be available as well as viewing costs by category (example – view only bandwidth cost of the Sales department)

Billing Model Structure Example

- Chargeback is the ability of producing invoices that reflect the total cost of ownership that is payable by a department, sub department or user in the hierarchy.

- In the example, this invoice generated at the lowest level (i.e. the virtual machine) and can be aggregated to any parents vertically in the hierarchy.

- This is a child to parent (to the nth parent mapping) and an invoice can never be assigned to a sibling or horizontally across the hierarchy.

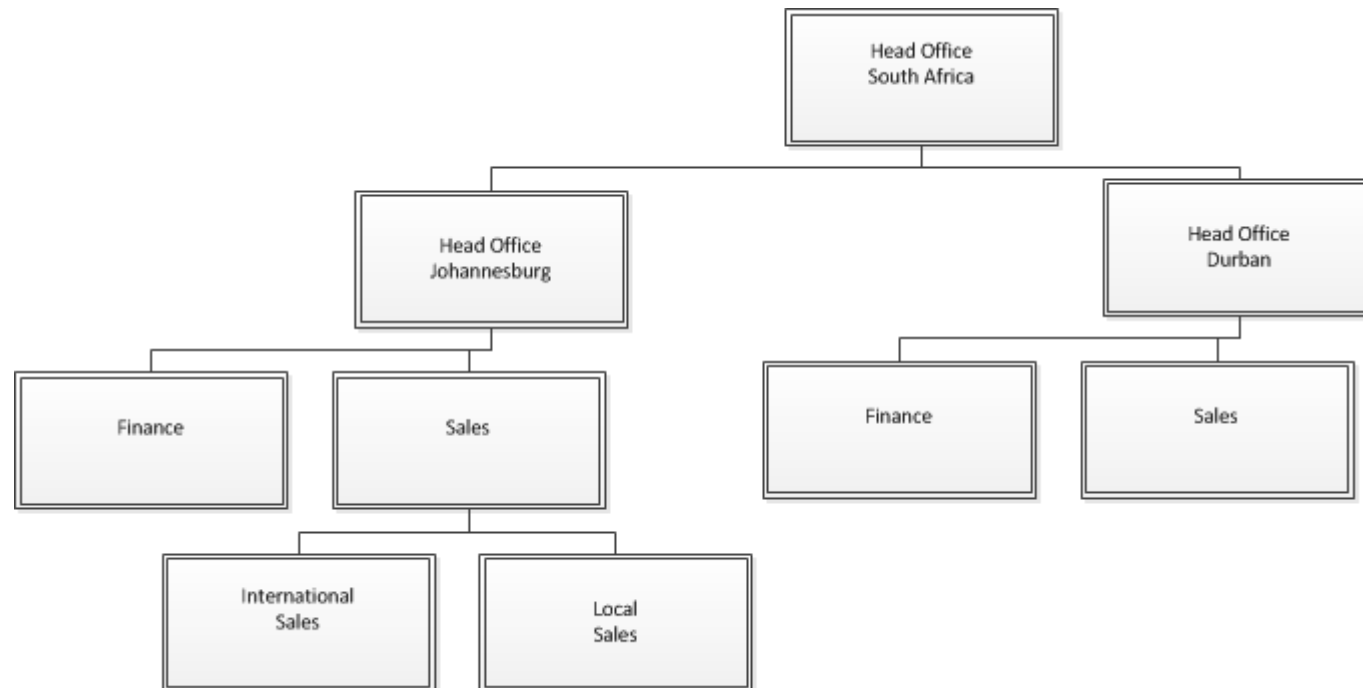- This allows an organization to manage budgets with a high level of traceability

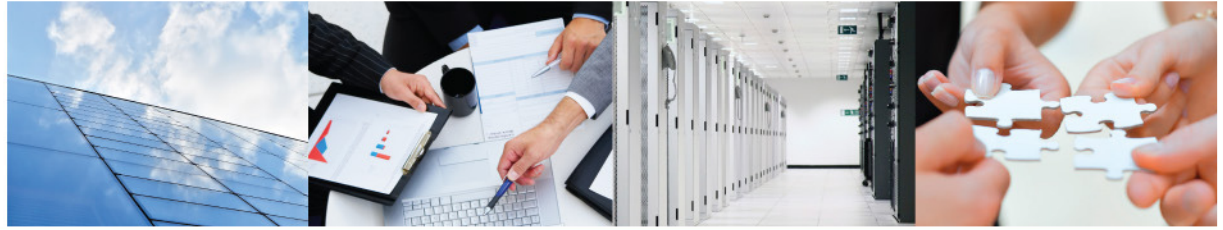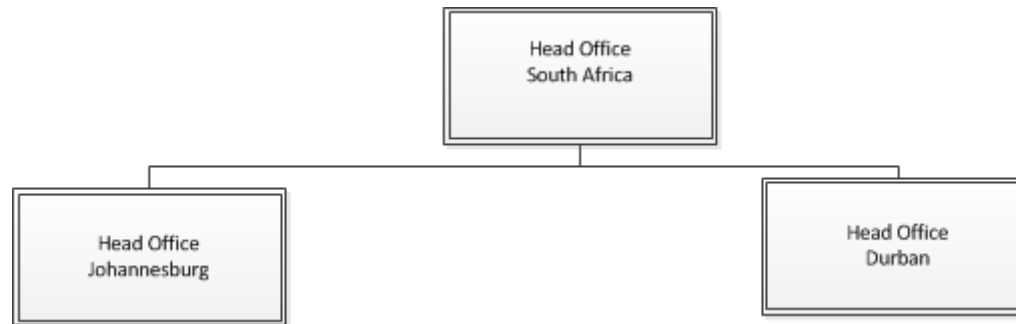# Billing Model Structure Example
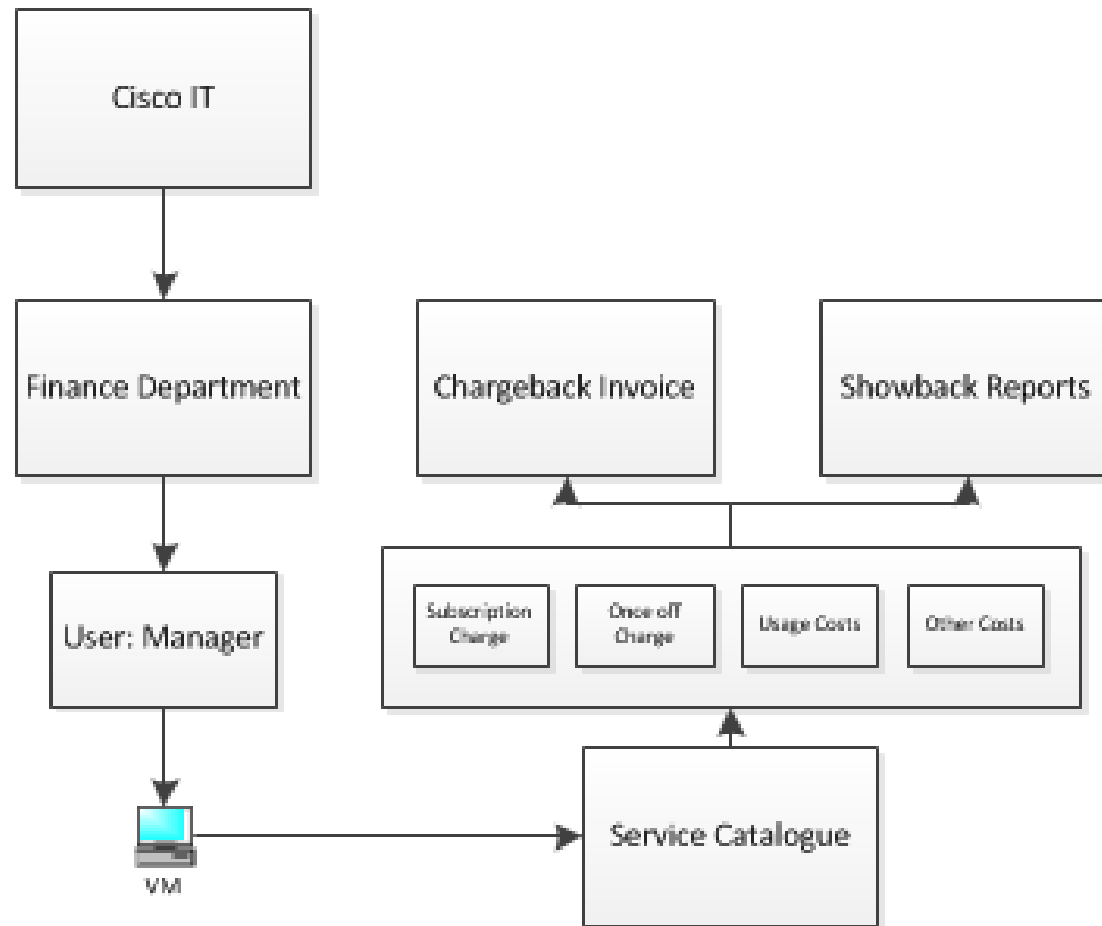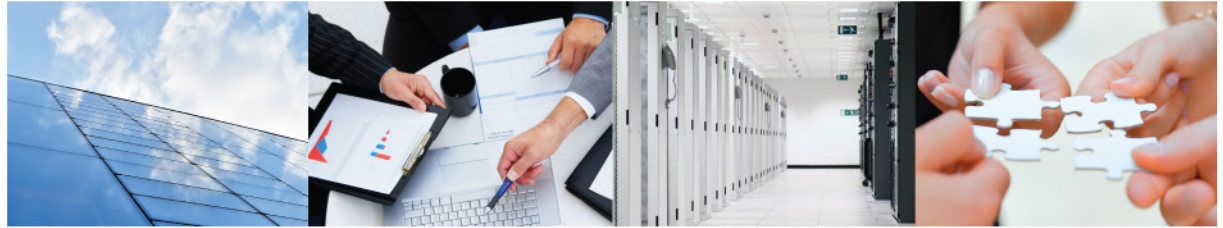
Example: ITaaS Structure

- ITaaS structures is a more flexible structure and mapping. The following shows a direct representation of a company
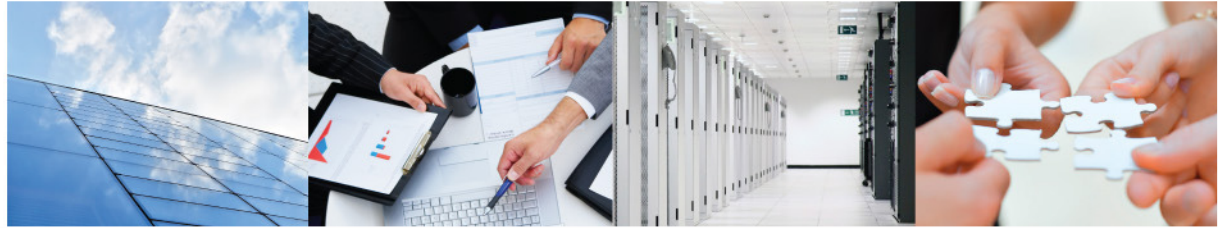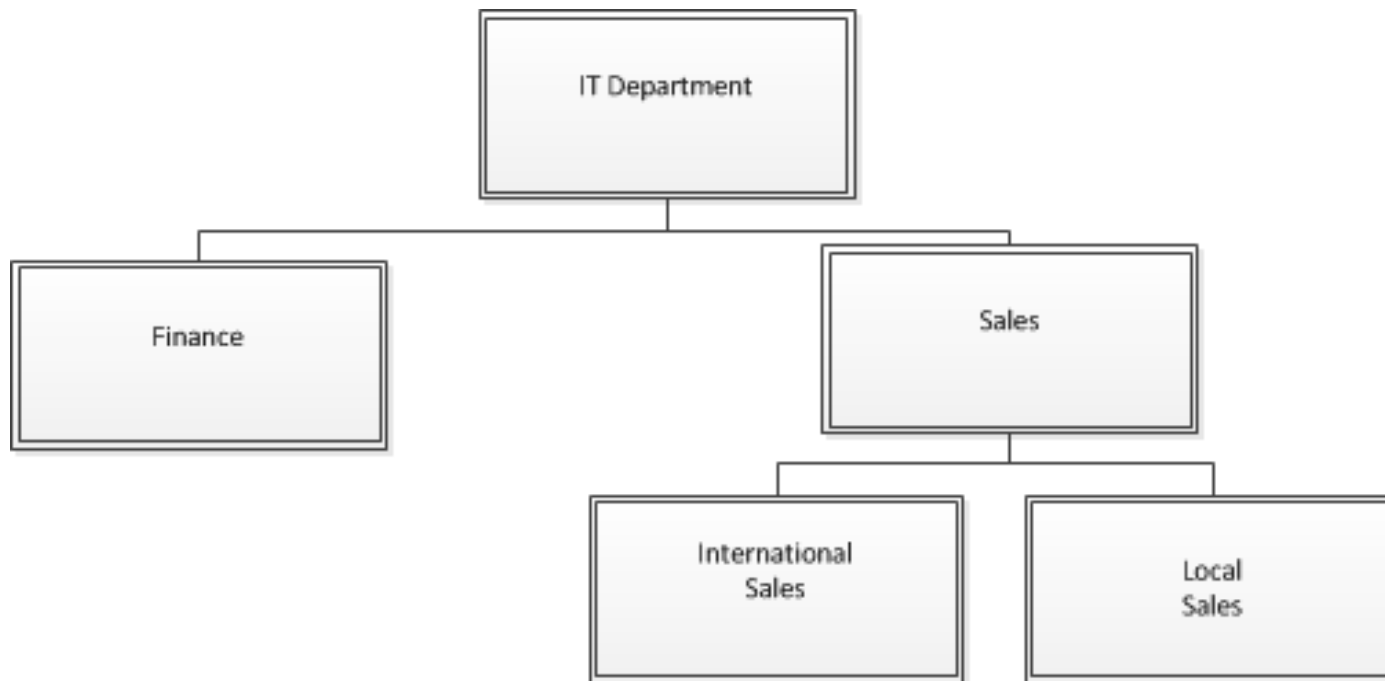
Example: ITaaS Structure

- The following represents a geographical representation of Company A applying the same total cost of ownership
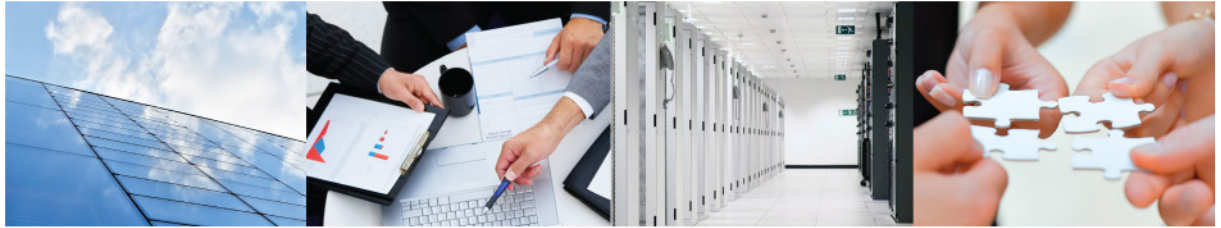
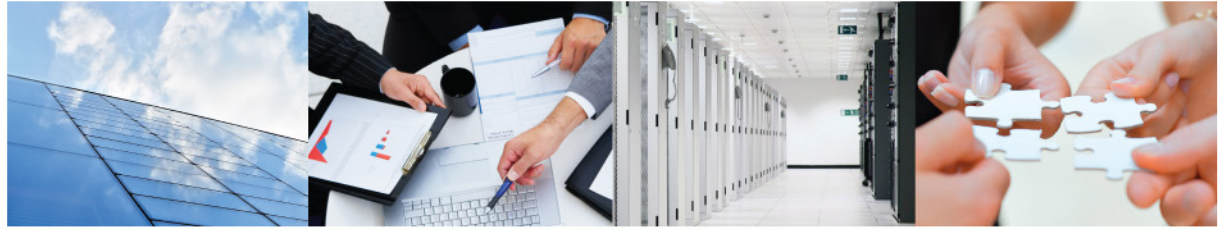# Example: ITaaS Structure

- The following represents a departmental Representation of Company A
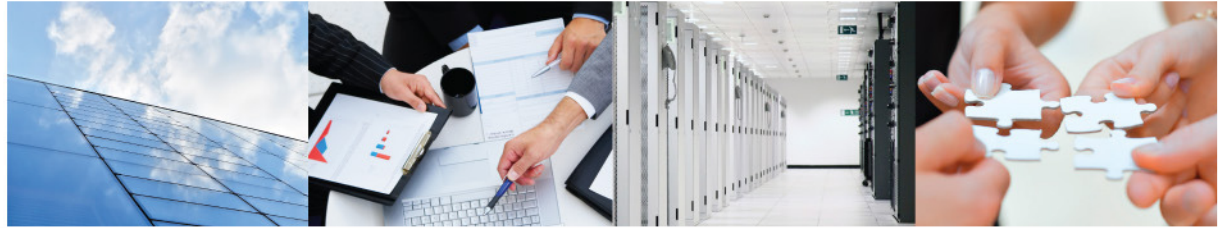
Example: Fixed Ratio Model

- Fixed ratio model requires billing model as an input but reallocates cost based on a fixed ratios
- Note the Billing Model represents a 100% allocation per entity of the fixed ratio model.
- Looking at the departmental example, consider the following TCOs
- Virtual Machine Costs – $100 each.
  - 'Virtual Machine sales' where Sales department uses 80% of the virtual machine while finance uses 20% of the machine during end of month processes.
    - The international sales department uses 50% of the resources and the local sales department uses 30% of the resources which makes up the 80% of their parent.
    - 'Virtual Machine finance' where the finance department uses 100% of the resources.
- Utilities Costs – $1000 for electricity, rent and maintenance.
- Staff Costs - $50 per VM.
- Licence Costs - $100 for accounting software on finance VM, $80 for sales software on sales VM.

Example: Fixed Ratio Model

- The following diagram shows how the fixed ratio model has been configured for this structure.
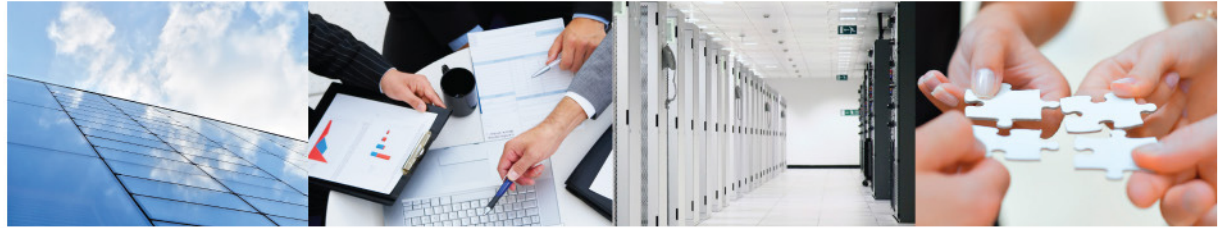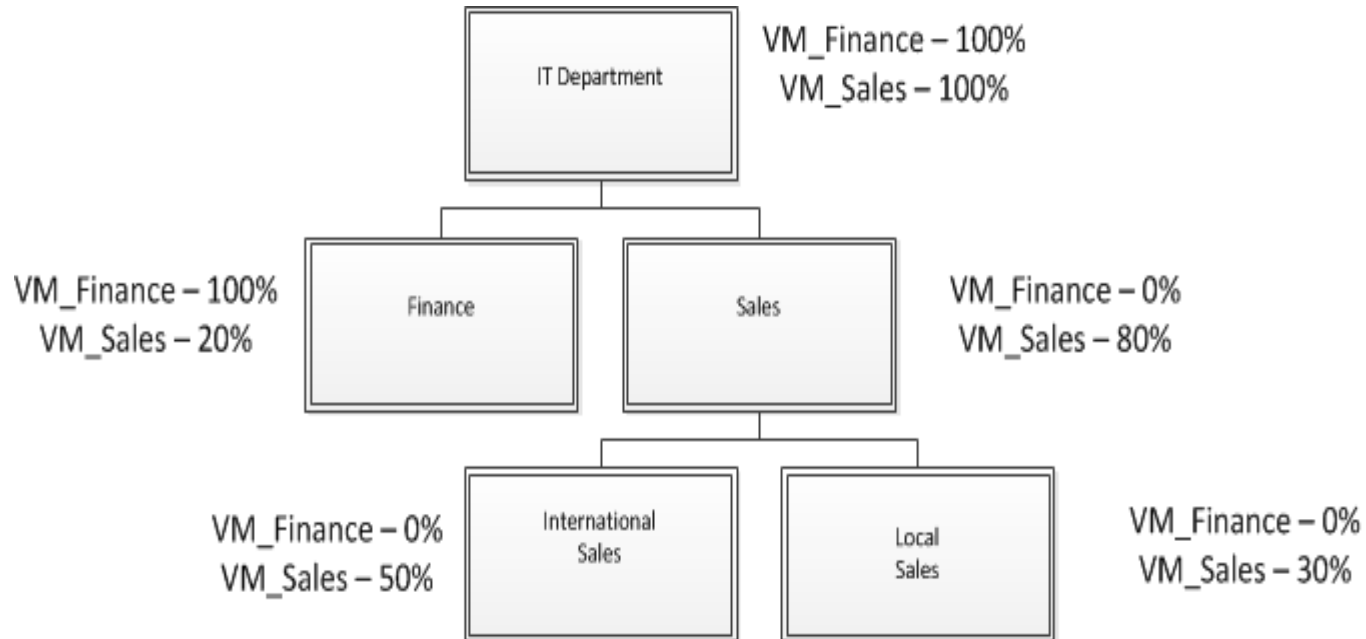
Example: Applying TCO

- In the above example, the total cost of each virtual machine is
- TCO per virtual machine
  - Virtual machine costs, Staff costs, Licence Costs
  - TCO per structure
    - Utilities costs = $1000 – split equally across virtual machines

	Finance VM	Sales VM
VM cost	$100	$150
Staff/Maintenance cost	$50	$50
Licence Cost	$100	$80
Utilities (split)	$500	$500

Example: The Maths
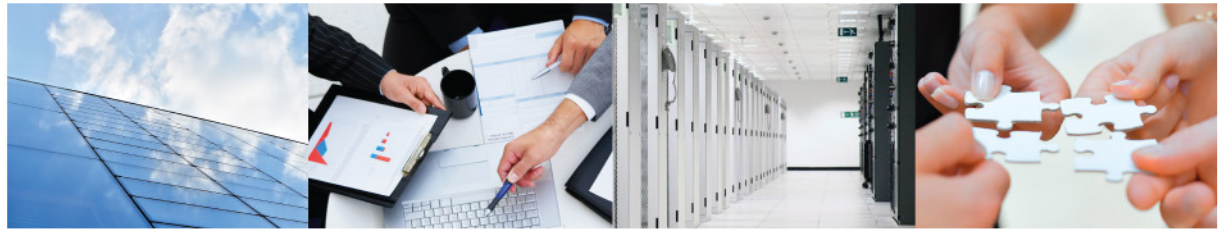
IT Department VMFinance = $100 + $50 + $100 + $500 = $750
VMSales = $150 + $50 + $80 + $500 = $780

Finance Department VMFinance = 100% of $750
VMSales = 20% of $780 = $156

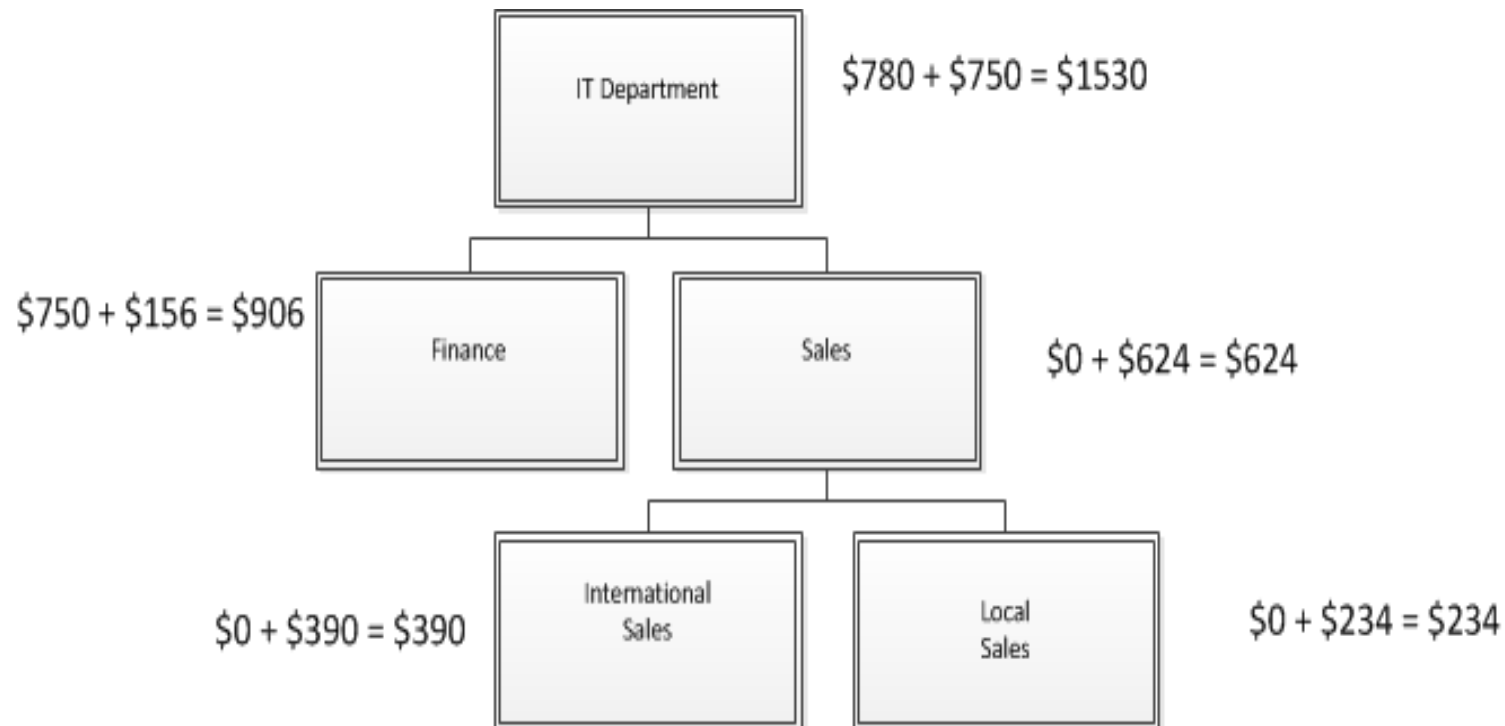Sales Department VMFinance = 0% of $750
VMSales = 80% of $780 = $624

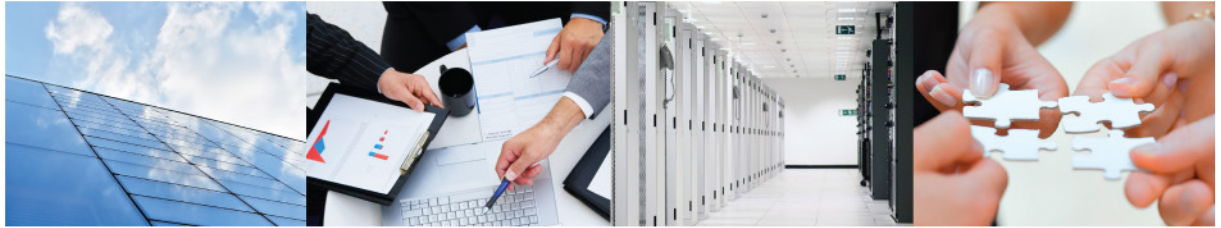International Sales VMFinance = 0% of $750
VMSales = 50% of $780 = $390

Local Sales VMFinance = 0% of $750
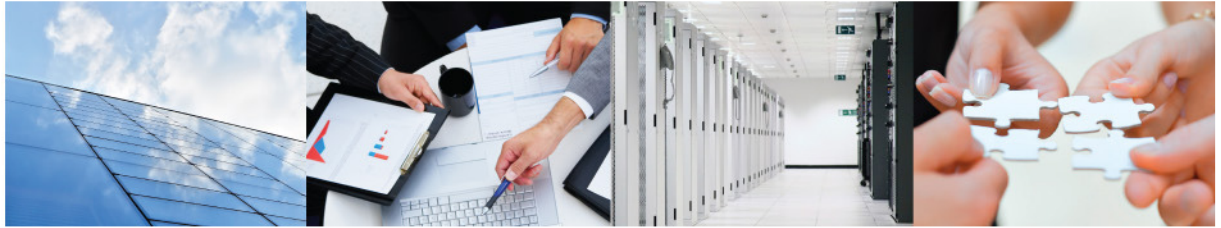VMSales = 30% of $780 = $234

Example: The Maths

Example: Showback Explanation

- The above diagram shows that the Total Cost IT is responsible for is $1530
- With Chargeback IT can assign responsibility for the costs to the departments that actually consume the resources, as in this case, neither virtual machine is consumed by IT.
- IT then passes accountability for that cost by assigning responsibility of that cost by the ratios of $906 to Finance and $624 to Sales.
- The Sales department could take responsibility for this amount OR the accountability can be further broken down to $390 to International Sales and $234 to Local Sales.

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Example: Chargeback Explanation

- The example shows that the Total Cost IT is responsible for is $1530

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