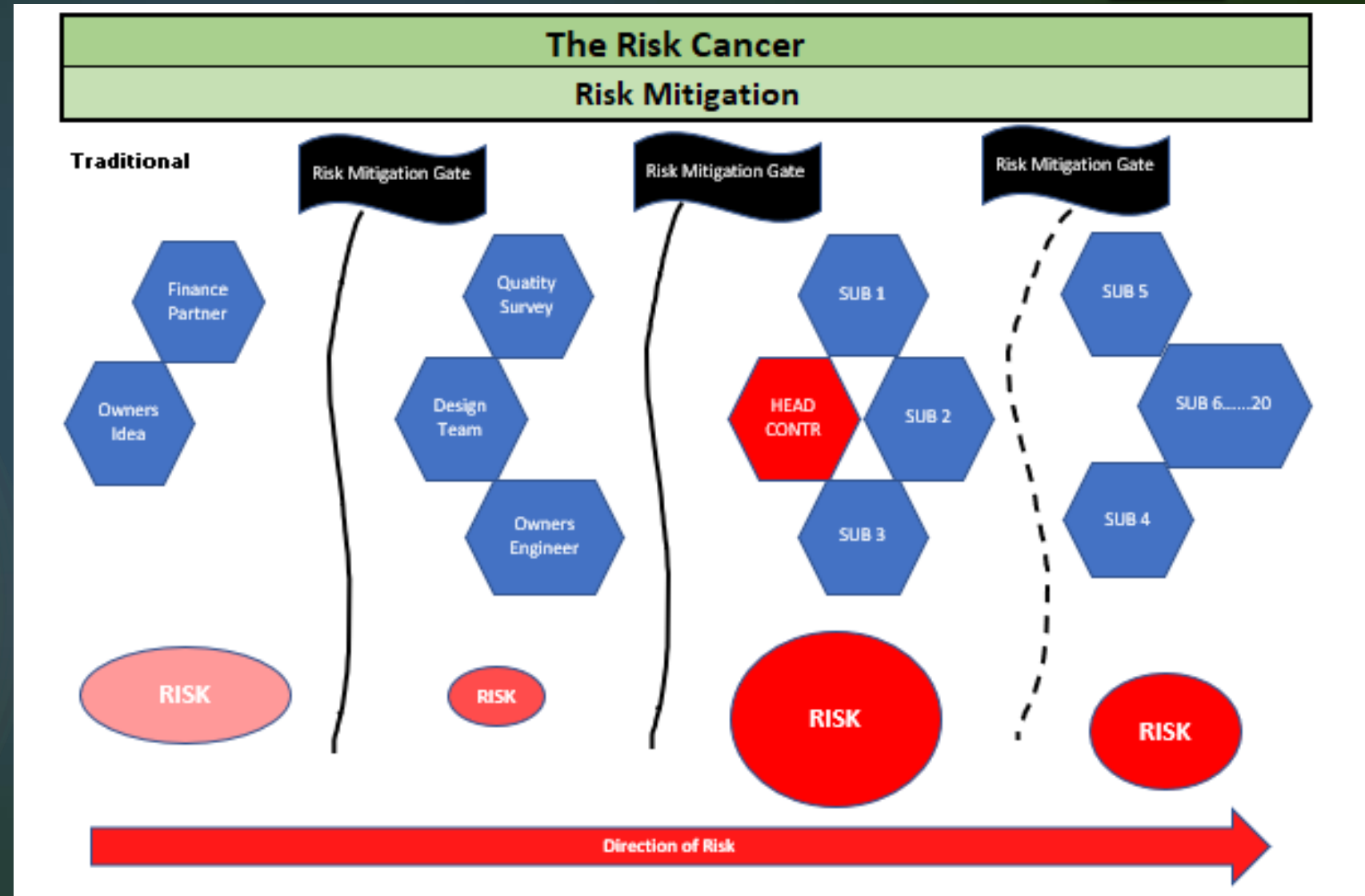


# RISK IN CONSTRUCTION

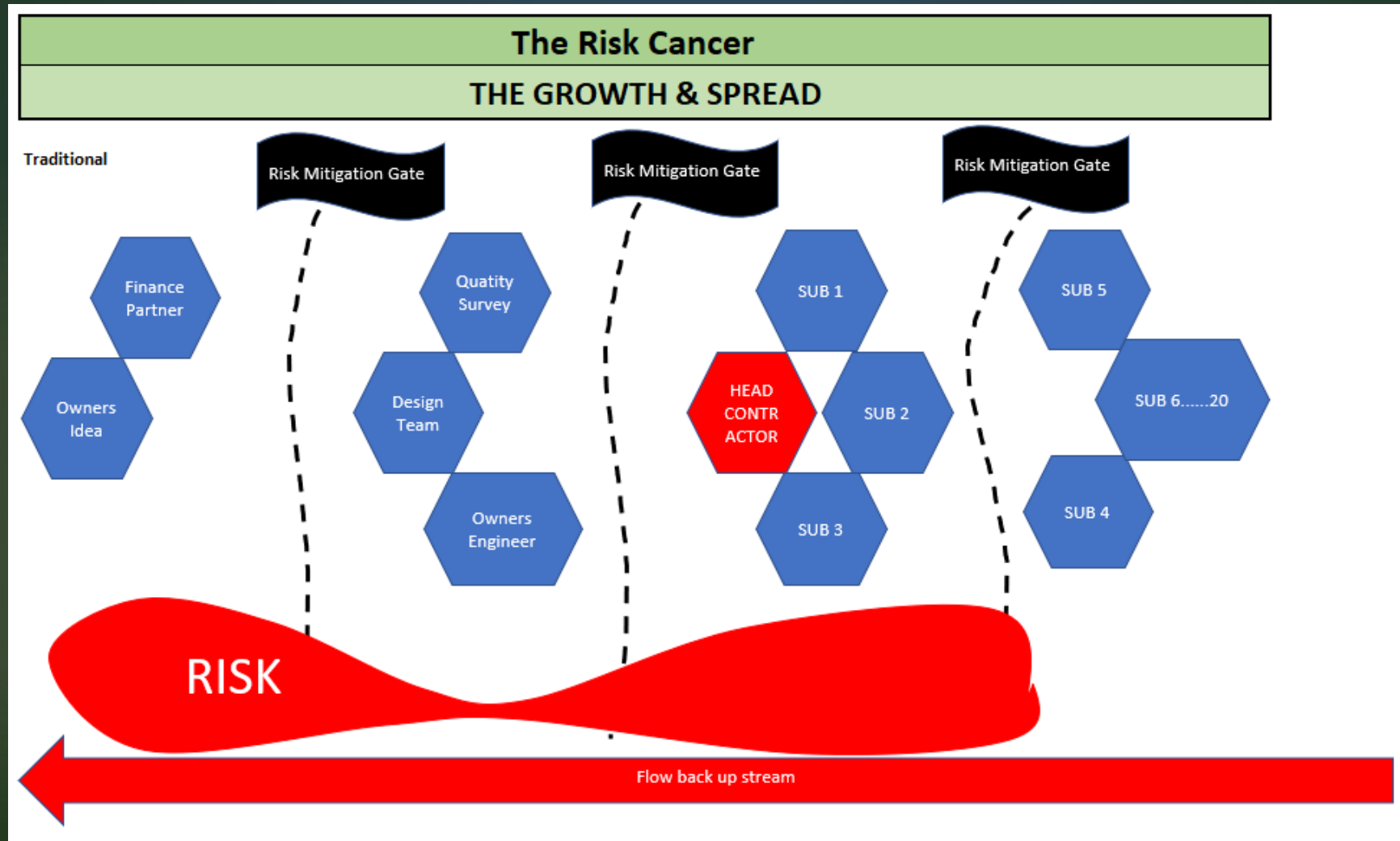
INTEGRITY SITE FACILITATORS  
GARRICK COCKER & JOE MORRISON

# The Risk Cancer

- ▶ Traditional Style of Delivering
- ▶ A project many moving parts
- ▶ Each Stakeholder establishes fences
- ▶ Bridges while stated are typically more symbolic



# Over time the Risk begins to metastasize

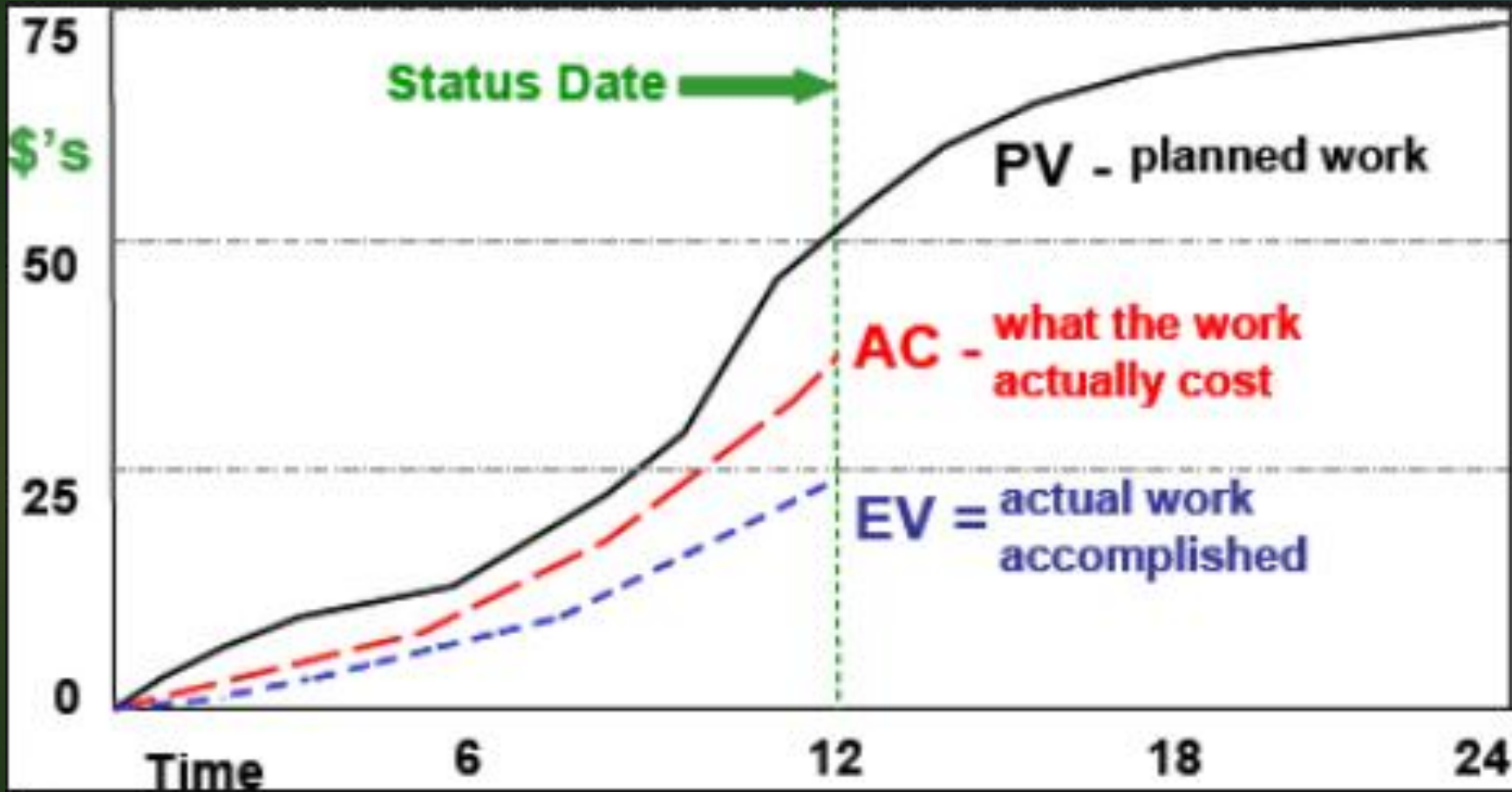


# Construction time is Finite

- ▶ Fixed End Date
- ▶ Start date is shifted
- ▶ Pressurized Construction Schedule
- ▶ Construction time and Costs Uncontrolled
- ▶ Risk starts to shift back to the Owner – Contractor under financial pressure

**Can you constrain a construction schedule without the design deliverables being at nominal 80% ?**

# Commodity Curve

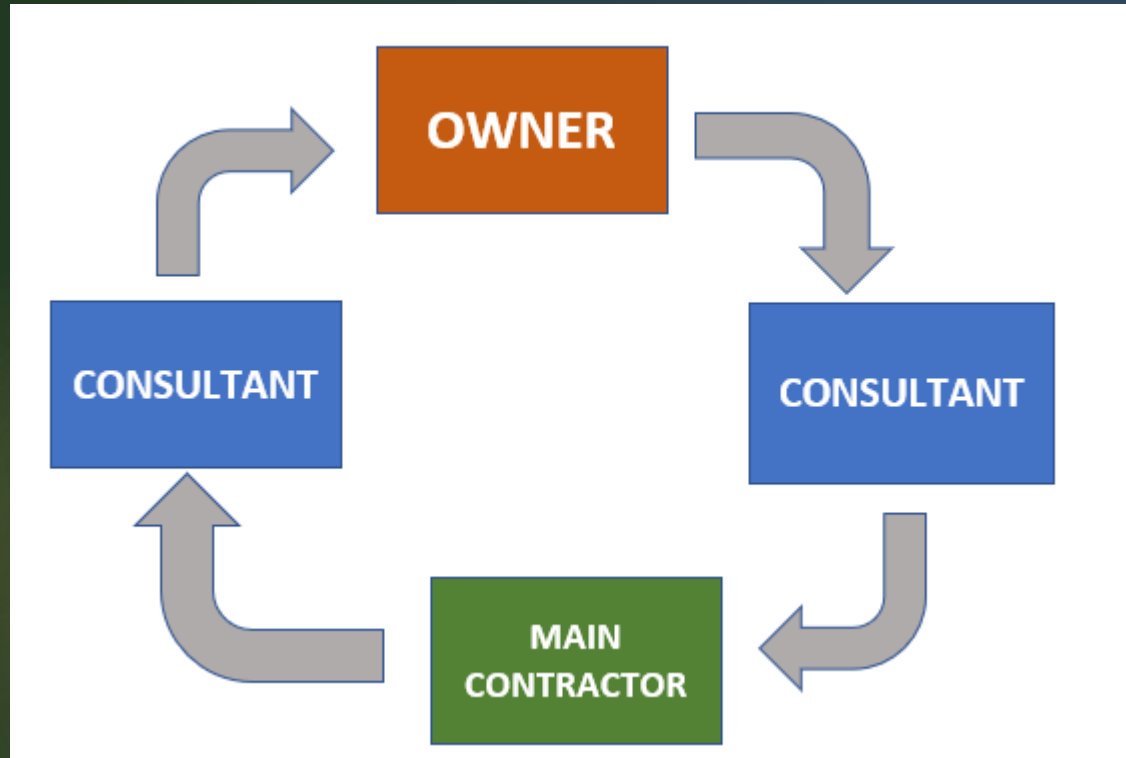


**RISK**  
Should construction  
have commenced?  
When did it?

# Deliverables

- ▶ IFC Drawings
- ▶ IFC Specifications
- ▶ Constructability & Design Reviews 30%, 50%, 80%
- ▶ Procurement schedule
- ▶ Contracting Strategy
- ▶ Package Strategy
- ▶ Budget
- ▶ Commodity Curve

# Flow of Information



- ▶ RFI's
- ▶ Technical Queries
- ▶ Contract Instructions
- ▶ Commodity Curve/Earned Value
- ▶ Transparency

# Construction Progresses the cracks begin to emerge

Concept



40% Complete





# What stops Risk Spread

## Watch the items that effect cost and time

- ▶ Altered goal posts – Structural changes to design brief from Owner
- ▶ Design changes
  - ▶ Building Code
  - ▶ Coordination issue
- ▶ Untimely procurement procedure
- ▶ Overly complicated design
- ▶ Lack of planning and qualified site oversight
- ▶ Lack of material or workmanship quality

## Clarity – Lead Indicators

- ▶ Logic diagram – resource curve =schedule/program
- ▶ Commodity Curve
- ▶ Information Quality and Flow
- ▶ Scope Change
- ▶ Scope Growth
- ▶ Last Planner
- ▶ Technical queries and RFIs
- ▶ Quality

Questions?