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# **Measuring Complex Projects**

## **2006 ISMA Conference**

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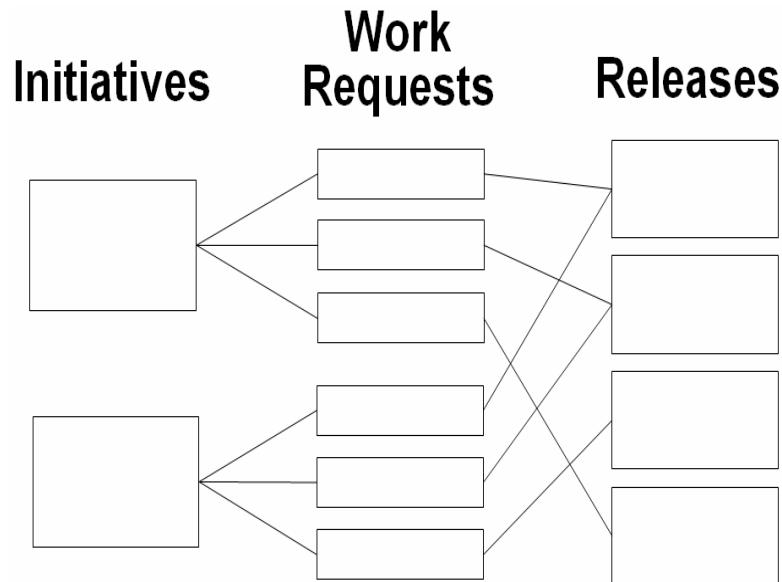


Role	1978 - 2006
Software Developer	
Telephony Long Rang Planner	
Software Project Manager	
Software Process Quality Assurance	
Software Metrics	
Contractual Metrics	



**Billing 3.4**

- **It has:**
  - Budget
  - Milestones
  - Quality Criteria
- **You can measure:**
  - Size (Function Points)
  - Effort (Hours)
  - Quality (Defs / FP)
  - Timeliness (Milestone Actuals vs Planned)
  - Productivity (FPs / Hour)



- Multiple initiatives fund multiple releases
- Work requests move between releases before implementation
- Budget measurement conflicts with timeliness, quality and productivity measurements.

# Measuring Complex Projects

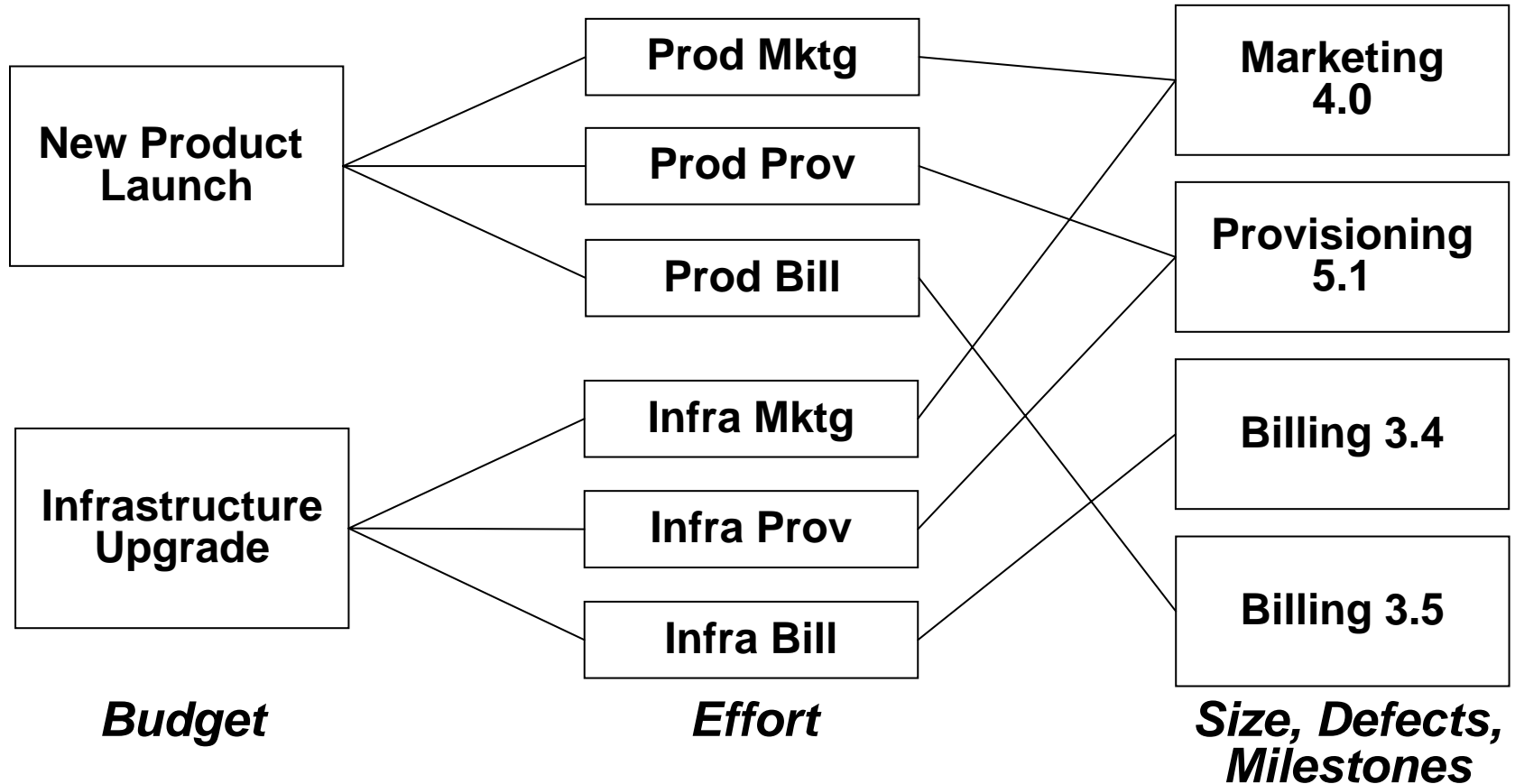
## Simple Real World Example



### Initiatives

### Work Requests

### Releases

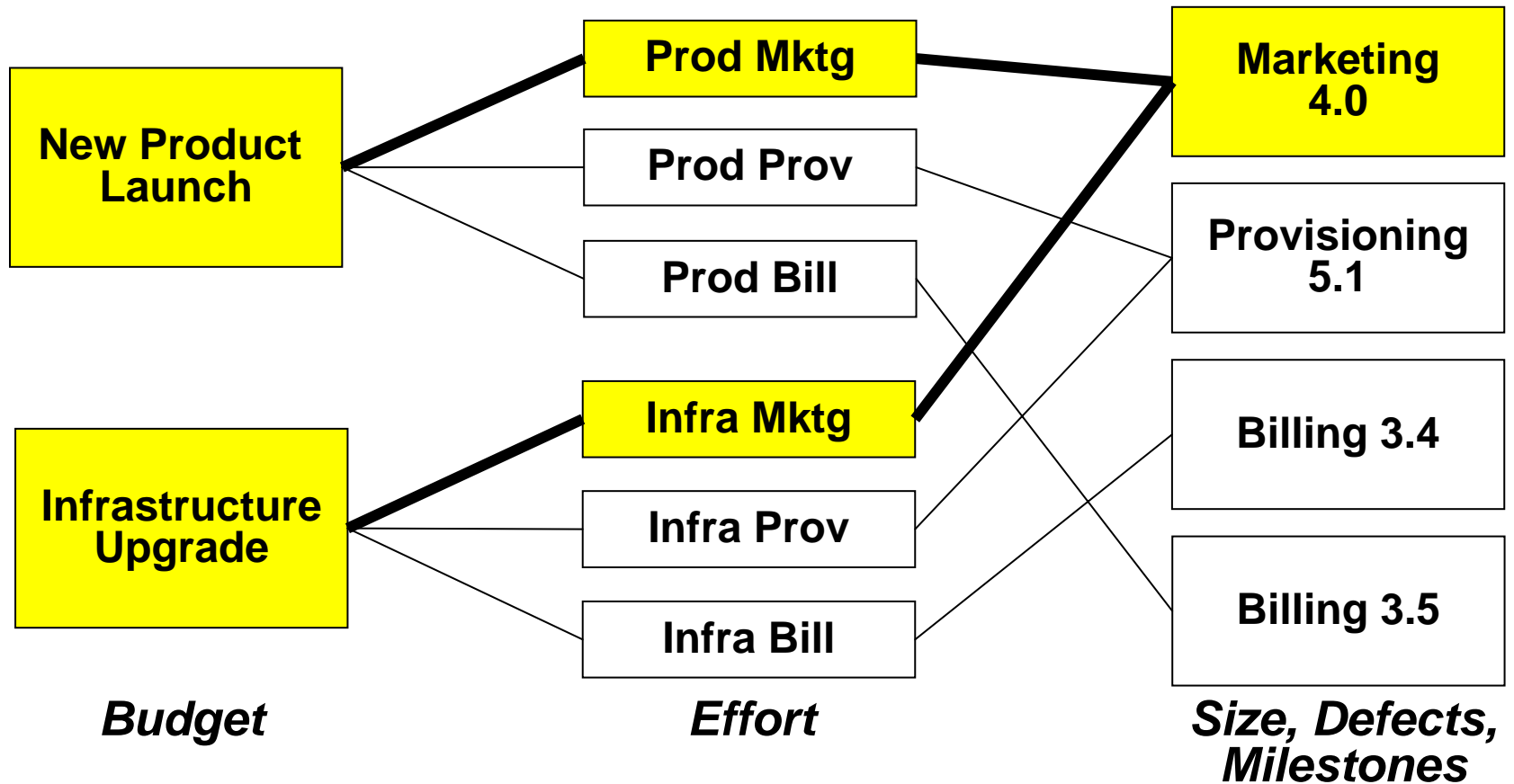


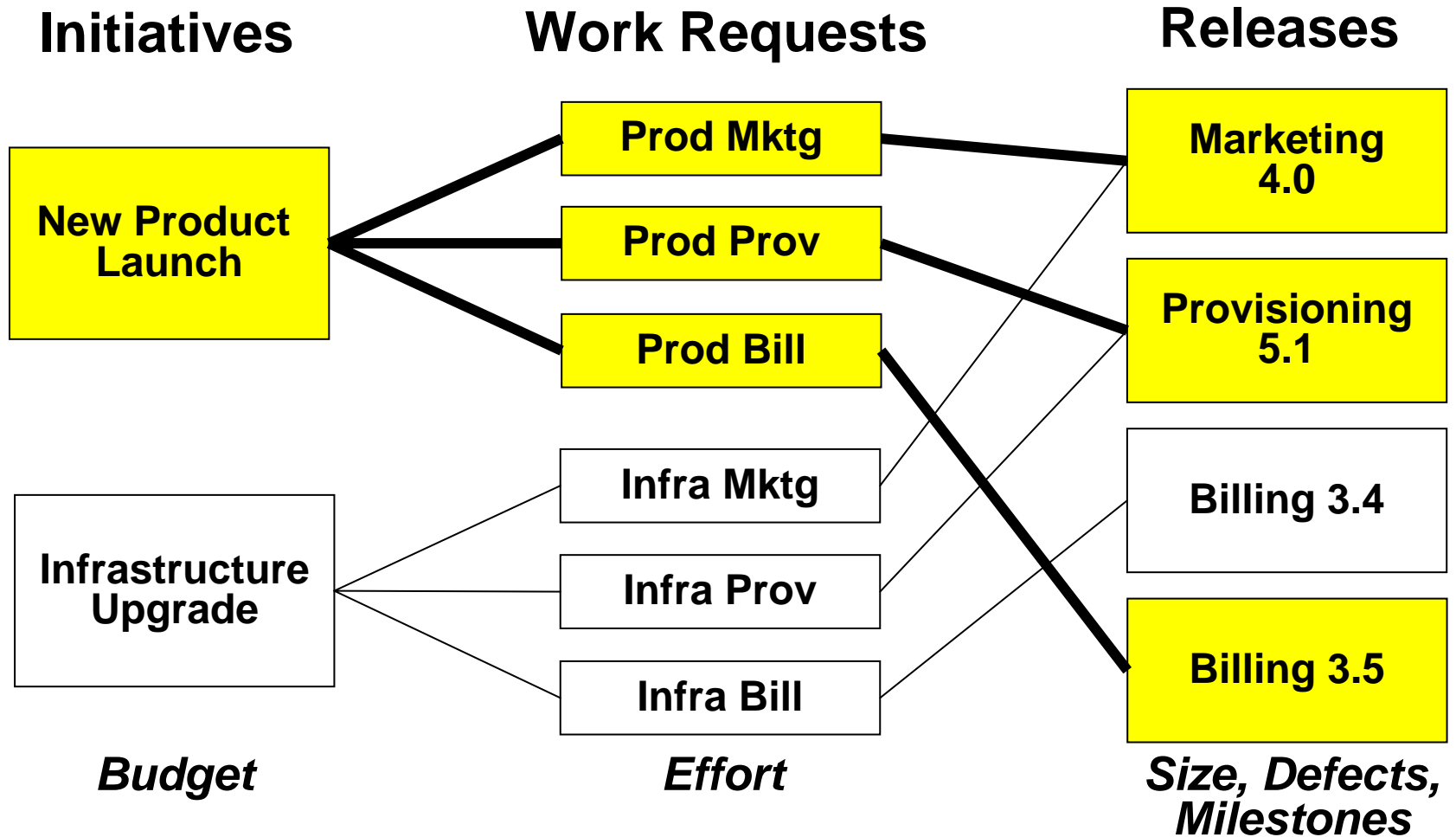


### Initiatives

### Work Requests

### Releases



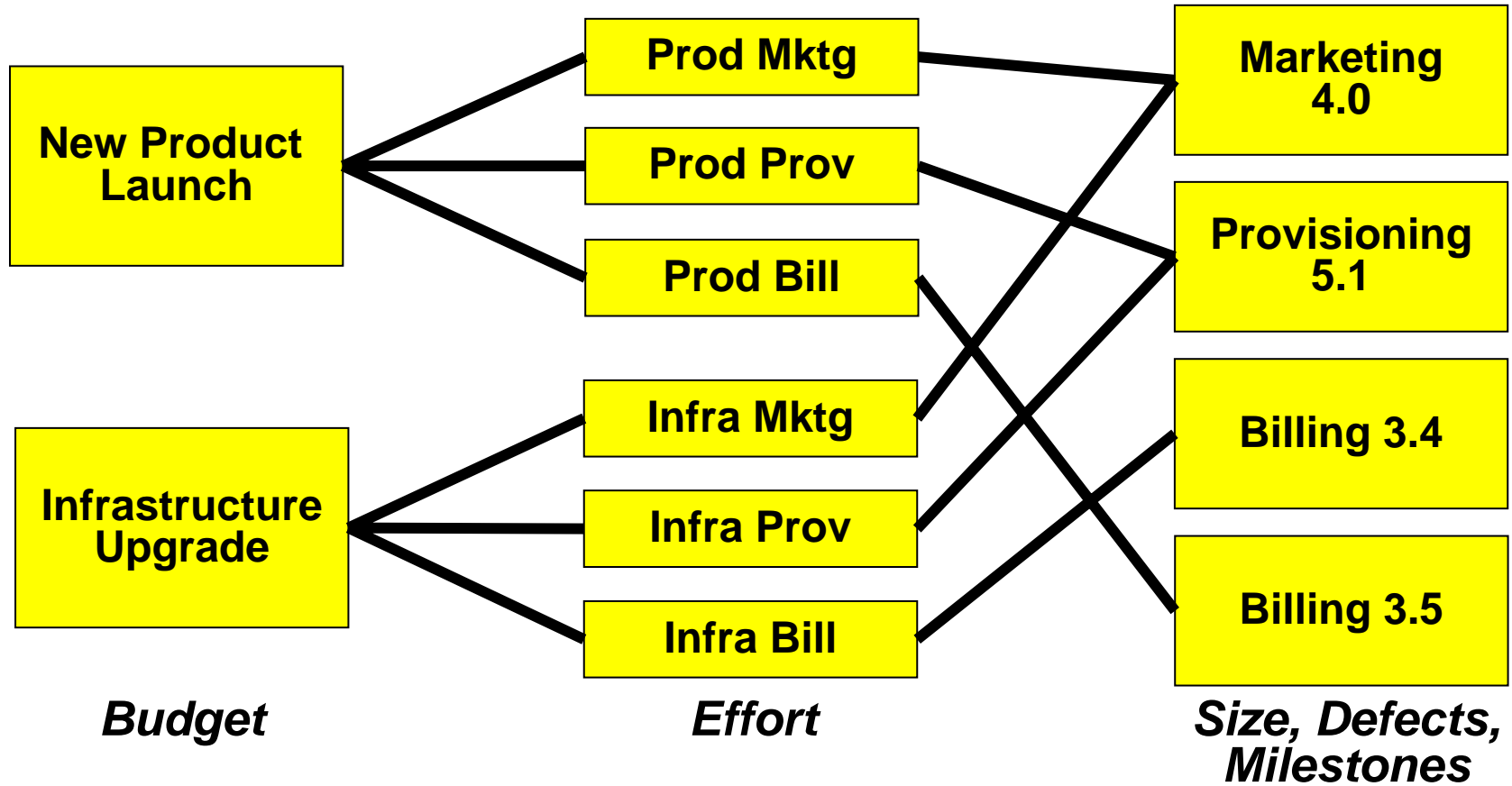




**Initiatives**

**Work Requests**

**Releases**



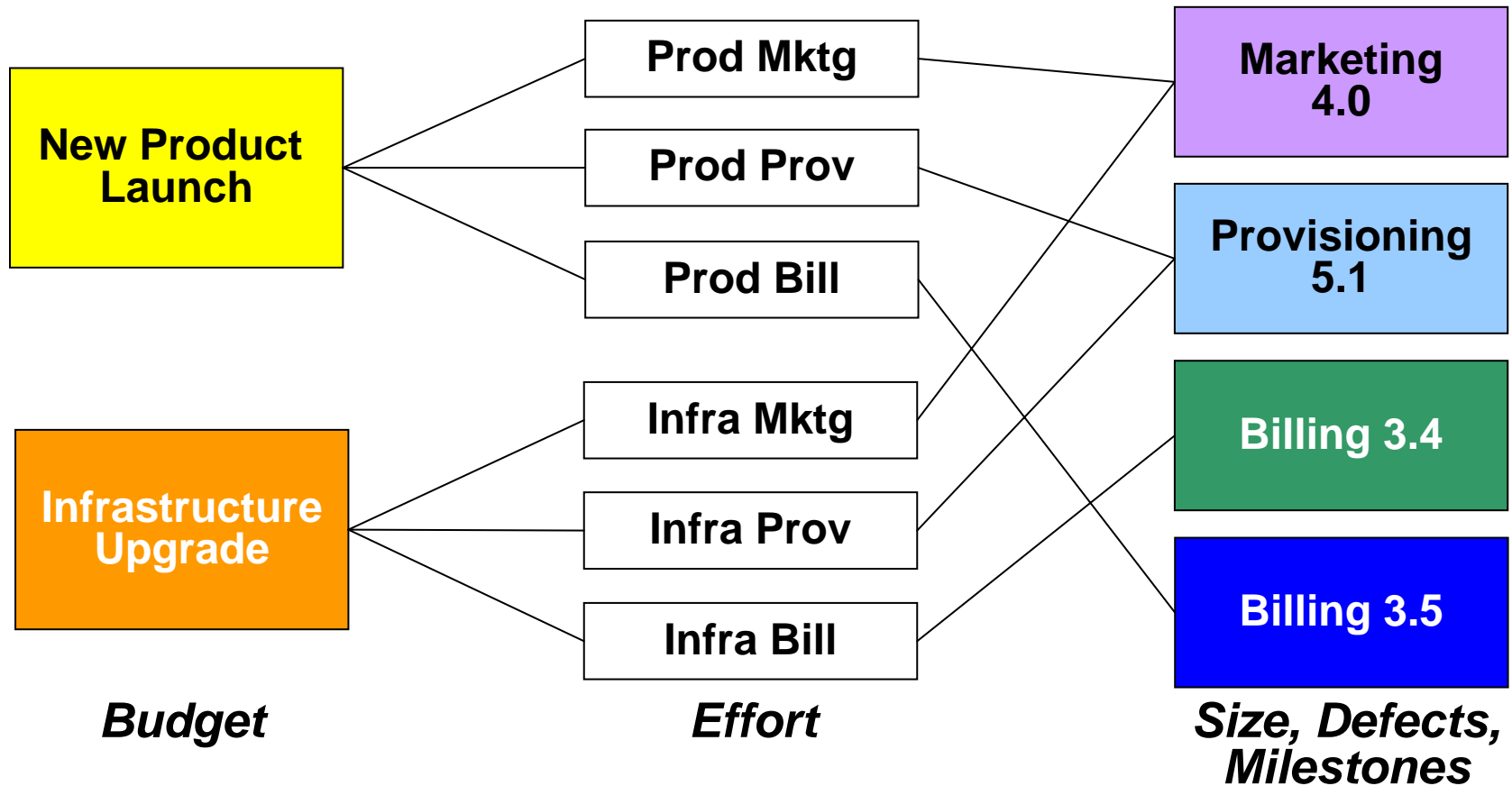




### Initiatives

### Work Requests

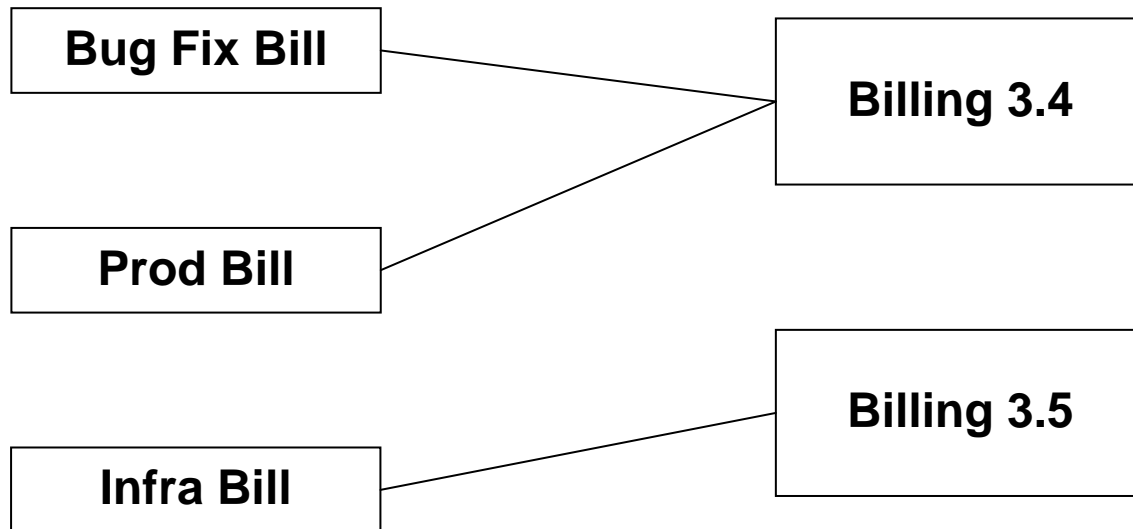
### Releases





### Work Requests

### Releases



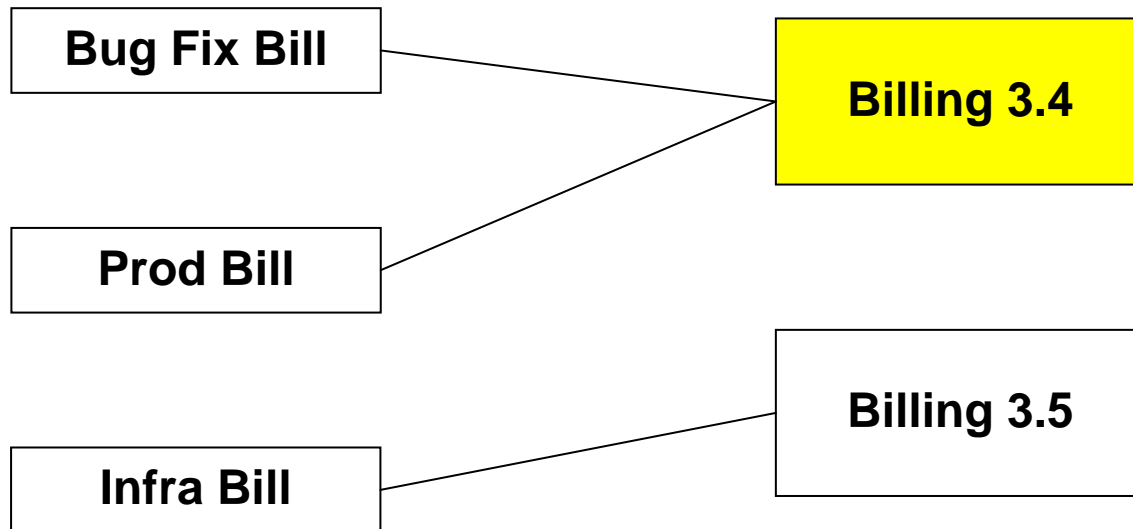
*Effort*

*Size, Defects,  
Milestones*



## Work Requests

## Releases

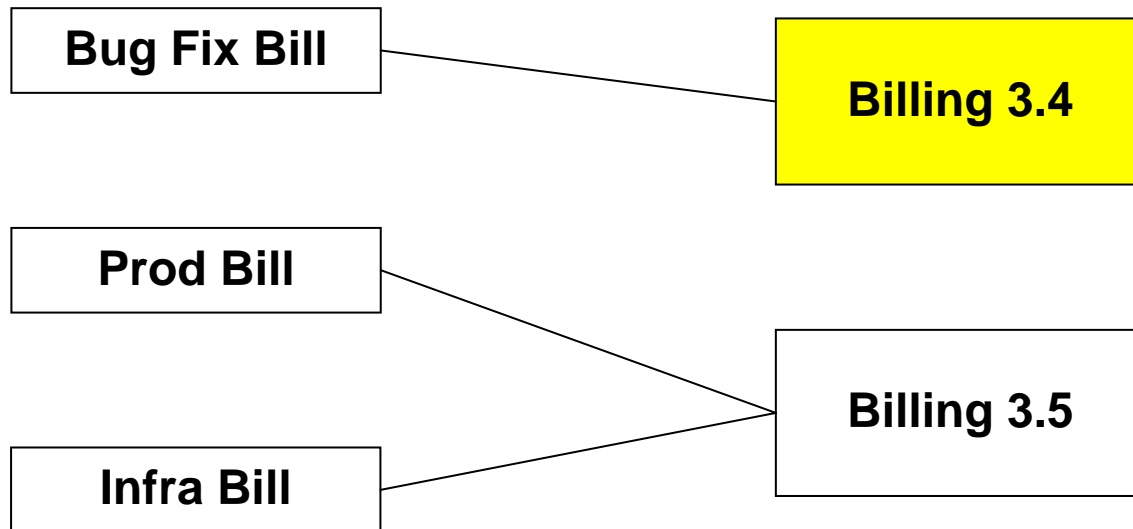


*Effort  
Size, Defects,  
Milestones*



## Work Requests

## Releases

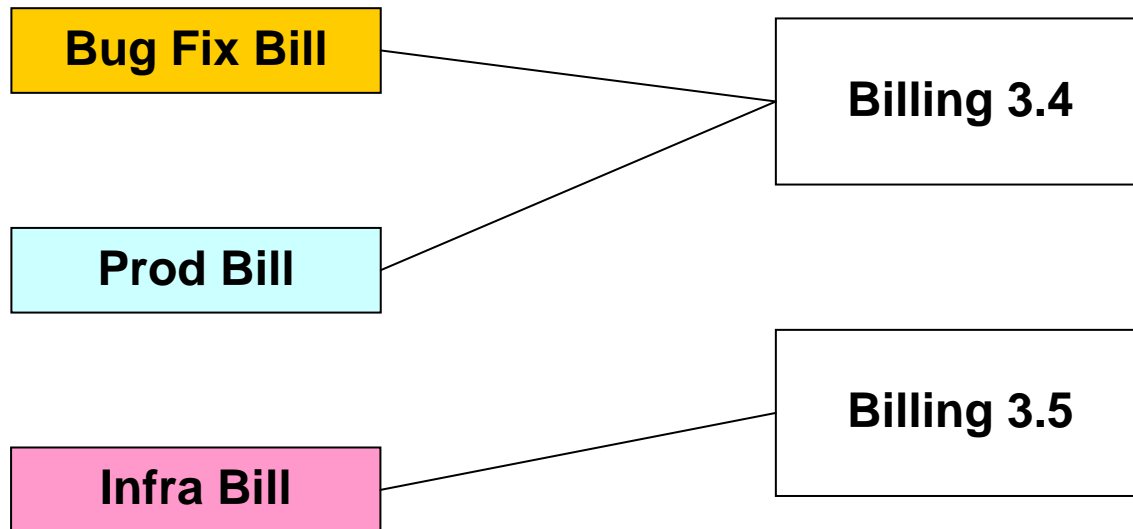


*Effort  
Size, Defects,  
Milestones*



### Work Requests

### Releases



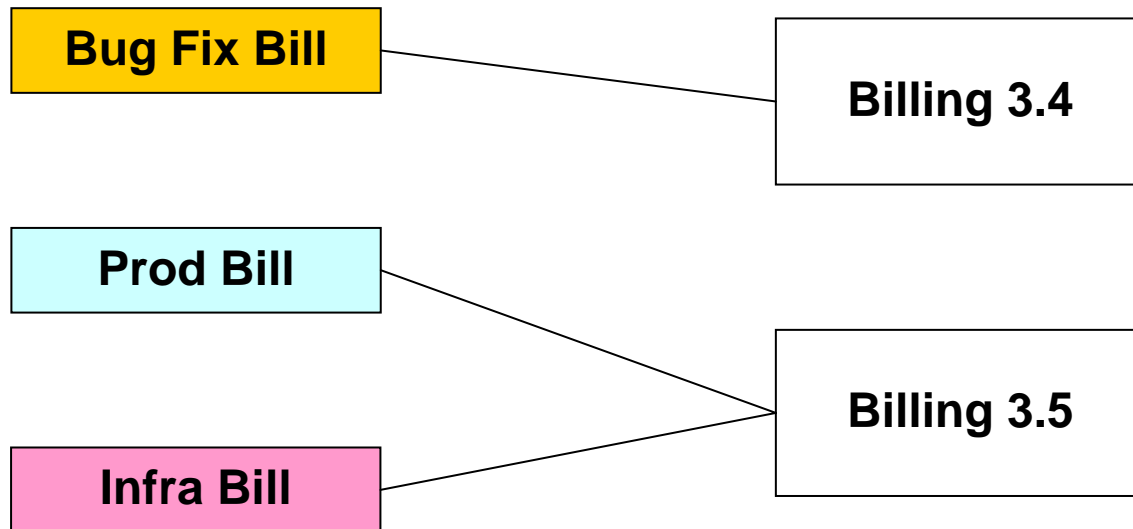
*Effort*

*Size, Defects,  
Milestones*



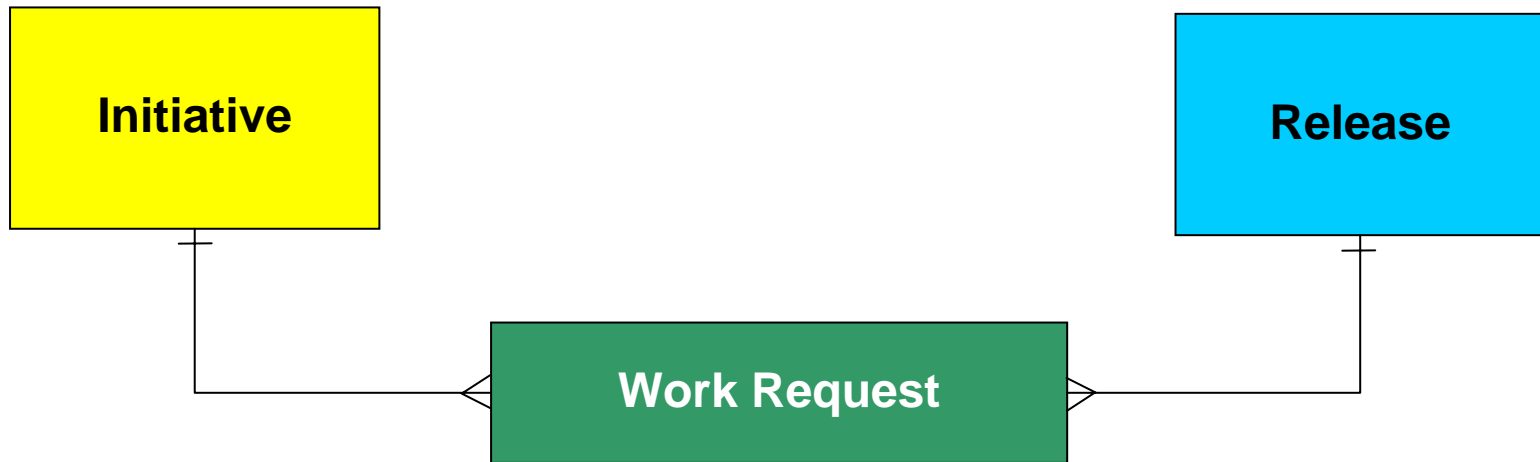
### Work Requests

### Releases



*Effort*

*Size, Defects,  
Milestones*



- Every work request is funded by one and only one initiative.
- Every work request is delivered in one and only one release



- Breaking the business rules
  - Creates many-to-many relationships between initiatives, work requests and releases
- Allocating release time to work requests
  - Great care must be taken to ensure that time is allocated to the correct application, task, phase and work request
- Separate work plans for work requests
  - This can be overkill, an administrative nightmare
  - Consider instead creating work request level tasks within release work plans, tasks that can be moved to other releases if needed





We have shown that:

- There are two types of projects: Budget and Delivery. These two types support and influence each other but should be measured separately.
- Time should be reported at the work request level to support metrics for budget, timeliness, quality and productivity, as well as allowing a means to adjust to scope churn.
- You should ensure that every work request is funded by only one initiative and implemented in only one release.



# Measuring Complex Projects Questions?

