Influence Disgram	Problem	Difficulty
Influence Diagram	How to visual	Some training
	decision-making	required
	scenarios?	

- An Influence Diagram (ID) is decision analysis tool graphically representing relationships among decisions, uncertainties, and objectives.
- A decision could be a yes/no question or a decision with a value, such as a budget.
- ID's can be expanded to be detailed decision trees, useful for quantitative analysis.
- ID's have standard node types and arrows which indicate the direction of influence.





- 1. Concisely define the decision & project outcomes.
- 2. Identify the relevant variables and factors that may impact the project outcomes. Represent as nodes.
- 3. Map the relationships between variables/nodes.
  - Determine direct and indirect cause-andeffect relationships and dependencies between the nodes. Show using arrows.
- 4. Assign probabilities & values to the chance & value nodes. Use available data and expert opinions
- 5. Use diagram to visually and concisely:
  - Identify critical factors and scenarios.
  - Facilitate effective communication and stakeholder engagement.

## Influence Diagram – Example – 6in6 Training

- Suppose you need to arrange 6in6 training for your company's employees
- There are multiple decisions to make, such as: "Who get training?" and "How much training should they get?" and "How big should the classes be?"
- An influence diagram shows how these decisions influence the training cost.



# Influence Diagram – Notes

### Slide 1

- 1. Influence Diagrams are less complex than some other decision-making visualizations, such as Decision Trees.
- 2. Diagram applications include: Decision Analysis, Project Planning, and Risk Analysis
- 3. By analyzing an influence diagram, managers identify critical factors and scenarios that have the highest impact on project outcomes.
- 4. Influence Diagrams are used by PMPs.
- 5. Influence Diagrams pros:
  - A. Easy for everyone to understand
  - B. Enhances communication
  - C. Facilitates identification of critical variables
  - D. Focuses on relationships.
  - E. Helps identify optimal strategies.
  - F. Simplifies complex decision-making

#### 6. Influence Diagrams cons:

- A. Can be time-consuming to create
- B. May be biased.
- C. May oversimplify complex relationships
- D. Requires accurate information
- Thinking through the arrow creation is often where the power of the diagram occurs:

### Slide 2

- 1. There are multiple implicitly known values, such as the hourly cost of employee labor.
- 2. There are two uncertainties shown. For the lower one (facilities) a good estimate is likely available. Hence, to better estimate costs the upper one (trainer costs) should be explored.

Recommended web sites for additional information

- https://www.managementyogi.com/2015/09/PMP-or-RMP-Exam-Influence-Diagram-in-Risk-Management.htmlt
- https://pmiuk.co.uk/influence-diagrams-acomprehensive-guide-to-improve-projectmanagement/