

MODULE

5

Process—  
Secondary Constraints

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**5**

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Secondary Constraints

CHAPTER

**1**

Resources

# Predictive: Project Resource Management

KNOWLEDGE AREAS	PROCESS GROUPS				
	Initiating	Planning	Executing	Monitoring and Controlling	Closing
<b>Project Resource Management</b>		<ul style="list-style-type: none"> <li>• Plan Resource Management</li> <li>• Estimate Activity Resources</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire Resources</li> <li>• Develop Team</li> <li>• Manage Team</li> </ul>	<ul style="list-style-type: none"> <li>• Control Resources</li> </ul>	

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- Focused on managing physical and human resources.
- Project manager identifies, acquires, and manages resources.

## Resource Management and *PMBOK® Guide—Sixth Edition Processes*

**Create WBS** helps define project staffing needs.

**Estimate Activity Durations** may depend on the ability to acquire staff with the right knowledge to complete the work.

Resource management often intersects with other project management processes.

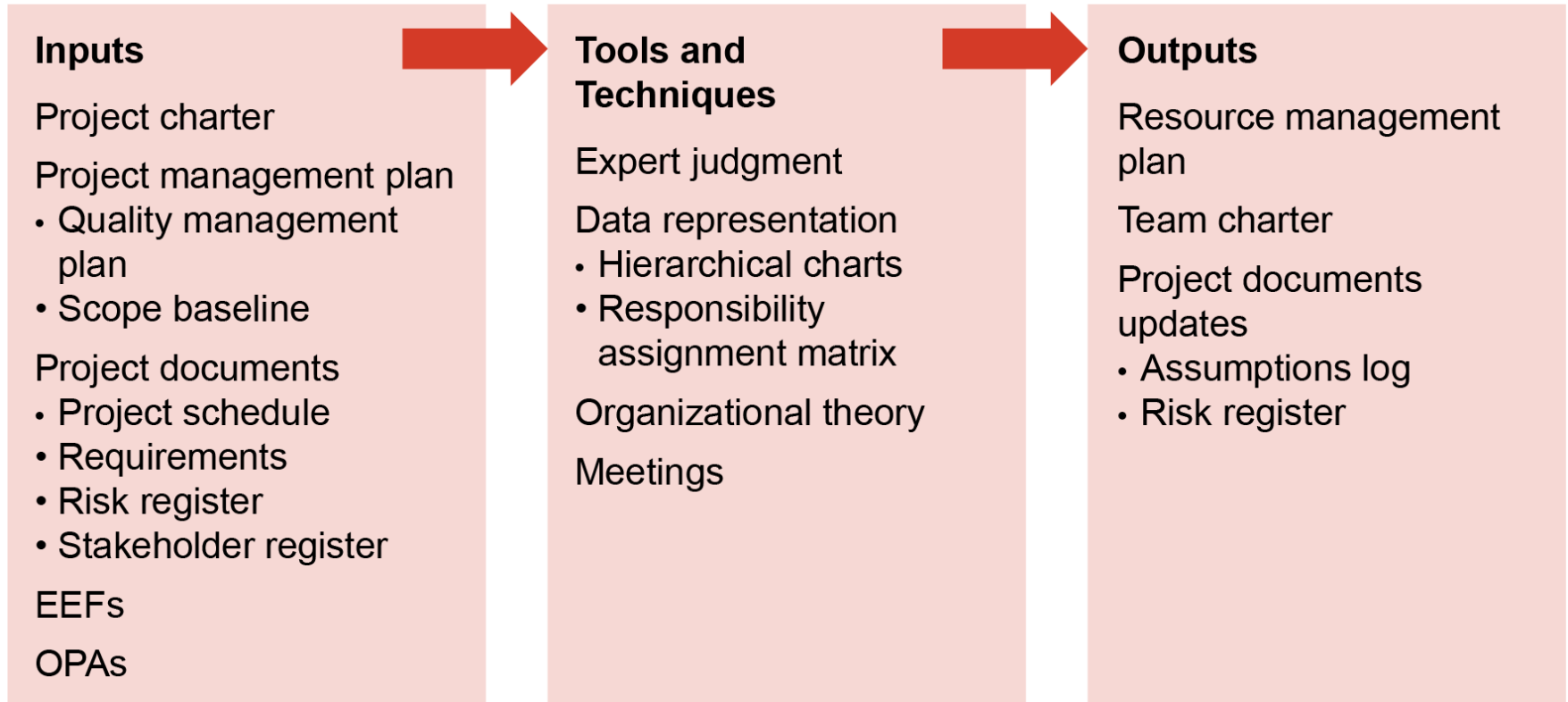
**Manage Stakeholder Engagement** may require resolving conflicts between stakeholders and team members.

**Control Quality** may be affected by team capabilities and motivation.

# Planning Project Resources on Agile/Hybrid Projects

- Mindset: feed projects to stable teams (mature, high velocity).
- Self-organizing, self-managing teams, no central control if feasible.
- Don't remove resources during iteration.
- Generalizing specialists reduce resource constraints.
- Collaborative team environment: productivity and innovative problem solving.
- Total expense planning: salaries/contractors maximum in total.

# Predictive: Plan Resource Management

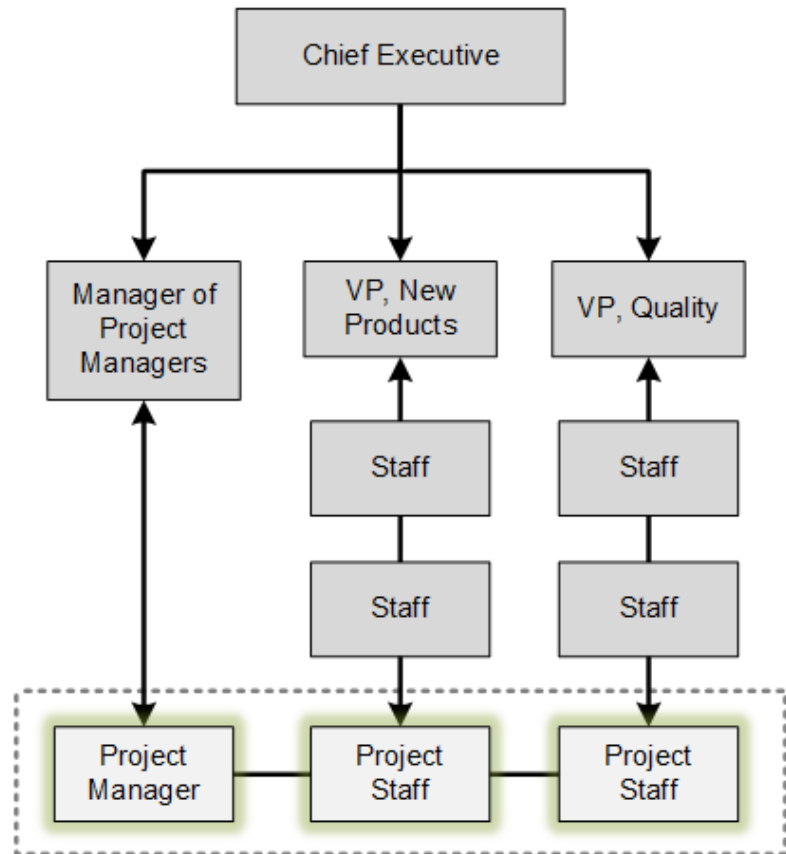


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# Organizational Breakdown Structure (OBS) Chart

- Key to understanding organizational reporting lines and project manager's authority

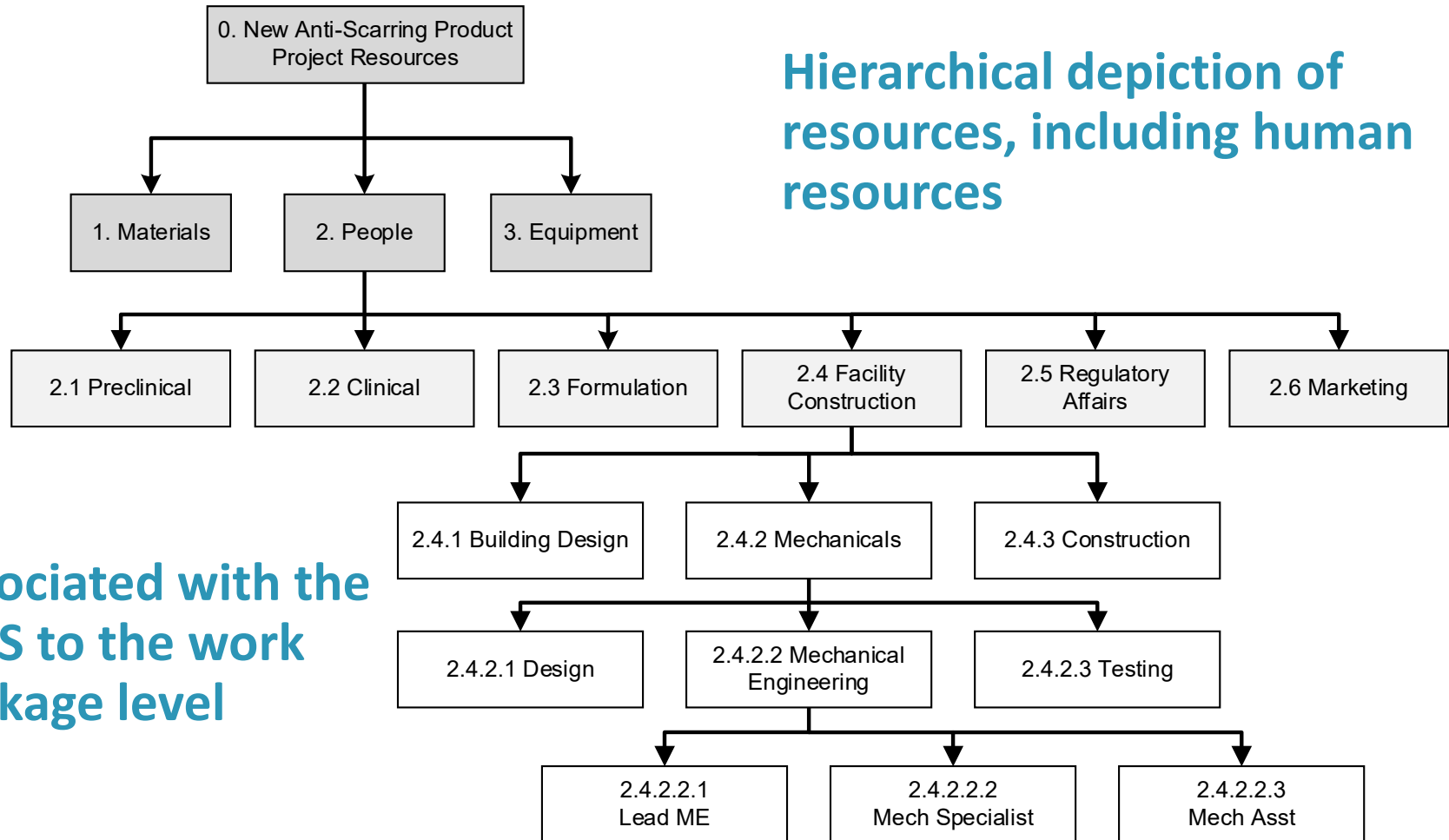
**Strong Matrix Organizational Structure**





# Resource Breakdown Structure (RBS) Chart

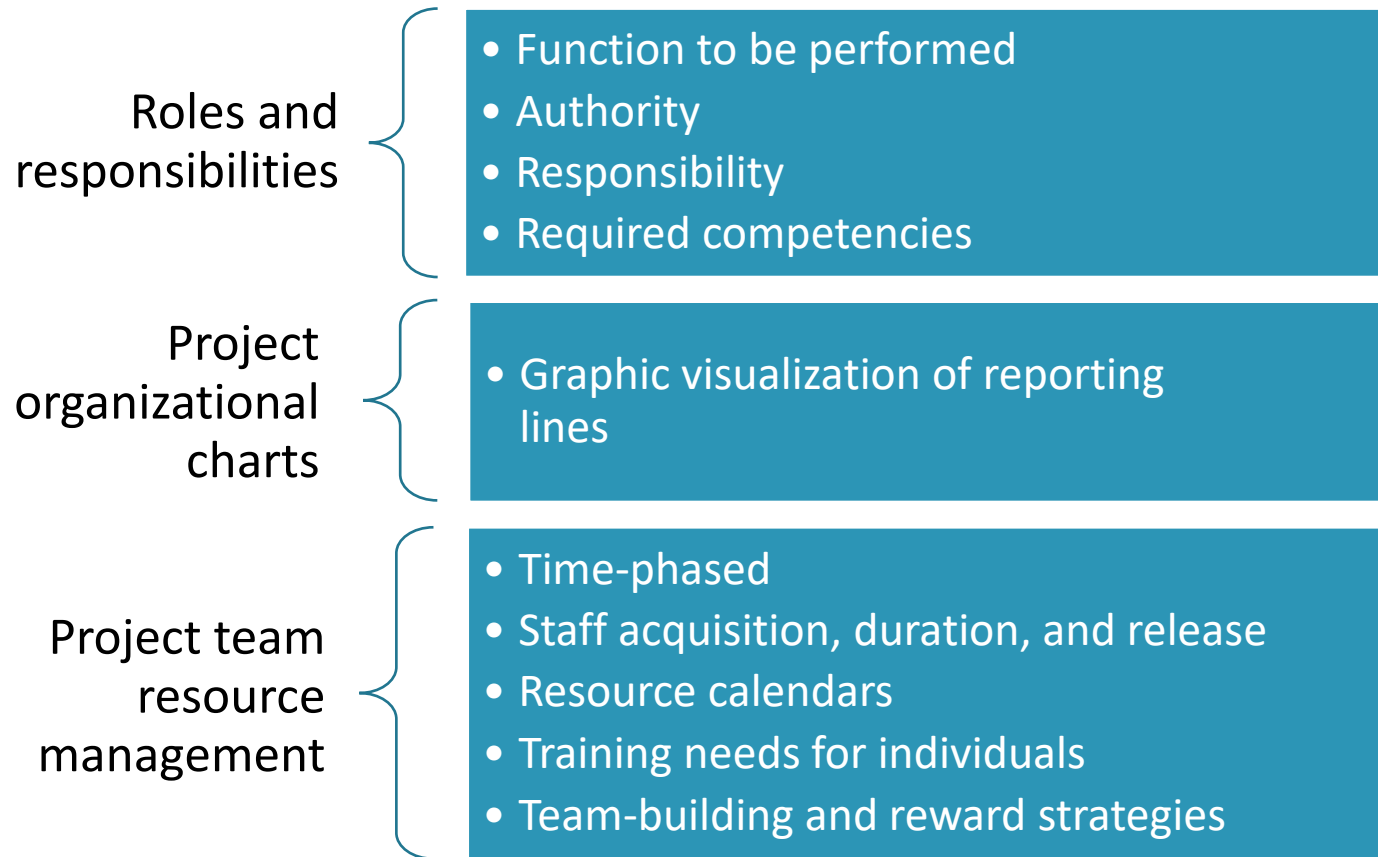
**Hierarchical depiction of resources, including human resources**



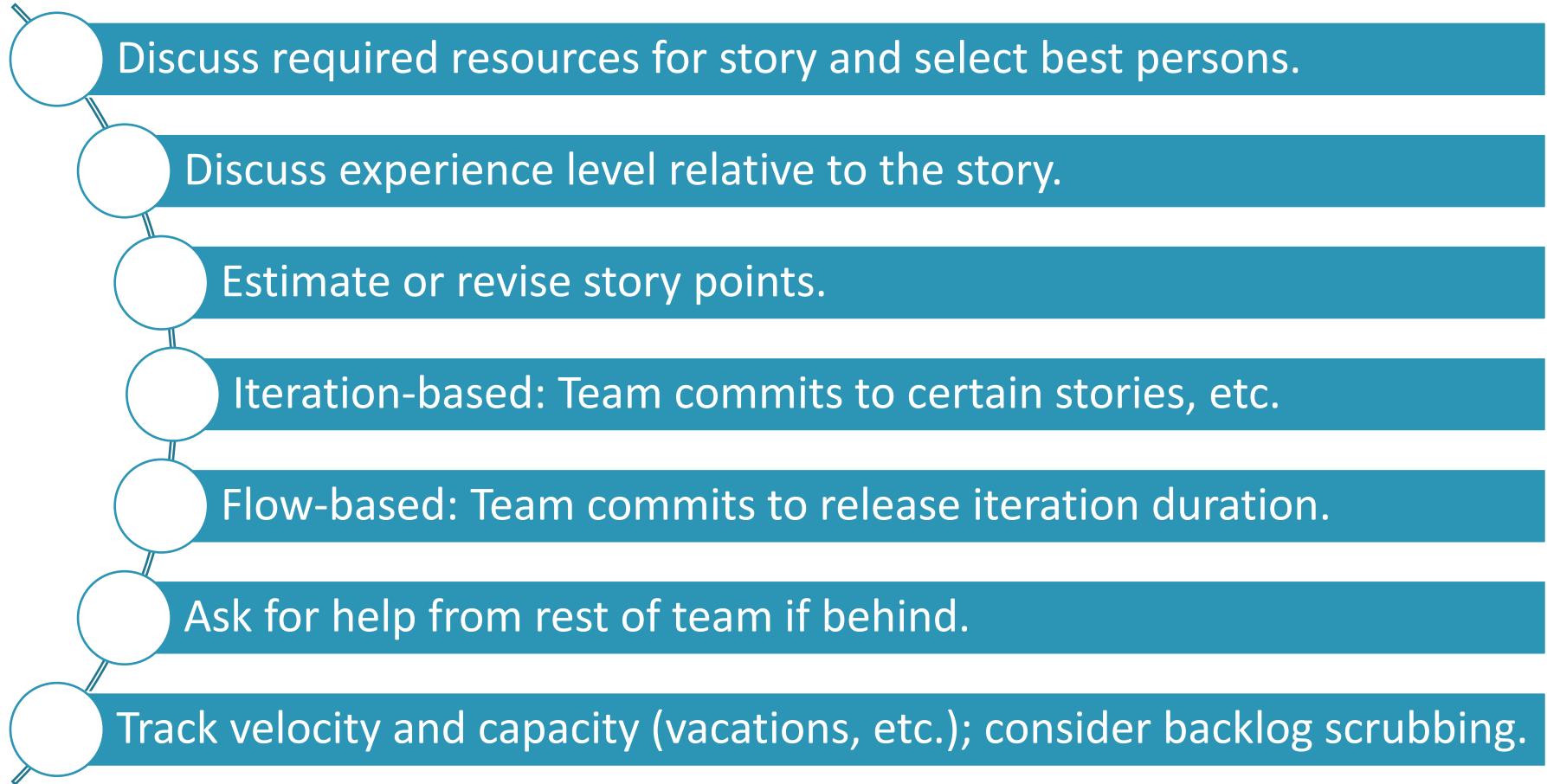
**Associated with the WBS to the work package level**



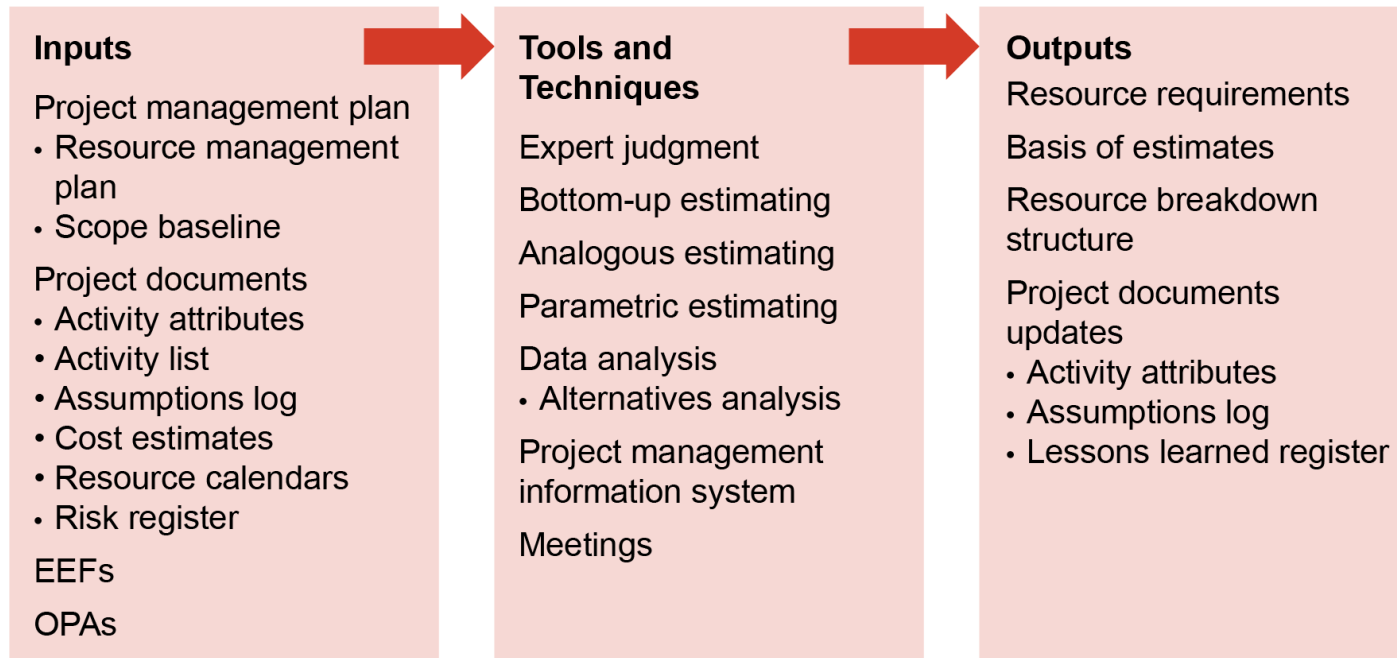
# Resource Management Plan



# Agile/Hybrid Task Resource Estimation



# Predictive: Estimate Activity Resources



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- Resource estimates and activity duration are directly related.

# Resource Calendars

- Used to identify the availability of specific resources (human, material, equipment)
- Will be a critical input into Estimate Activity Durations and Develop Schedule

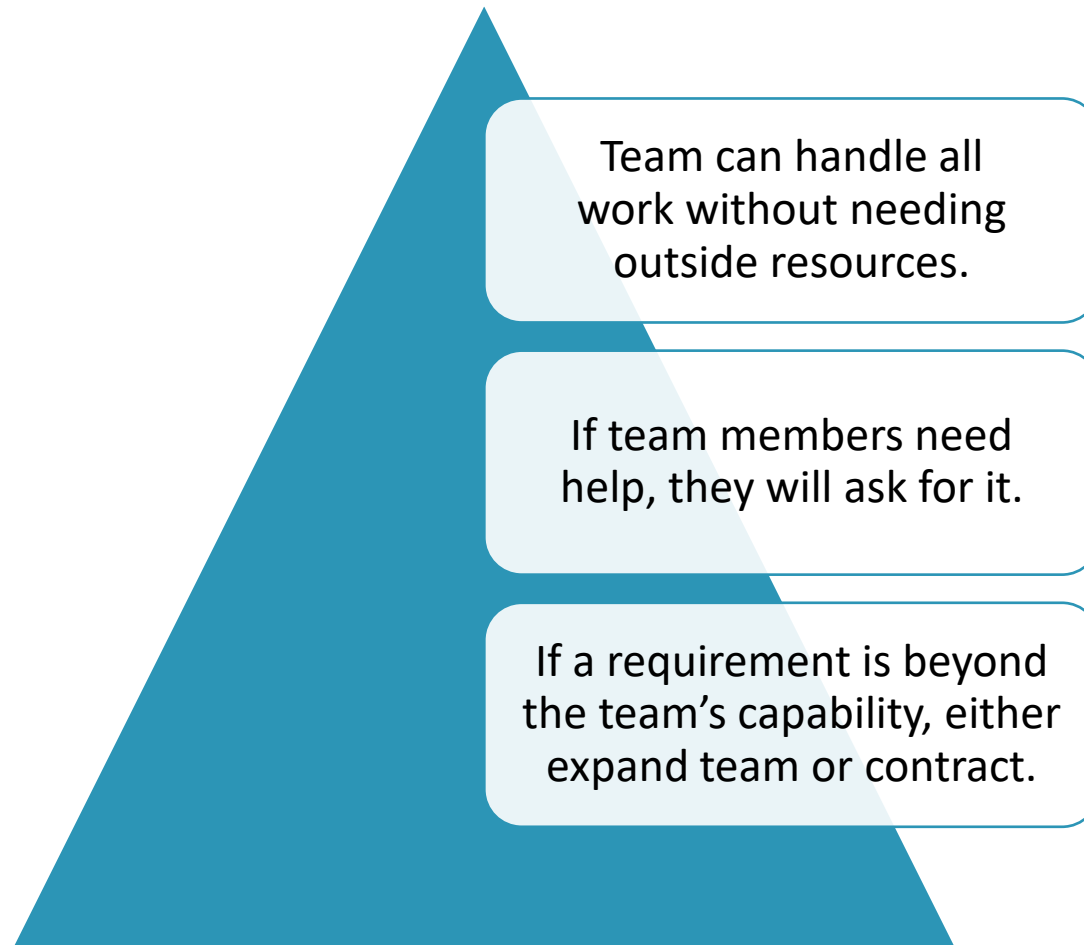


## Resource Estimating Tools

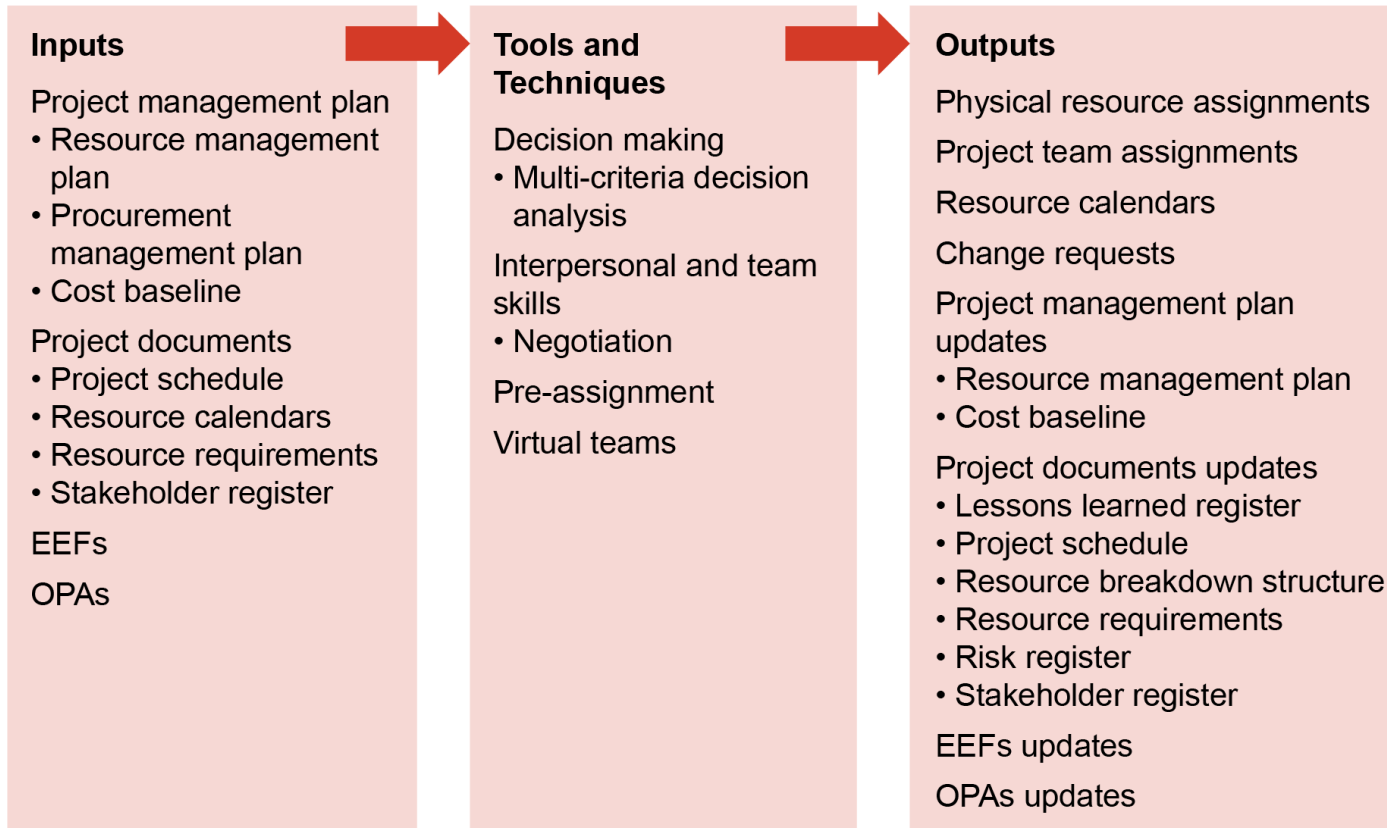
How do you estimate what resources will be required?

- **Alternatives analysis:** Comparing time required to perform in-house or by contractor, to build a component or tool or to purchase it.
- **Bottom-up estimating:** Requirements for each work package are assessed and then rolled up to determine resources needed for each higher level.
- **Software tools:** Scheduling component can be leveraged to manage resource pools and speed estimation of resource needs.

# Acquiring Resources for Agile/Hybrid Projects



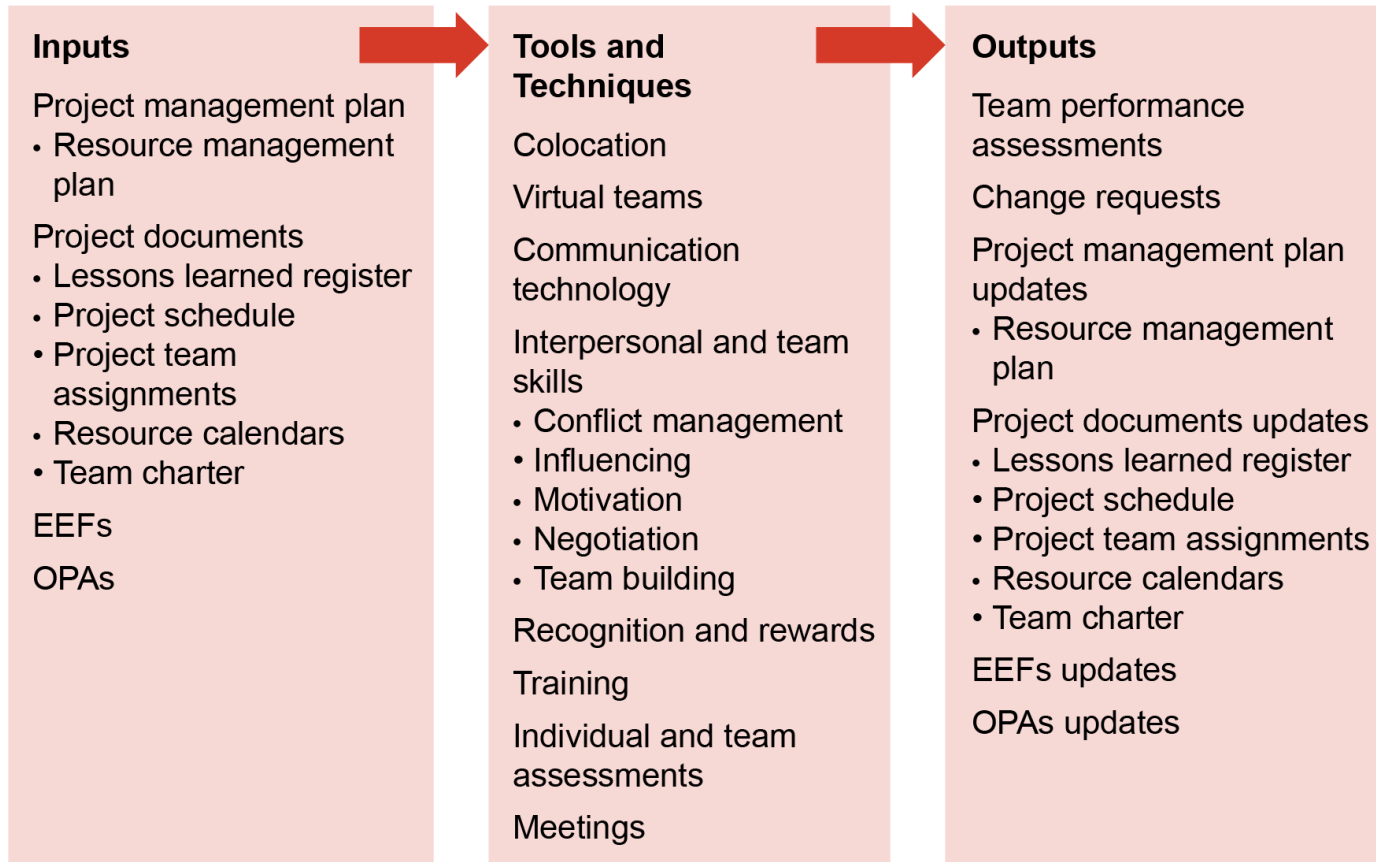
# Predictive: Acquire Resources



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# Predictive: Develop Team

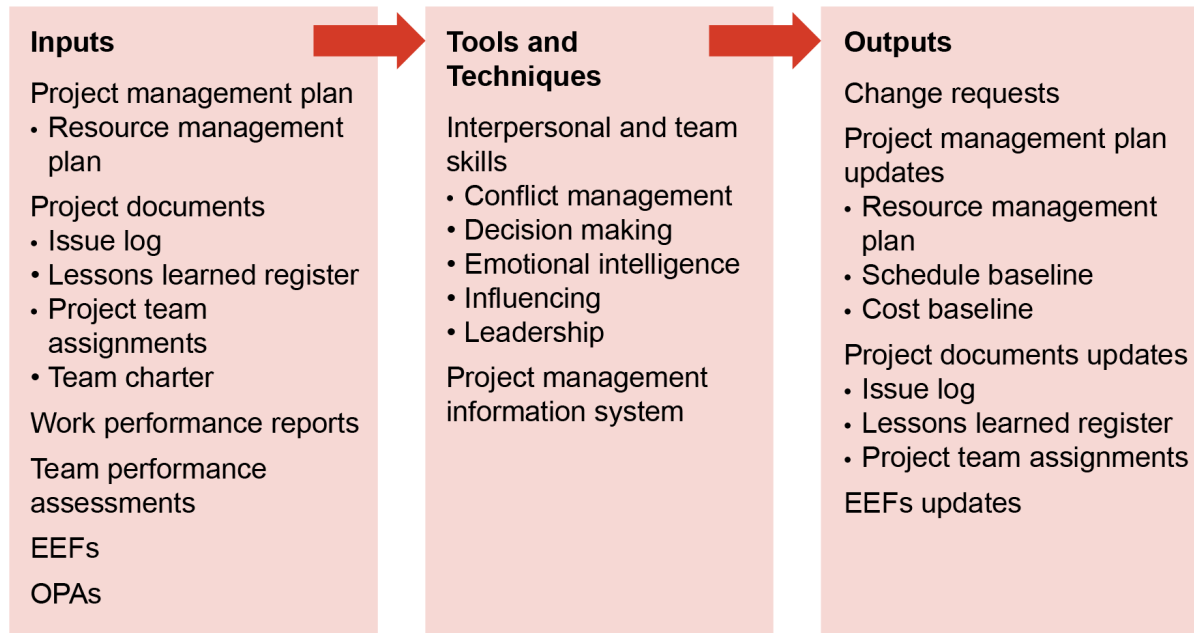


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## Managing Agile/Hybrid Teams

- Teams manage themselves.
- Servant leaders provide performance data during retrospectives to assist self-management.
- Some management may still be necessary such as removing a team member who is unable to self-manage.

# Predictive: Manage Team



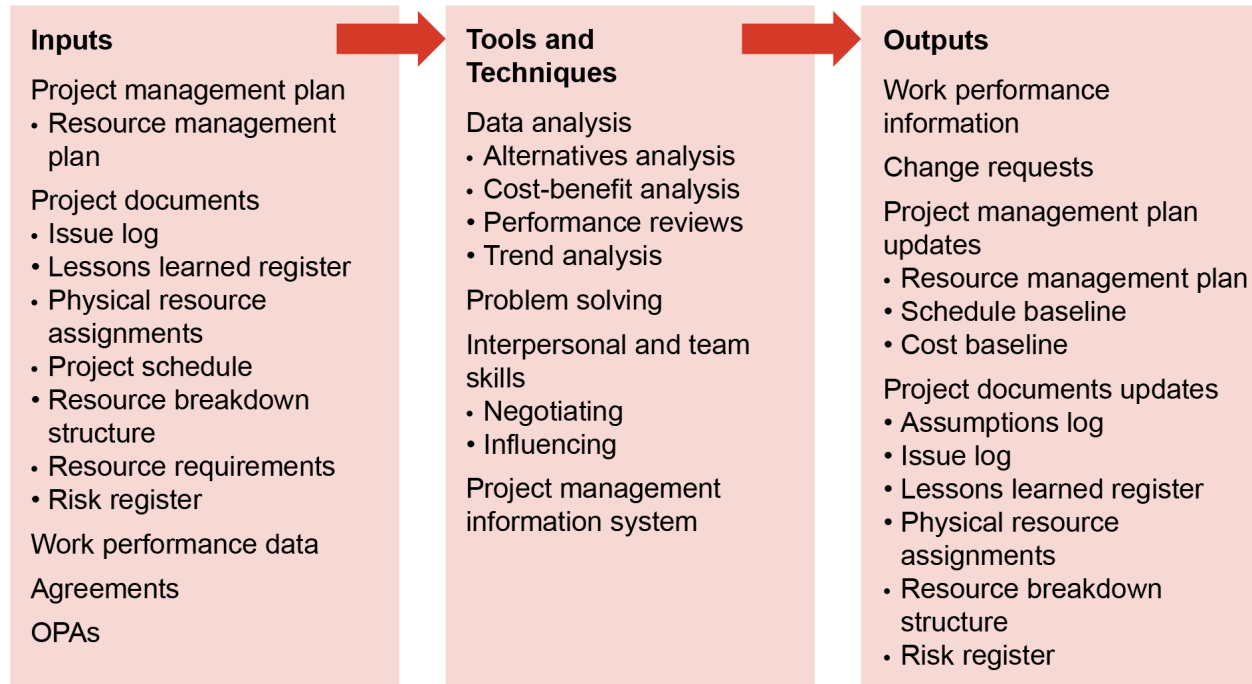
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- Requires a variety of management skills to create high-performance teams

# Controlling Resources on Agile/Hybrid Projects

- Scrum master ensures that team has what it needs to succeed:
  - Central meeting space with kanban board
  - Colocated workspaces
  - IT and software/cloud-based systems

# Predictive: Control Resources



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- Focus on physical resource assignment and allocation

# Resource Problems

## Internal

- Poor storage conditions

## External

- Supplier goes out of business
- Political upheaval
- Environmental disaster
- Pandemic