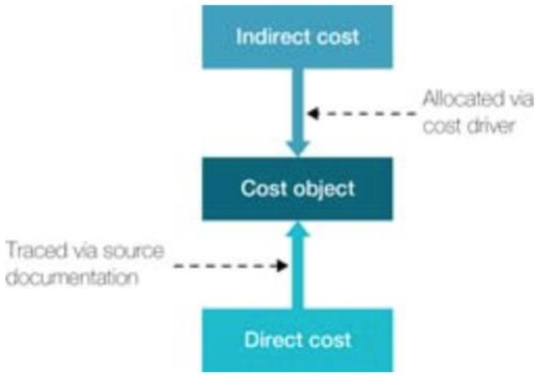
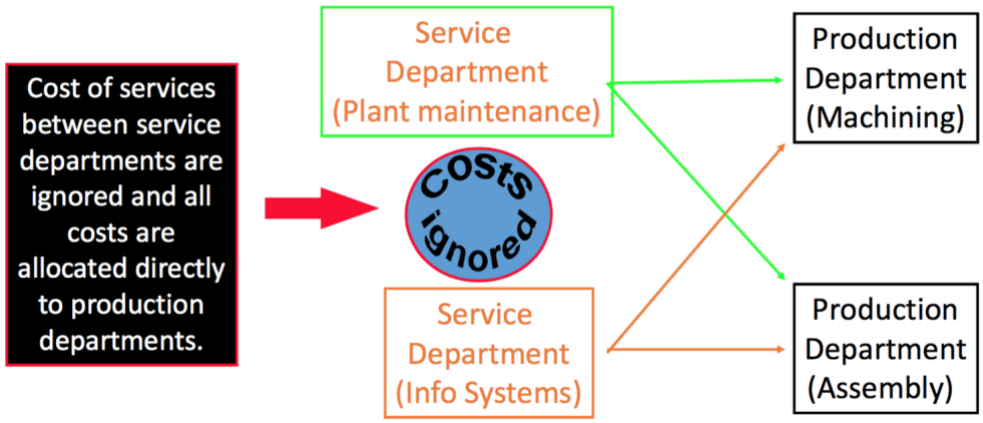
A Costing Framework and Applying it in a Support Department Setting

- **Simple costing system to determine full cost of a cost object:**



- 3 allocation methods used to allocate support department costs to operating departments
    - Direct method – simple to compute and understand
        - Most widely used
        - Ignores interactions between support departments
    - Step-down method – simple to compute and understand
        - Accounts for some of the interactions between support departments
    - Reciprocal method – the most precise
        - Difficult to explain to managers

Method 1: Direct Method



E.g. Suppose we have this information, allocate the service departments' costs to production departments using the direct method

	Service Departments		Production Departments	
	Plant Maintenance	Info Systems	Machining	Assembly
Budgeted O/H	$6,300,000	$1,452,150	$4,000,000	$2,000,000

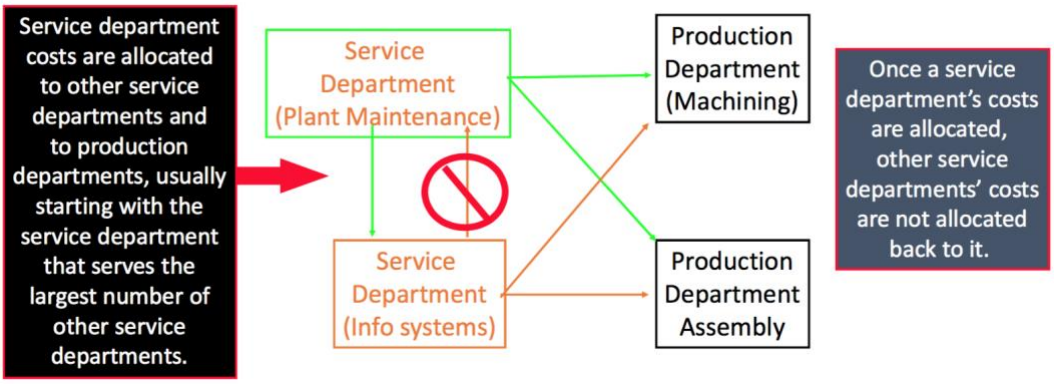
Provider of services	User of services			
	Plant Maintenance	Info Systems	Machining	Assembly
Maintenance	-	20%	30%	50%
Info systems	10%	-	80%	10%

Answer – use the following template in an exam:

	Maintenance	Info Systems	Machining	Assembly
Budgeted Costs	$6 300 000	$1 452 150	$4 000 000	$2 000 000
Maintenance	($6 300 000)	-	$2 362 500	$3 937 500
Info Systems	-	($1 452 150)	$1 290 800	$161 350
Total	-	-	$7 653 300	$6 098 850

Method 2: Step-Down Method

- Allocates support costs to other support departments and to operating departments that partially recognizes the mutual services provided among all support departments
- One-Way Interaction between Support Departments prior to allocation
- Allocate the support department that provides the most services to the other support department first
    - If both are equal percentages, look at the dollar figure amount



E.g. Suppose we have this information, allocate the service departments' costs to production departments using the step-down method

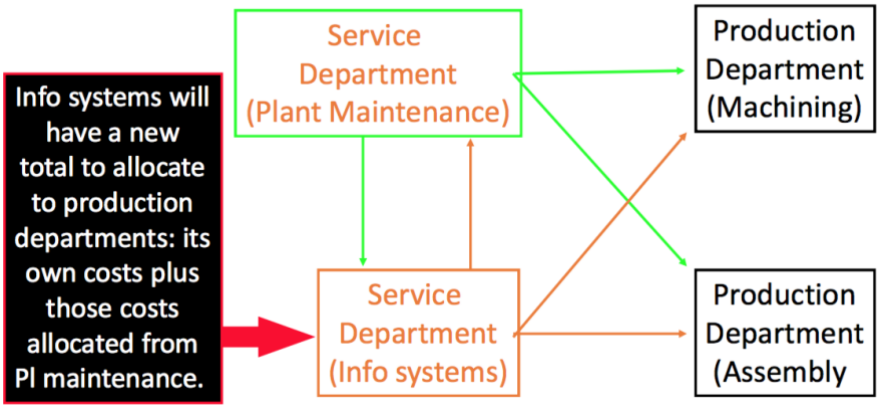
	Service Departments		Production Departments	
	Plant Maintenance	Info Systems	Machining	Assembly
Budgeted O/H	$6,300,000	$1,452,150	$4,000,000	$2,000,000

Provider of services	User of services			
	Plant Maintenance	Info Systems	Machining	Assembly
Maintenance	-	20%	30%	50%
Info systems	10%	-	80%	10%

Answer – use the following template in an exam:

	Maintenance	Info Systems	Machining	Assembly
Budgeted Costs	$6 300 000	$1 452 150	$4 000 000	$2 000 000
Maintenance	($6 300 000)	$1 260 000	$1 890 000	$3 150 000
Info Systems	-	($2 712 150)	$2 410 800	$301 350
Total	-	-	$8 300 800	$5 451 350

Method 3: Reciprocal Method



E.g. Suppose we have this information, allocate the service departments' costs to production departments using the reciprocal method

	Service Departments		Production Departments	
	Plant Maintenance	Info Systems	Machining	Assembly
Budgeted O/H	$6,300,000	$1,452,150	$4,000,000	$2,000,000

Provider of services	User of services			
	Plant Maintenance	Info Systems	Machining	Assembly
Maintenance	-	20%	30%	50%
Info systems	10%	-	80%	10%

Answer – use the following template in an exam:

- Let M = Maintenance, I = Info systems

- M = 6 300 000 + 10% of I (Equation 1)
- I= 1 452 150 + 20% of M (Equation 2)
- Substitute Equation 2 in equation 1
    - M = 6 300 000 + 10% (1 452 150 + 20% M)
    - 0.98M = 6 445 215
    - ∴ M= 6 576 750
- ∴ I = 1 452 150 + 20% (6 576 750)
    - I= 2 767 500

	Maintenance	**Info Systems**	**Machining**	**Assembly**
Budgeted Costs	$6 300 000	$1 452 150	$4 000 000	$2 000 000
Maintenance	($6 576 750)	$1 315 350	$1 973 025	$3 288 375
Info Systems	$276 750	($2 767 500)	$2 214 000	$276 750
Total	-	-	$8 187 025	$5 565 125