Carnegie Mellon University
Dietrich College
Information Systems

# Global Project Management

August 28, 2019

**Today's Agenda:**

- Recap and introductions
- Quiz
- 'The Vasa Capsizes' discussion
- Global project management primer
- Next class

*Fall 2019*

Home
Syllabus
Modules
Assignments
Quizzes
Grades
NameCoach

## Recent Announcements

### Syllabus and Schedule

- **Syllabus**
- Schedule

### Theme 1 - Global Project Management

- **8/26 :: Course Introduction**
- **8/28 :: Global Project Management**
- **9/4 :: Cultural Aspects of Global Teams**
- **9/9 :: Project Planning and Estimation**

View Course Stream
View Course Calendar

### To Do

- Quiz 8/28
  Aug 28 at 1:20pm |
- Homework #1
  10 points |
  Sep 4 at 12pm |
- Quiz 9/9
  Sep 9 at 1:20pm |
- Homework #2
  10 points |
  Sep 16 at 12pm |
- Quiz 9/18
  Sep 18 at 1:20pm |
- Homework #3
  10 points |
  Sep 23 at 12pm |
- Quiz 9/25
  Sep 25 at 1:20pm |

# Discussion questions

Why was it hard to get the images sequenced?

What type of **planning** was used?

- How did the group adjust (as needed)?

What type of **communication** was used?

- What methods would work better?
- Did you do more talking or listening?

What kind of **leadership** was used to tackle the problem? Was it effective?

# Project management take-aways

## Planning

- Have a goal and a plan (spend time on it)
- ‘Plan the work and work the plan’ (how to line up, how to share information)
- Manage resources (time, people and space) – and adjust as needed
- Don’t underestimate complexity
- Allow time for testing / checking

## Communication

- Listen more, talk less
- Shared language (e.g., ‘Blue Man’)
- Techniques when can’t see the problem (collaborate)
- Scale and context (am I zoomed in? is this Paris or the Washington monument?)

## Leadership

- Team leaders are critical
- Team roles (helping others when you are in place)
- Managing transitions is difficult

# Introductions

Name

The coolest place you have ever visited – why?

# Quiz

In Canvas under today's session

Access code: class2

## 8/28 :: Global Project Management

**Read before class:**

The Vasa Capsizes

What Good Successful Project Managers Do (MIT Sloan Management Review)

Global Teams That Work (Harvard Business Review)

**Materials used during class:**

Quiz 8/28 - on the Vasa Capsizes reading

## Question 1 — 1 pts

Where did the Vasa capsize?

- Sweden
- Qatar
- China
- America

## Question 2 — 1 pts

The Vasa sank because the wood used during construction was poor quality.

- True
- False

## Question 3 — 1 pts

The Vasa sank because the builders could not understand Shipwright Henrik Hybertson's written plans.

- True
- False

## Question 4 — 1 pts

The Vas sank because the results of a failed stability test were ignored.

- True
- False

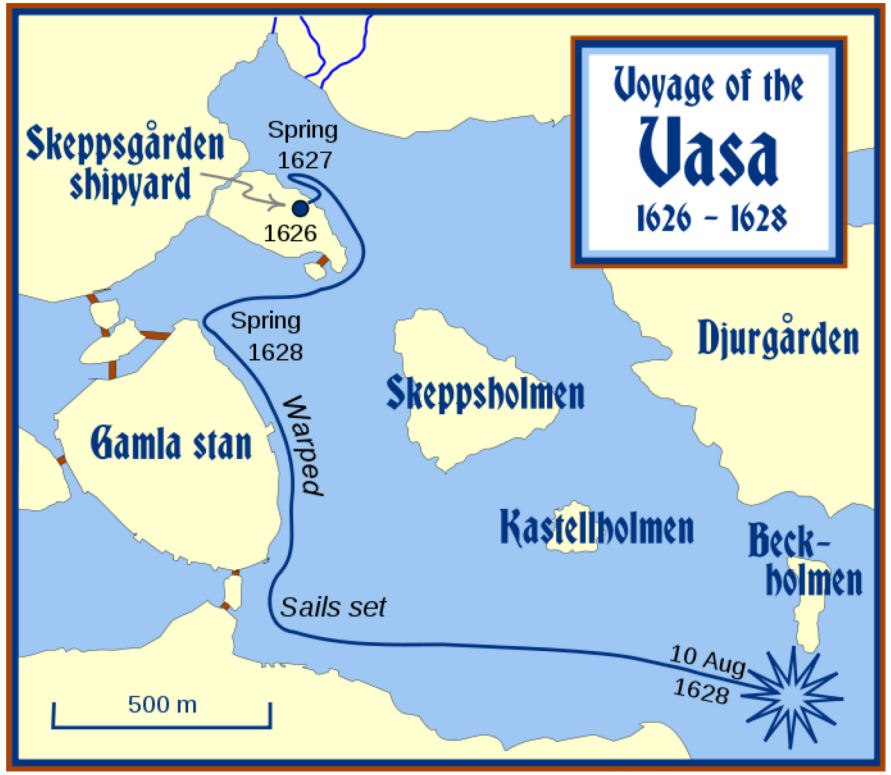
## Question 5 — 1 pts

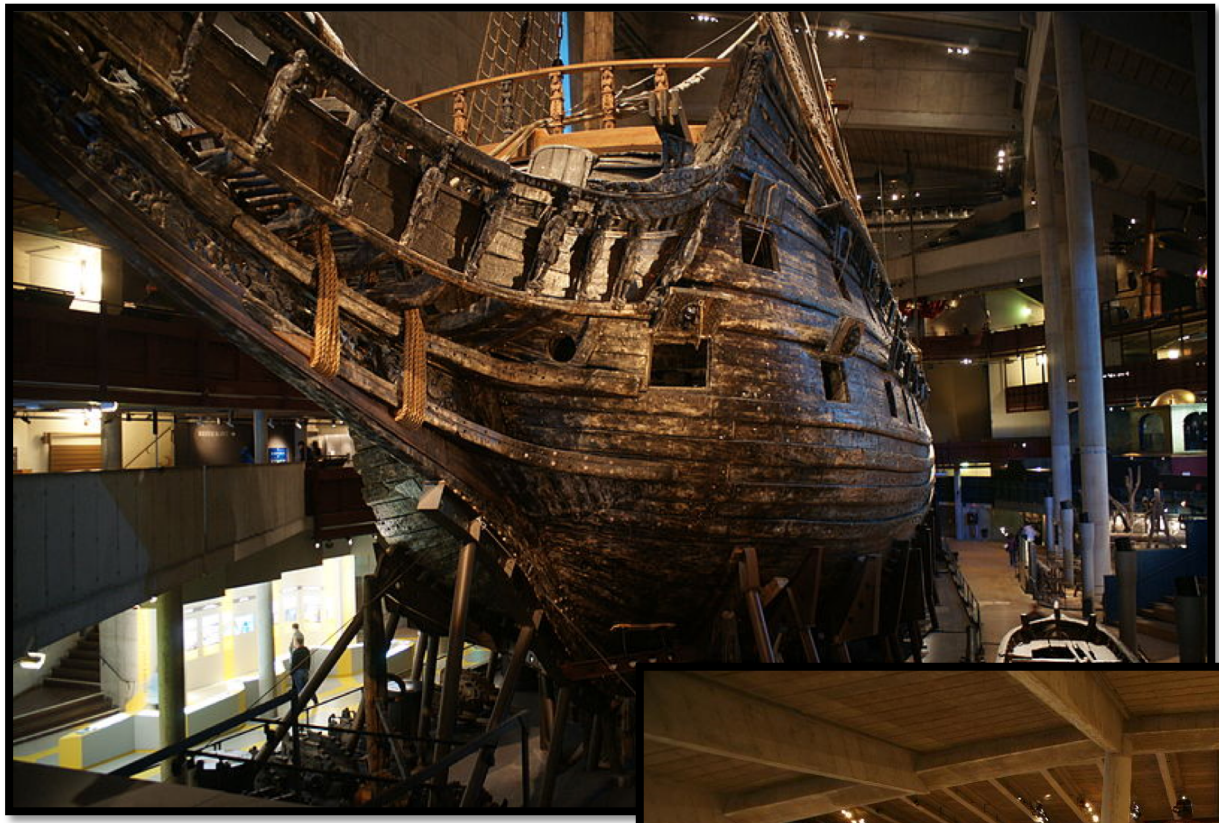
A second court of enquiry was held to determine who was at fault for the Vasa disaster. Who was found guilty and punished accordingly (what was the court's decision at the end of the enquiry)?

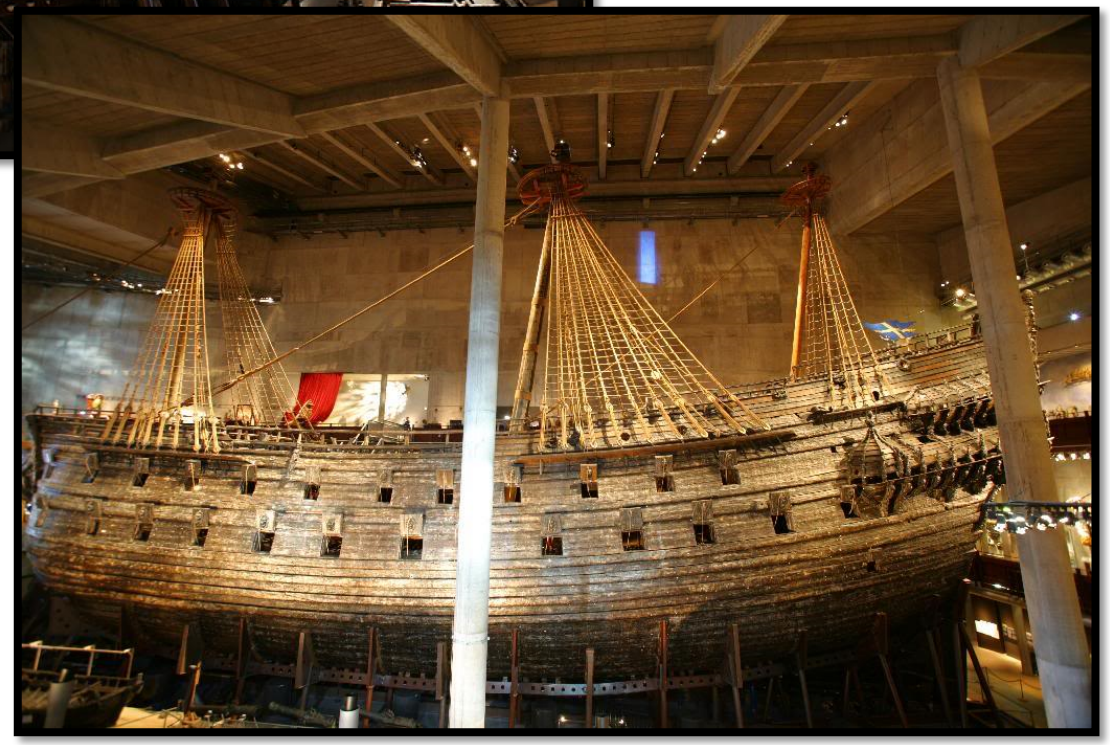
- King Gustavus II Adolphus
- Admiral Klas Fleming
- Captain Söfring Hansson
- No one was found guilty

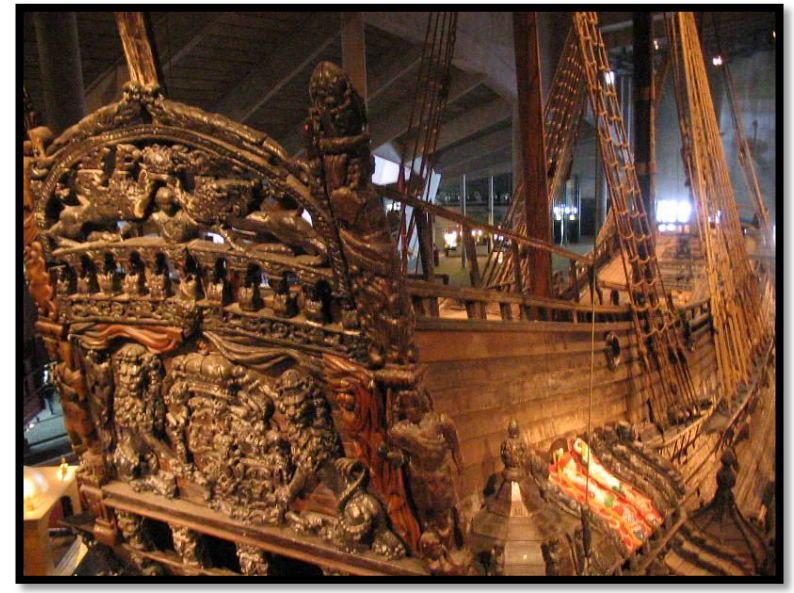
# The Vasa Capsizes


© Nations Online Project
0 200 400 km
0 100 200
North Atlantic Ocean
Barents Sea
Norwegian Sea
North Sea
Baltic Sea
Gulf of Bothnia
Gulf of Finland
Skagerrak
Kattegat
Northeast Passage
Arctic Circle
15°
30°
70°
65°
60°
55°
Hammerfest
Tromsø
Halti (Finland) 1,365 m
Inari
RUSSIA
Narvik
Kebnekaise 2,097 m
Kiruna
Gällivare
Jokkmokk
Arjeplog
Boden
Haparanda
Tornio
Luleå
Arvidsjaur
Piteå
Storuman
Lycksele
Skellefteå
Oulu
FINLAND
Umeå
Trondheim
Are
Östersund
Örnsköldsvik
Vaasa
Härnösand
Sundsvall
NORWAY
Sveg
Hudiksvall
Galdhøpiggen 2,469 m
Söderhamn
Mora
Tampere
Lillehammer
Falun
Gävle
Turku
Åland Is
Bergen
Borlänge
Torsby
Oslo
Helsinki
St Petersburg
Karlstad
Västerås
Uppsala
Örebro
Stockholm
Tallinn
Laxå
Hallsberg
Nynäshamn
Stavanger
Vänern
Nyköping
Vänersborg
Linköping
ESTONIA
RUSSIA
Gothenburg
Jönköping
Borås
Nässjö
Visby
Riga
Varberg
Lungby
Alvesta
Halmstad
Växjö
Kalmar
LATVIA
DENMARK
Helsingborg
Hässleholm
Öland Is
Karlskrona
Gotland Is
Copenhagen
Kristianstad
Lund
Malmö
Ystad
Bornholm Is
LITHUANIA
Vilnius
RU
Kiel
GERMANY
POLAND
SWEDEN
National capital
County capital
City/Town
Major airport
International boundary
Highway
Main road
Railroad


Voyage of the
Vasa
1626 – 1628
Skeppsgården shipyard
Spring 1627
1626
Spring 1628
Warped
Djurgården
Skeppsholmen
Gamla stan
Kastellholmen
Beck-holmen
Sails set
10 Aug 1628
500 m







*August 28, 2019, a mock enquiry is opened by the Swedish government to understand the causes of Vasa's sinking with modern project management principles in mind.*

*The enquiry is conducted by the so-called 67-329 court.*

*The court is now questioning:*

*King Gustavus II Adolphus*

*Master Shipwright Henrik Hybertson*

*Shipwright Assistants Hein Jakobsson (replaced Hybertson upon his death) and Johan Isbrandsson*

*Admiral Clas Larsson Fleming (oversaw the contract and performed the stability test)*

*and Captain Hansson (sailed the ship during its demise)*

## *Why did the Vasa capsize???*

# *Why did the Vasa capsize???*

- Critical demand for the Vasa (political need)
- Unclear / changing length of the Vasa
- Stability test failed – but they didn't report or respond
- Too much weight – sculptures and weapons
- No written records or instructions
- Different design specs (e.g., the chart of items on the ship)
- Timeline was adjusted multiple times – decreased
- Innovation issues – double decks and more items than typically found
- Other ships being built at the same time (conflicting priorities)
- Math / theory foundations
- Design issues – top heavy
- New shipwright was weak / inexperienced

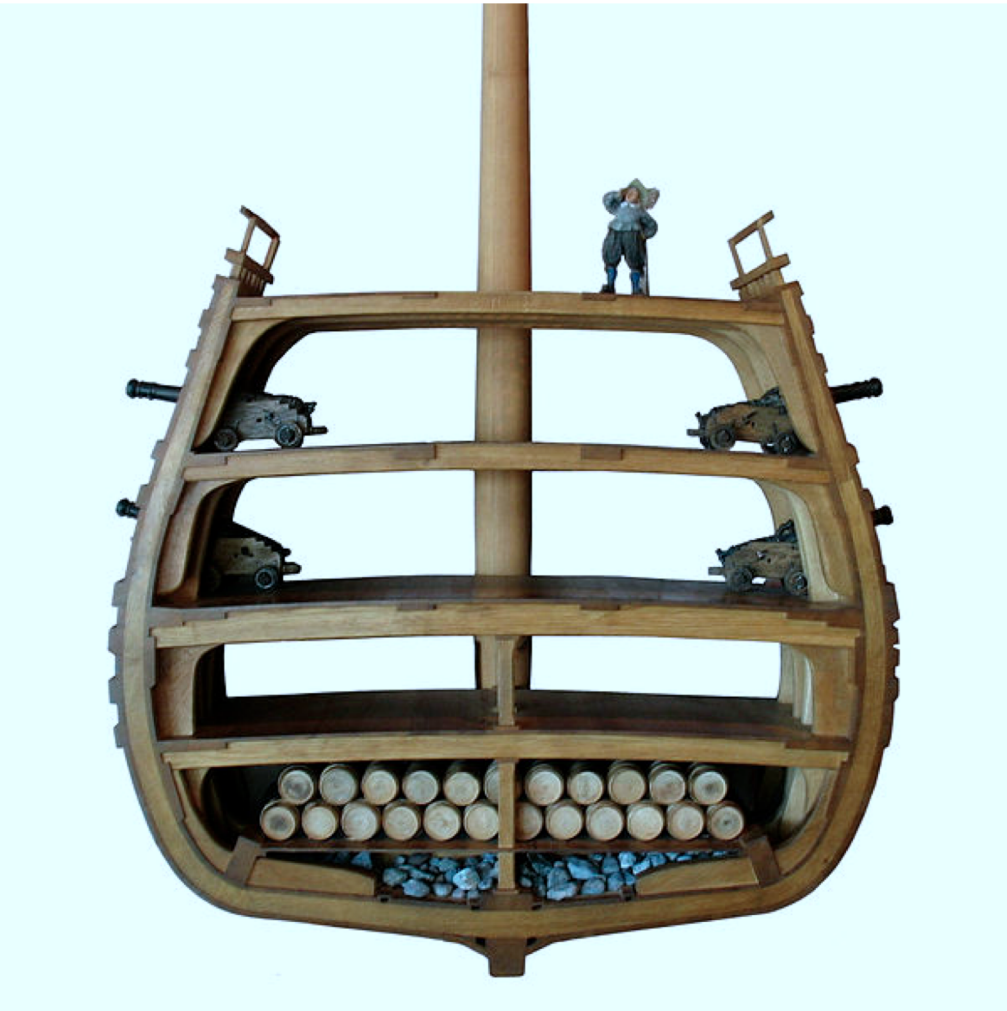
# *Why did the Vasa capsize???*


**Situational factors:** The Vasa was built primarily in reaction to socio-political issues and pressures from the outside.

**Excessive schedule pressure:** The Vasa was built under strong time constraints to meet a pressing need.

**Changing needs:** Many changes to operational characteristics occurred during construction of the ship.

# *Why did the Vasa capsize???*



**Lack of scientific methods:** There were no known methods for calculating center of gravity, stiffness, and the resulting stability relationships of the Vasa. Design requirements were in the head of Master Shipwright Henrik Hybertson.

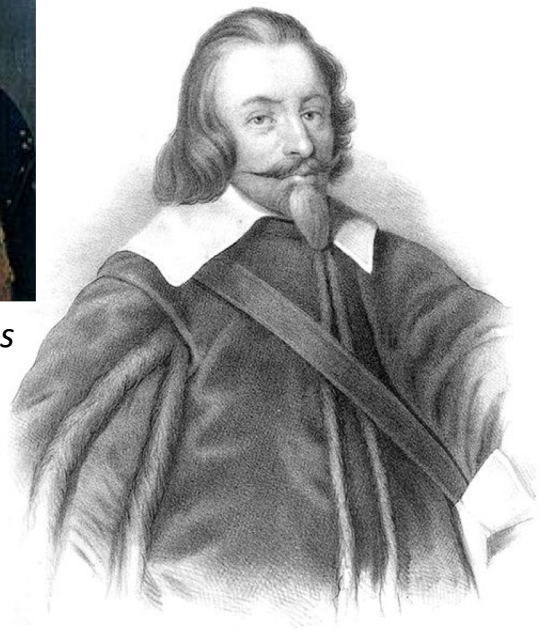
**Lack of technical specifications:** The (non-existent) specifications were not revised as the operational requirements changed.

**Excessive innovation:** No one in Sweden, including the shipwright, had ever built a ship having two gun decks.

**Secondary innovations:** Secondary innovations were added during construction to accommodate the increased length, the additional gun deck, and other changes (e.g., keel length).

# *Why did the Vasa capsize???*

*King Gustavus II Adolphus*



*Admiral Clas Larsson Fleming*

**Lack of a documented project plan:** During a year-long transition in leadership it was difficult for the assistant to manage the project. This resulted in poor supervision of the various groups working on the ship (i.e., the shipwright, the ship builder, and the subcontractors). There is no evidence that the new shipwrights prepared any plans after the original shipwright died.

**Requirements creep:** It seems no one was aware of the degree to which the Vasa evolved during the 2.5 years of construction.

**Ignoring the obvious**: The Vasa was launched after failing a stability test.  Also, there may have been possible mendacity in that the results of the stability test were known to some but were not communicated.

# Summary of 10 Lessons of the Vasa

1. **Situational factors:** The Vasa was built primarily in reaction to socio-political issues and pressures from the outside.
2. **Excessive schedule pressure:** The Vasa was built under strong time constraints to meet a pressing need.
3. **Changing needs:** Many changes to operational characteristics occurred during construction of the ship.
4. **Lack of scientific methods:** There were no known methods for calculating center of gravity, stiffness, and the resulting stability relationships of the Vasa.
5. **Lack of technical specifications:** The (non-existent) specifications were not revised as the requirements changed.
6. **Excessive innovation:** No one in Sweden, including the shipwright, had ever built a ship having two gun decks.
7. **Secondary innovations:** Many secondary innovations were added during construction of the Vasa to accommodate the increased length, the additional gun deck, and other changes.
8. **Lack of a project plan:** During a year-long transition in leadership it was difficult for the assistant to manage the project. This resulted in poor supervision of the various groups working on the ship (i.e., the shipwright, the ship builder, and the numerous subcontractors). There is no evidence that the new project manager (the former assistant) prepared any plans after the original shipwright died.
9. **Requirements creep:** It seems that no one was aware of the degree to which the Vasa had evolved during the 2.5 years of construction.
10. **Ignoring the obvious**: The Vasa was launched after failing a stability test. And the results of the stability test were known to some but were not communicated.

# Project Management Primer – The Basics of Getting Things Done

# What is a project?

*A project is a problem scheduled for solution.*

This definition forces us to recognize that projects are aimed at solving problems and that failure to define the problem properly is what sometimes gets us into trouble.

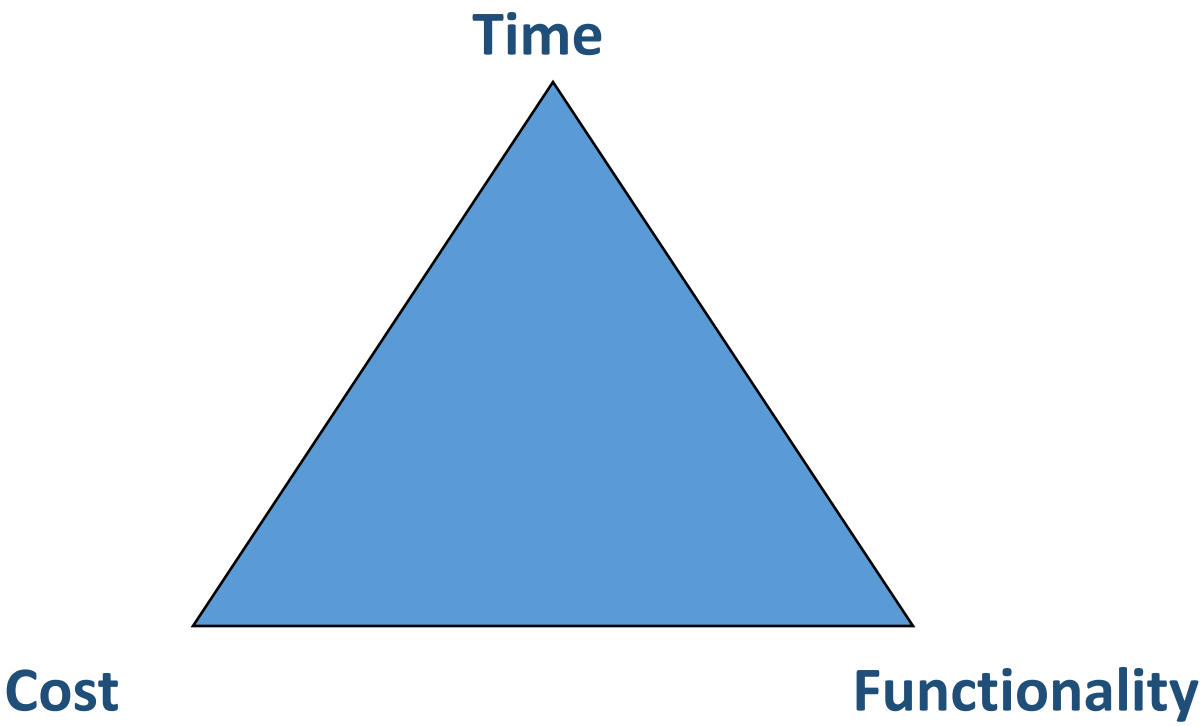
# What is project management?

*Planning the work. And then working the plan.*

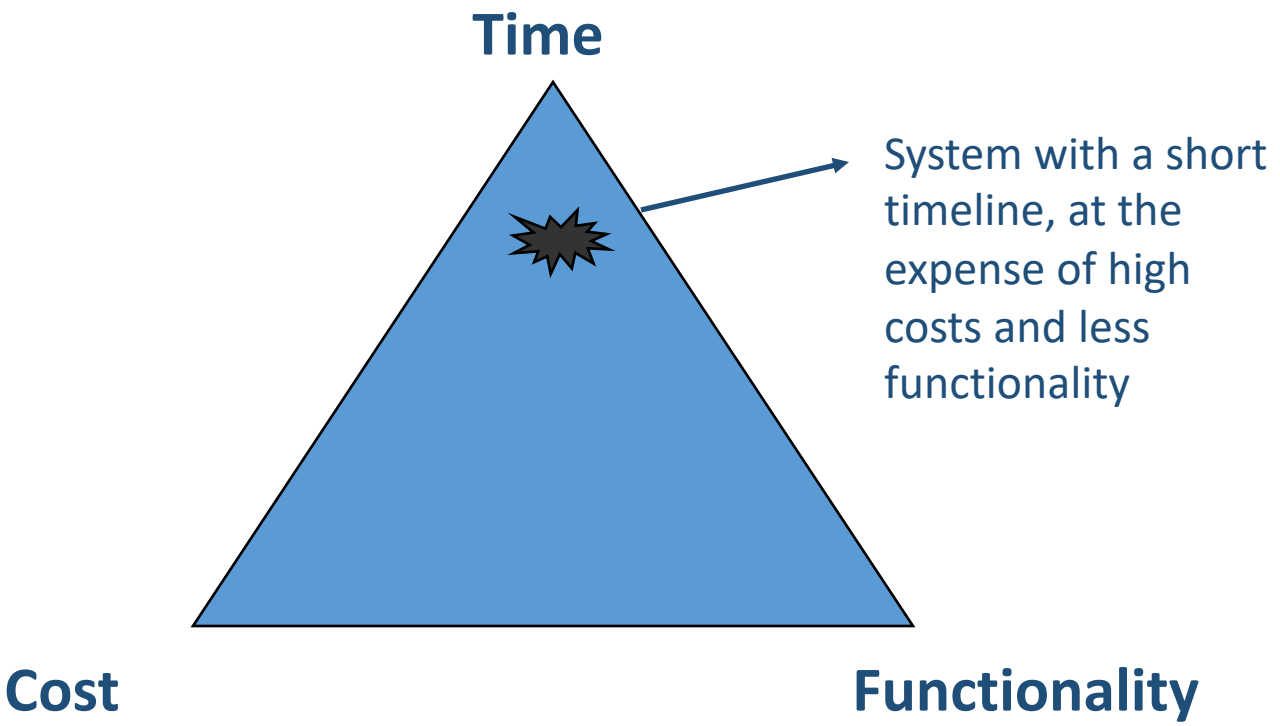
Project management is the planning, scheduling, and controlling of project activities to meet project objectives.

The major objectives that must be met include performance, cost, and time goals, while at the same time you control or maintain the scope of the project at the correct level.

# Trade-Offs of Project Management



# Trade-Offs of Project Management



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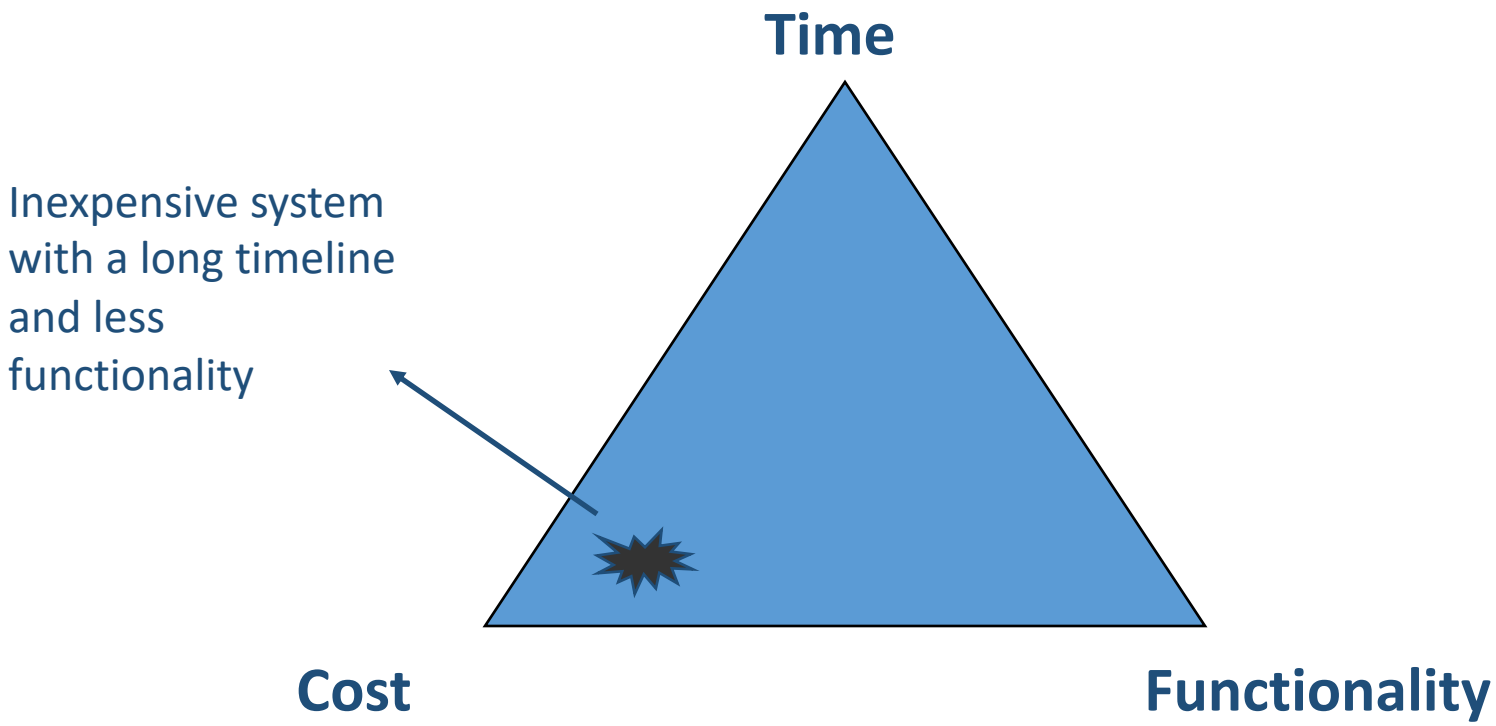

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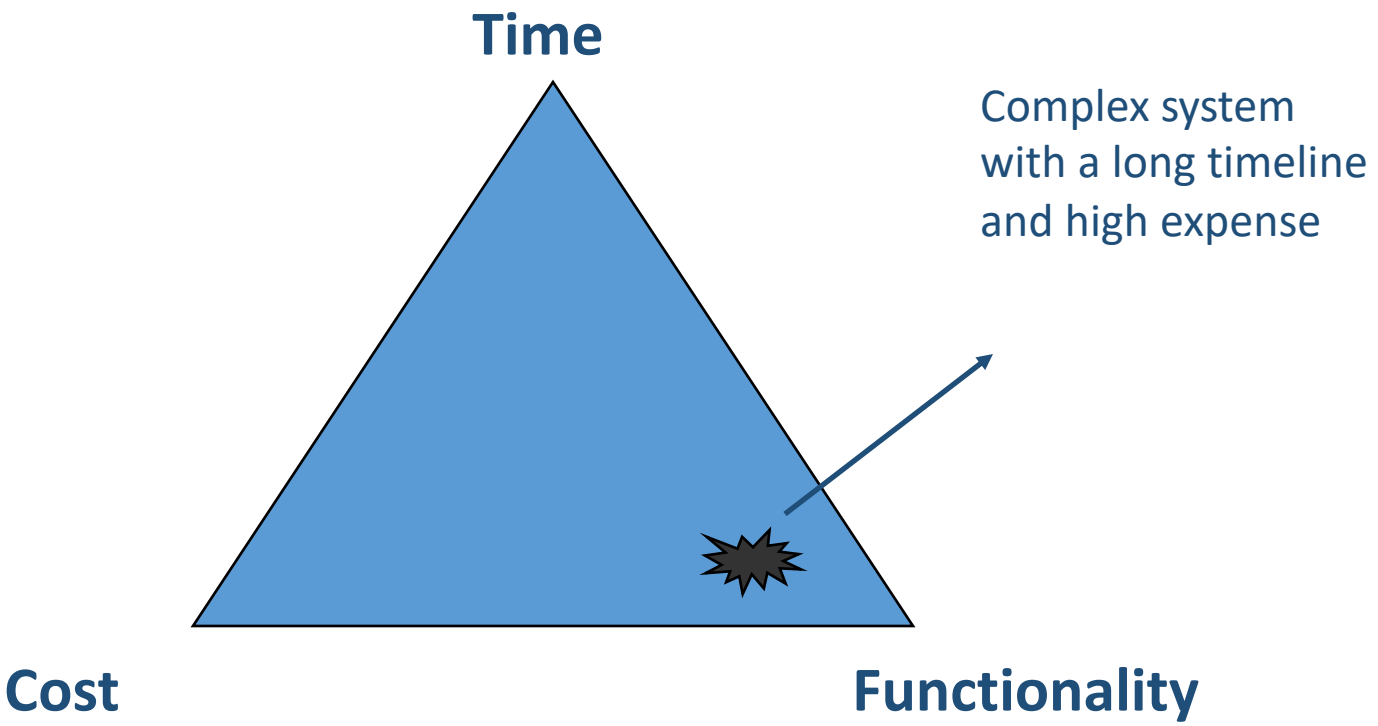

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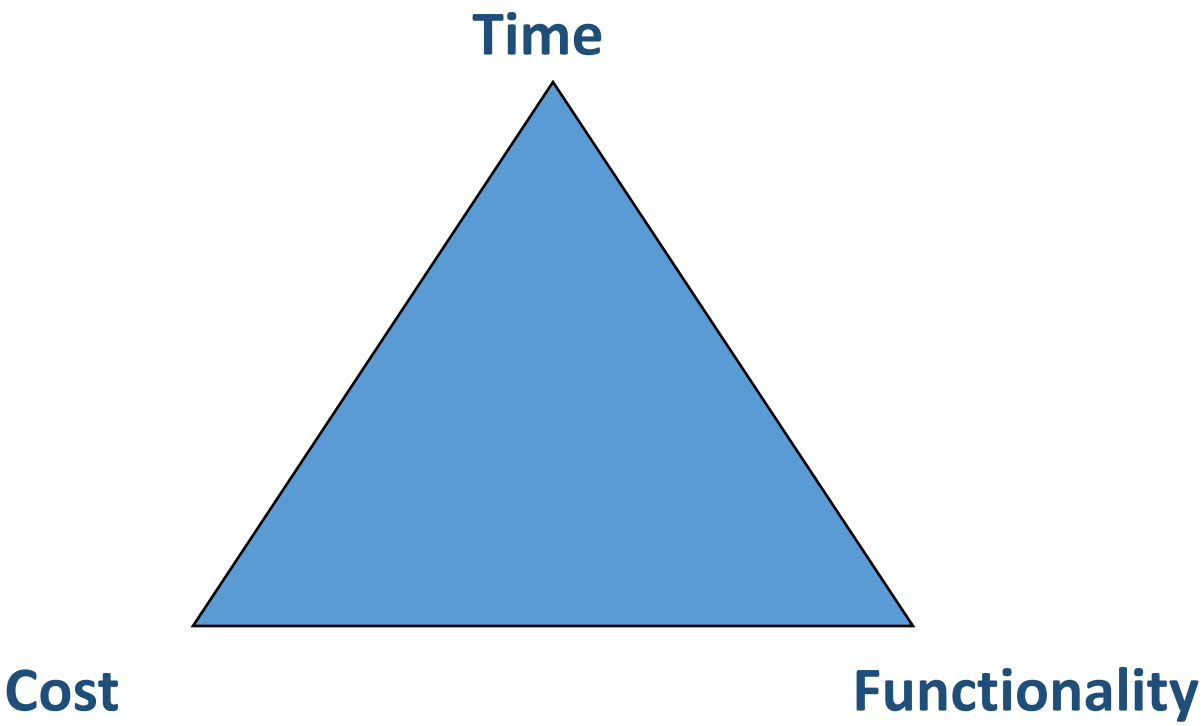


# What do project managers do?

# What do project managers do?

## THE FOUR ROLES OF THE PROJECT MANAGER

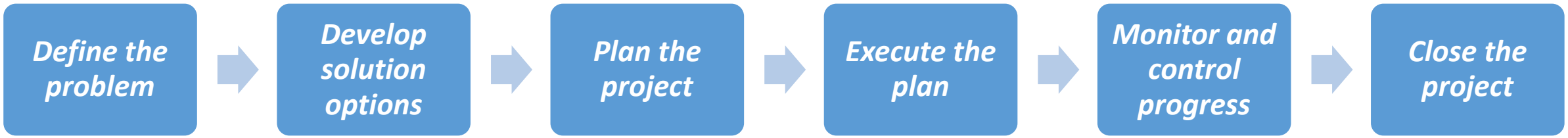
Our research found that today's successful project managers assume four roles that help them cope with unexpected events.

| ROLE | DRIVEN BY | TIMING | KEY ACTIVITIES |
|---|---|---|---|
| **Develop collaboration** | Intention | Initially | •Select the right people<br>•Develop mutual interdependence and trust |
| **Integrate planning and review with learning** | Intention | Periodically | •Develop stable short-term plans and flexible long-term plans<br>•Conduct learning-based project reviews |
| **Prevent major disruptions** | Events | Occasionally | •Anticipate and cope proactively with a few major problems |
| **Maintain forward momentum** | Events | Continuously | •Resolve problems by hands-on engagement<br>•Update and connect through frequent face-to-face communication<br>•Move about (walk the floor) frequently |

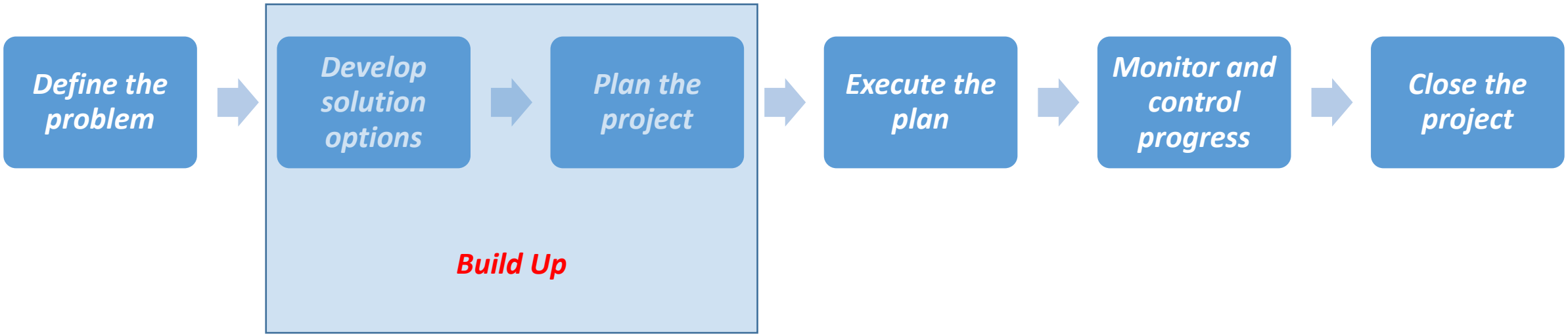
From: "What Successful Project Managers Do" by Laufer et al. (2015)

# Steps in Managing a Project???

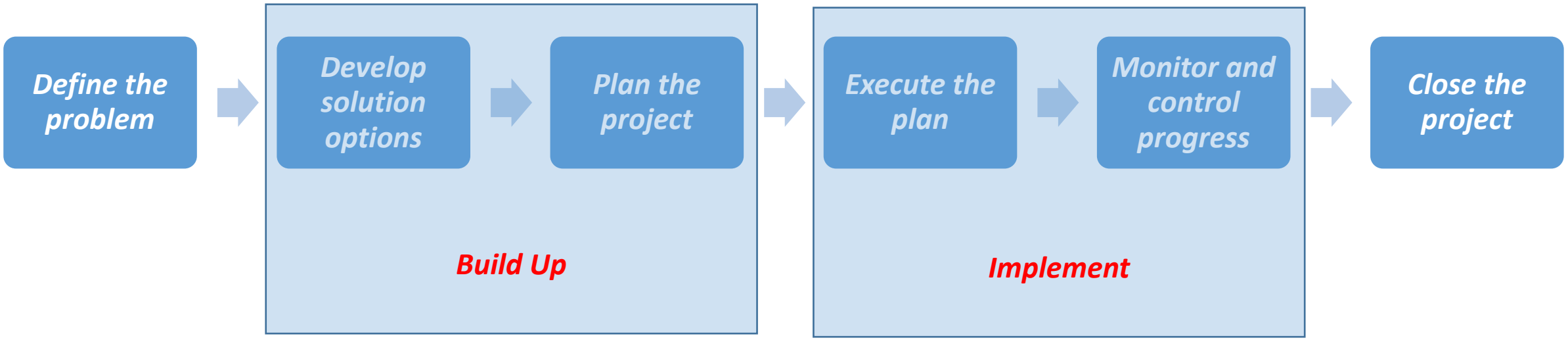
# Steps in Managing a Project



# Steps in Managing a Project



# Steps in Managing a Project



# How should project managers build and manage a ‘good’ team?

# The Secrets of Great Teamwork

(Harvard Business Review) by Martine Haas and Mark Mortensen, 2016

## Idea in Brief

**THE PROBLEM**

Teams are more diverse, dispersed, digital, and dynamic than ever before. These qualities make collaboration especially challenging.

**THE ANALYSIS**

Mixing new insights with a focus on the fundamentals of team effectiveness identified by organizational-behavior pioneer J. Richard Hackman, managers should work to establish the conditions that will enable teams to thrive.

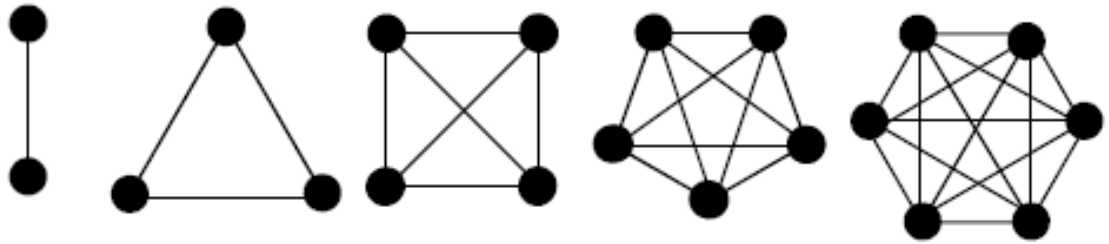
**THE SOLUTION**

The right conditions are

- a compelling direction
- a strong structure
- a supportive context, and
- a shared mindset

Weaknesses in these areas make teams vulnerable to problems.

# Mythical Man Month (Brooks)



| | | | | | | |
|---|---|---|---|---|---|---|
| People | 2 | 3 | 4 | 6 | 6 | (n) |
| Interfaces | 1 | 3 | 6 | 10 | 15 | $\frac{n^2 - n}{2}$ |

**Key Thoughts:**

1. Small autonomous teams are more efficient than large bureaucratic ones.
2. Look for “flat spots” in the schedule if introducing new people to the team
3. Scope triangle – only option to ask for more money, time or cut functionality!

# Global Teams That Work:
# A Framework for Bridging Social Distance

*(Harvard Business Review) by Tsedal Neeley, 2015*

**Social distance:** The degree of emotional connection among team members (it is lower in distributed teams – making it harder to communicate, understand, connect, align, trust, etc.)

**SPLIT framework:**

1. **Structure** (location of boss and team) – all about perception of power – need to keep focus on TEAM goals
2. **Process** (empathy is important) – allow time for social interaction (put it on meeting agendas) and for conflict to arise (process to voice concerns)
3. **Language** (fluency level matters) – dial down dominance and dial up engagement; team leaders should look for balance
4. **Identity** (avoid making assumptions about what behaviors mean) – everyone is a teacher and a learner
5. **Technology** (pick the right tools) – asynchronous versus synchronous? – synchronous is harder to schedule but might be better in the end

“Projects don’t fail from a lack of charts, graphs, stats, or reports, they fail from a lack of clear communication.”

*Basecamp Home page*

# Upcoming Classes

**Monday, September 2nd**
Labor Day NO CLASS

**Wednesday, September 4th**
Cultural Aspects of Global Teams

Complete before class:
- Homework #1

Read before class:
- Trouble in Paradise (Harvard Business Review)
- Culture as a Kaleidoscope by Jennifer Gibbs
- Cultural Intelligence (Harvard Business Review) - *optional reading*