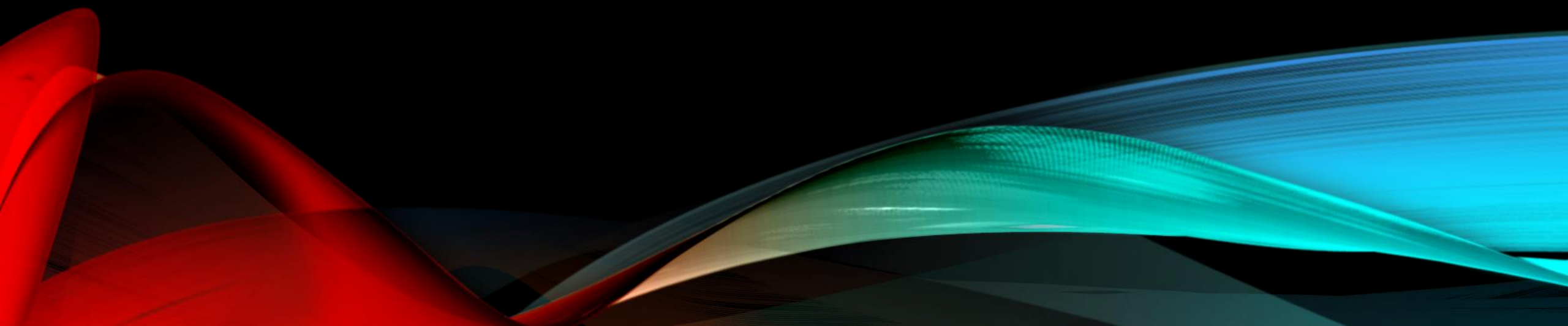
Grail

Professional Services

QUALITY MANAGEMENT

Mark A. Ward

COMMUNICATION MODEL



COMMUNICATION MODEL TERMS (1)

- Transmit message: Data or information to be conveyed
- Sender: The initiator or source of the message
- Receiver: The recipient of the message
- Medium (also known as method or channel): The manner in which the message is transmitted
- Encoding: Translation of the data or information by the sender into a message (e.g., symbols) that the receiver can understand

Project Management Institute, A Guide to the Project Management Body of Knowledge, PMBOK® Guide) – Sixth Edition, Project Management Institute Inc., 2017, Pages 371-373.

COMMUNICATION MODEL TERMS (2)

- Decoding: Translation of the message by the receiver into meaningful data or information that can be understood by the receiver
- Feedback: In some instances, the receiver may respond to a message by providing information to the sender regarding the message (e.g., message received and understood).

Project Management Institute, A Guide to the Project Management Body of Knowledge, PMBOK® Guide) – Sixth Edition, Project Management Institute Inc., 2017, Pages 371-373.

COMMUNICATION MODEL TERMS (3)

- Acknowledgment: Verbal and/or nonverbal cues that the message has been received and understood. Importantly, however, acknowledgment does not mean the receiver agrees with the content of the message.
- Noise: Anything that interferes with the message (e.g., distance)

Project Management Institute, A Guide to the Project Management Body of Knowledge, PMBOK® Guide) – Sixth Edition, Project Management Institute Inc., 2017, Pages 371-373.

A sender has a message that it wants to send to a receiver.

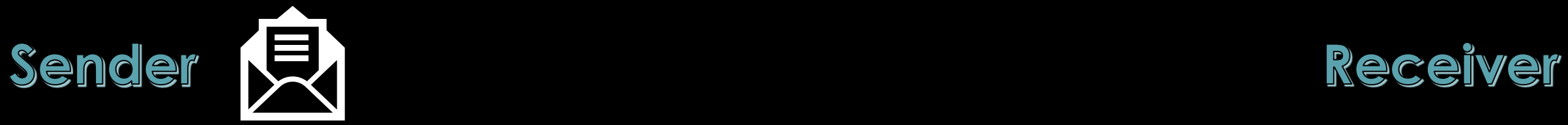


Figure 10-1. Communication Model Animation

A sender will **encode** that message into a form that will facilitate its transmission across a medium.

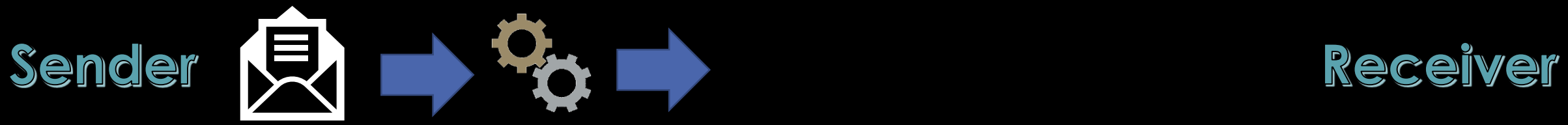


Figure 10-1. Communication Model Animation

A sender will transmit that encoded message across a medium to a receiver.

Sender

Receiver

Figure 10-1. Communication Model Animation

A receiver will **decode** the message into a form that can be understood by that receiver.

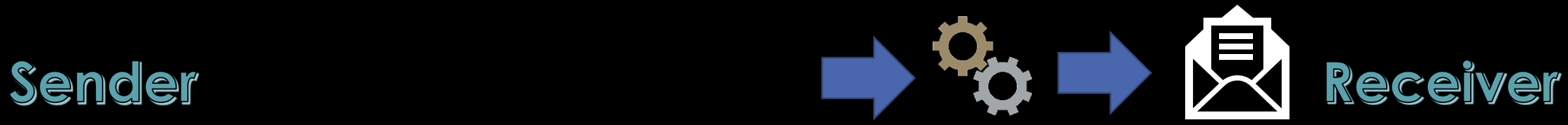


Figure 10-1. Communication Model Animation

Noise can disrupt or distort a message a sender is trying to send a receiver.

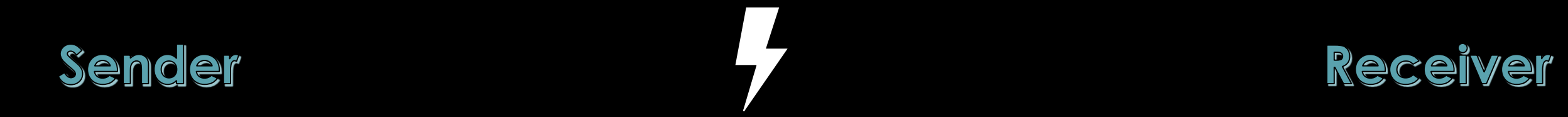


Figure 10-1. Communication Model Animation

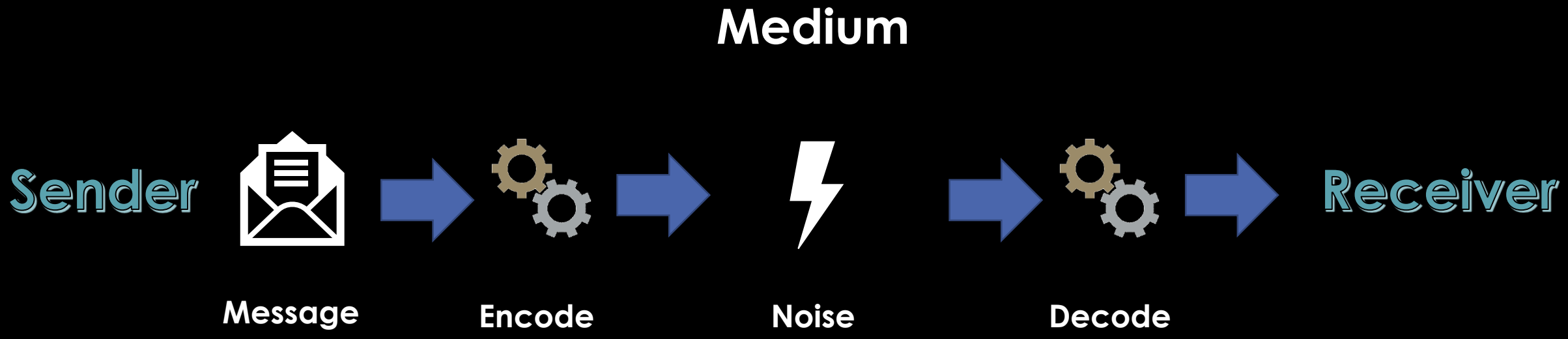
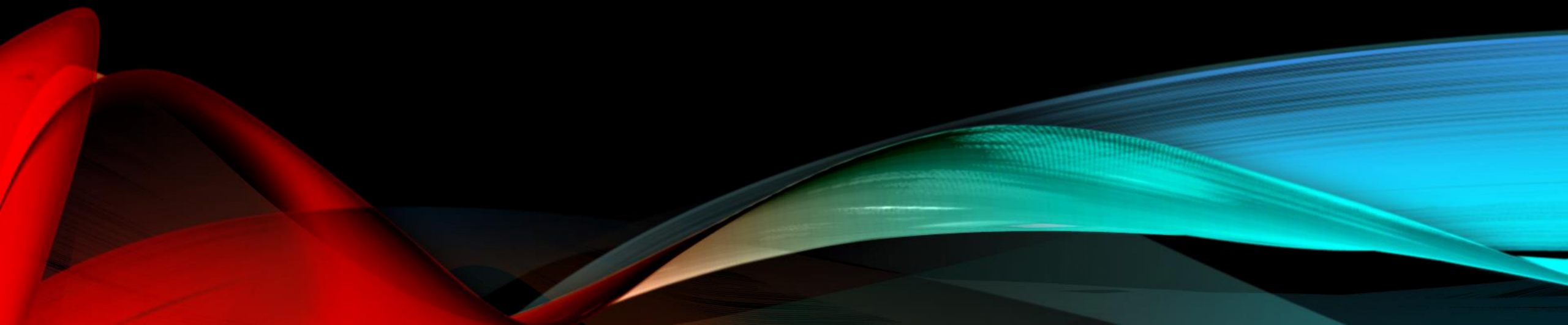


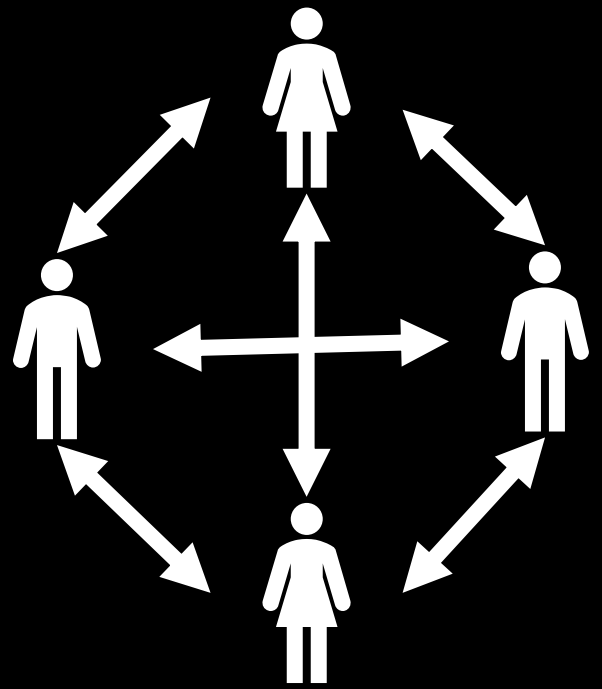
Figure 10-1. Communication Model Review

COMMUNICATION LINES FORMULA

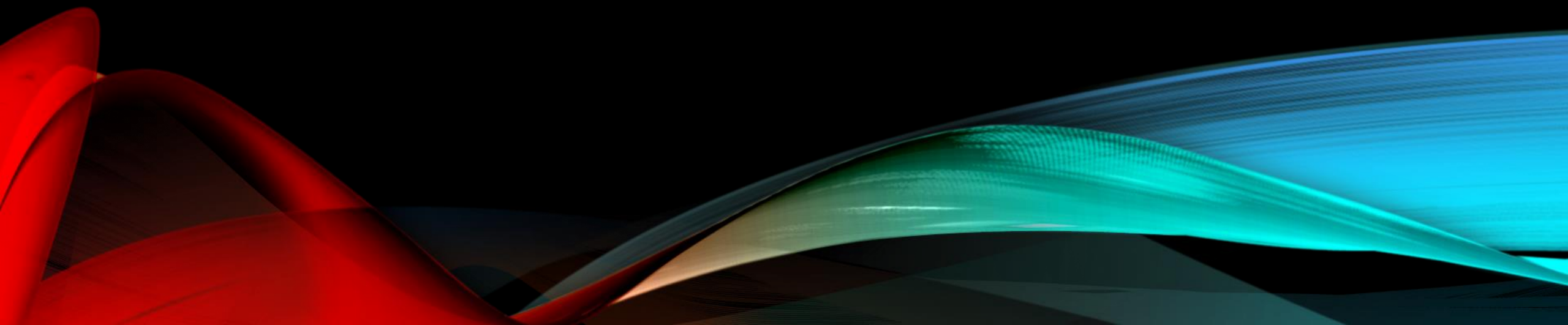


COMMUNICATION LINES FORMULA

- As the number of participants increases, the number of lines of communication also increases at (n x (n - 1)) ÷ 2, where n = number of individuals.
- Example:
- Four (4) people must communicate with each other.
- (4 x (4 - 1)) ÷ 2 = 6
- Hence there are six (6) lines of communication



QUALITY CONCEPTS



GRADE VERSUS QUALITY

- Grade: Product characteristics (e.g., higher grade means more product features)
- Quality: Dependability, reliability, functionality, and so on

Project Management Institute, A Guide to the Project Management Body of Knowledge, PMBOK® Guide) – Sixth Edition, Project Management Institute Inc., 2017, Pages 271-275.

ACCURACY VERSUS PRECISION

- Accuracy: How well something aligns with an established objective
- Precision: How replicable are the results (also referred to as reliability)

Project Management Institute, A Guide to the Project Management Body of Knowledge, PMBOK® Guide) – Sixth Edition, Project Management Institute Inc., 2017, Pages 271-275.

Figure 8-1. Accurate and Precise

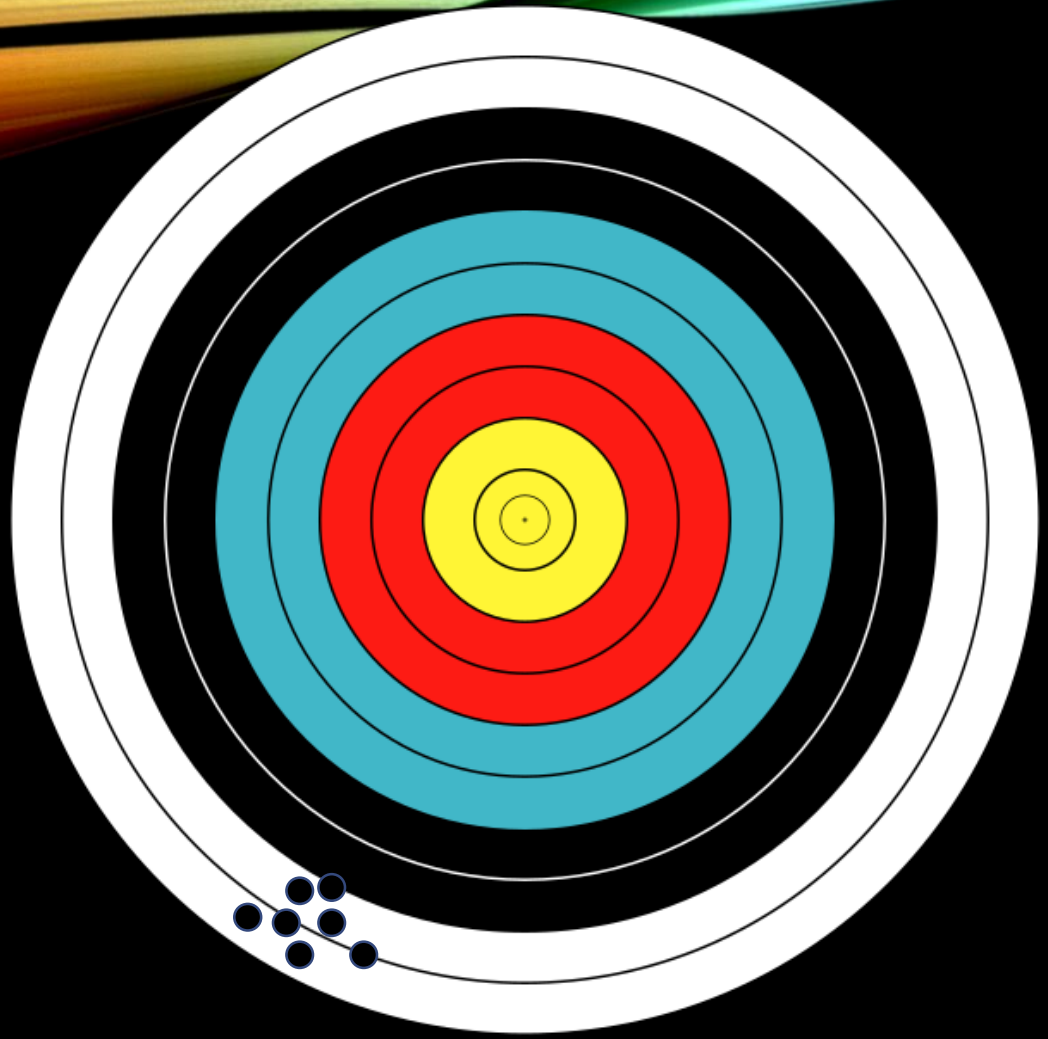


Figure 8-2. Precise but not Accurate

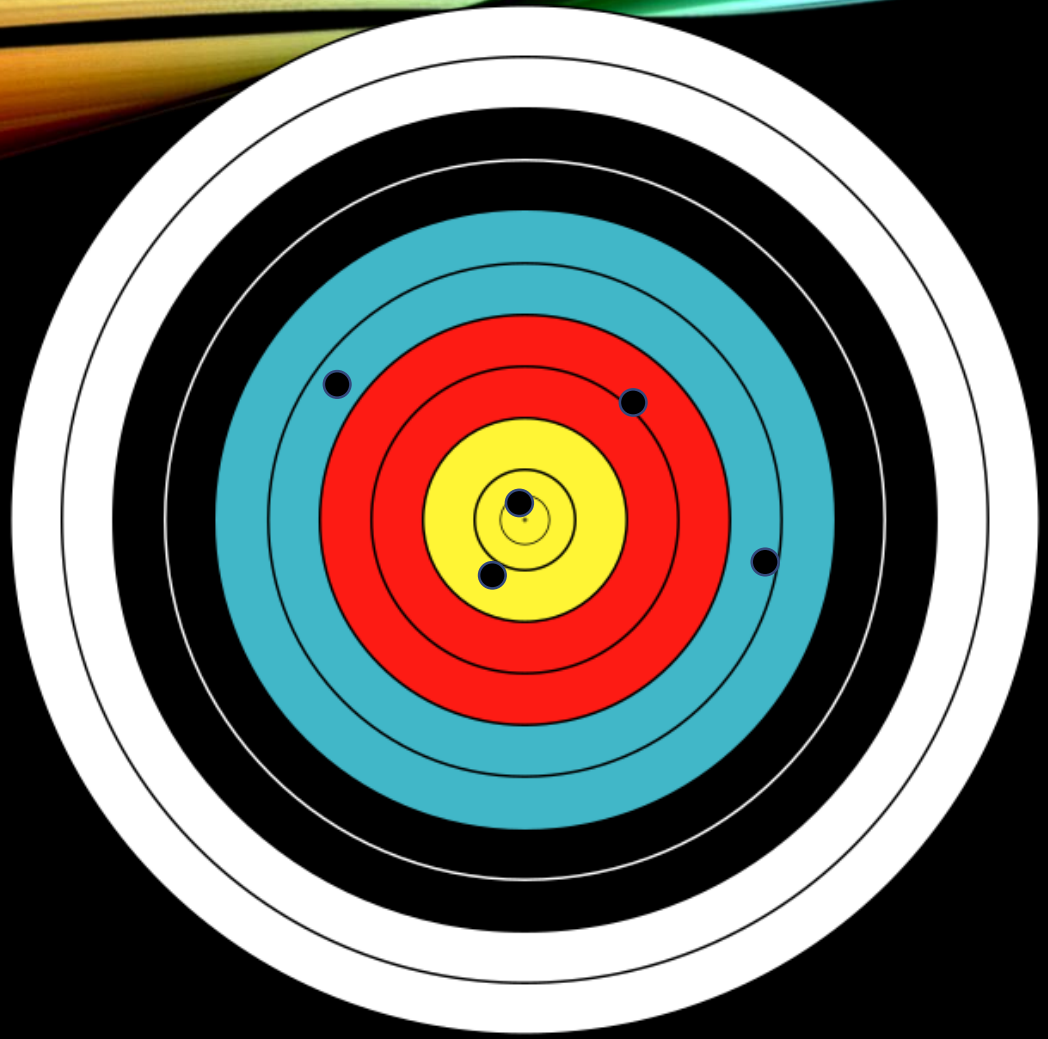


Figure 8-3. Occasionally Accurate but not Precise

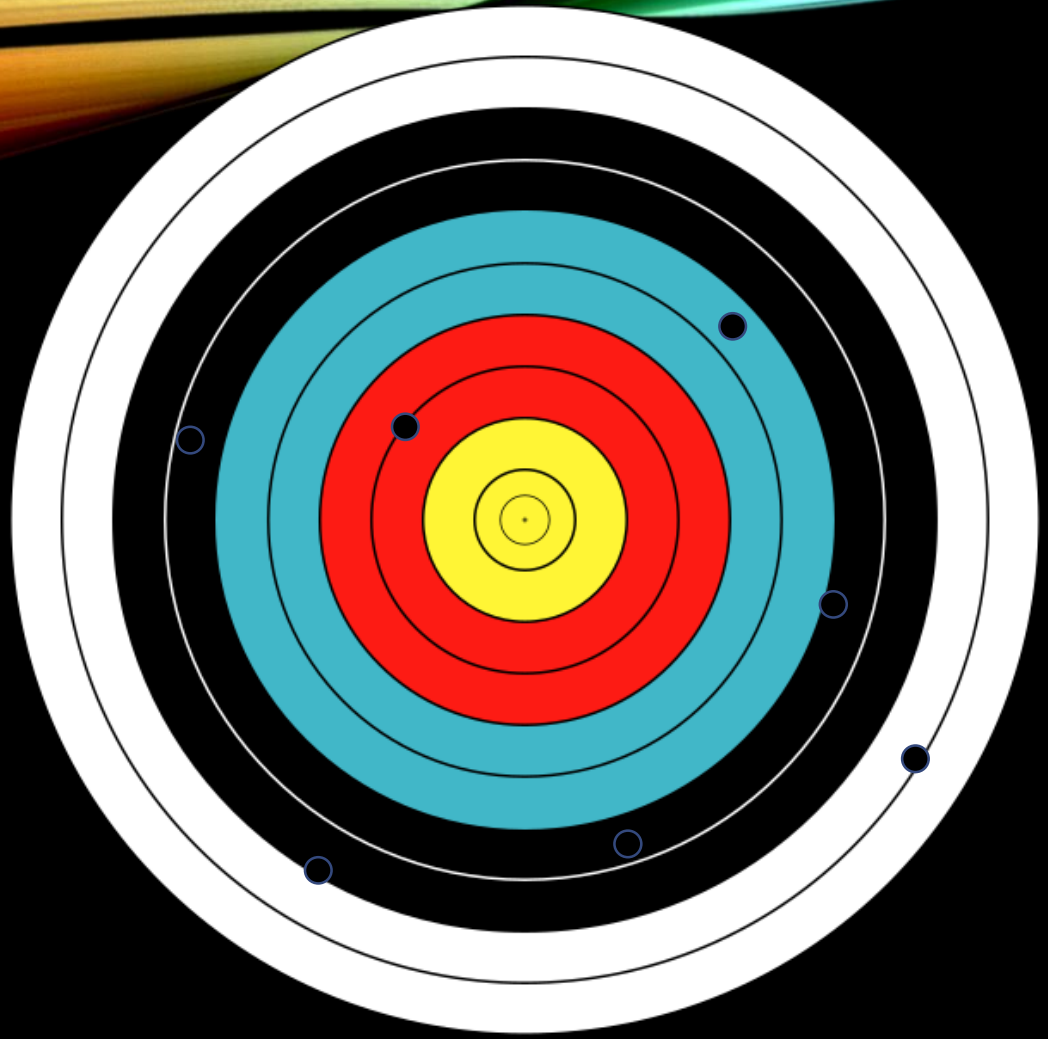
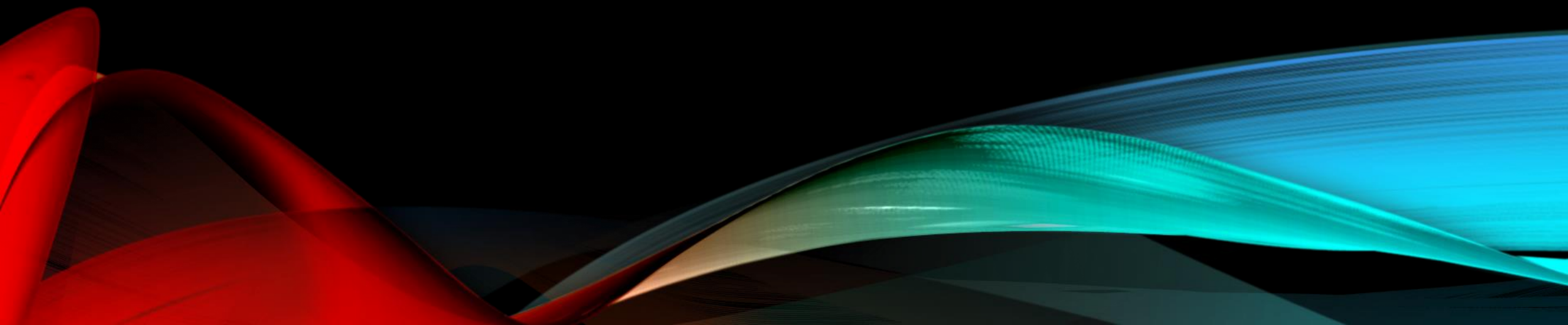


Figure 8-4. Not Accurate or Precise

COST-PLUS-FIXED-FEE (CPFF)



COST-PLUS-FIXED-FEE (CPFF) (1)

- The contractor (seller) recoups all of the cost to produce the product or provide the service plus a fixed fee. This fee is the profit earned by the contractor (seller).
- Note: The buyer (organization) assumes most of the risk with this contract type.

Project Management Institute, A Guide to the Project Management Body of Knowledge, PMBOK® Guide) – Sixth Edition, Project Management Institute Inc., 2017, Pages 471-472.

COST-PLUS-FIXED-FEE (CPFF) (2)

- Note that as the overall cost of the project increases, the fee (profit) of the seller does not increase. That is, the fee (profit) remains the same regardless of the overall cost of the project.

Project Management Institute, A Guide to the Project Management Body of Knowledge, PMBOK® Guide) – Sixth Edition, Project Management Institute Inc., 2017, Pages 471-472.

COST-PLUS-INCENTIVE-FEE (CPIF) (1)

- The contractor (seller) recoups all of the cost to produce the product or provide the service plus a fixed fee.
- Additional fees may be collected by the contractor (seller) for attaining certain performance levels. For example, a contractor (seller) may complete a phase or project ahead of schedule, under budget, or with enhanced performance characteristics.

Project Management Institute, A Guide to the Project Management Body of Knowledge, PMBOK® Guide) – Sixth Edition, Project Management Institute Inc., 2017, Pages 471-472.

COST-PLUS-INCENTIVE-FEE (CPIF) (2)

- Generally, incentive fee is a percentage or portion of difference between actual cost and projected cost
- If the seller goes over budget, the seller's profit is reduced and vice versa.
- Note: The buyer (organization) assumes most of the risk with this contract type.

Project Management Institute, A Guide to the Project Management Body of Knowledge, PMBOK® Guide) – Sixth Edition, Project Management Institute Inc., 2017, Pages 471-472.

COST-PLUS-INCENTIVE-FEE (CPIF) (3)

- In a CPIF and other contract vehicles, you may be asked to calculate:
- **Final fee**
- **Final price**

COST-PLUS-INCENTIVE-FEE (CPIF) EXAMPLE (1)

- Targeted (expected) cost: $100
- Fixed fee: $10
- Share ratio: 80% (buyer)/20% (seller)
- Note: Share ratio buyer is always first followed by the seller.
- Final Price Formula: (AC + FF) + SS% x (TC – AC), where: AC = Actual Cost, TC = Targeted Cost, SS = Seller's Share, and FF = Fixed Fee
- Fixed Fee Formula = Final Price - Actual Cost
- Alternate formula: AC + (SS% x (PC – AC))

COST-PLUS-INCENTIVE-FEE (CPIF) EXAMPLE (2)

- Actual cost: $**100**, contractor earnings:
- (AC + FF) + SS% x (TC – AC)
- (**100** + 10) + (.2 x (100 - **100**)) = **$110 (earns $10)**
- **Final price**: $110
- $110 - $100 = $10
- **Final fee**: $10

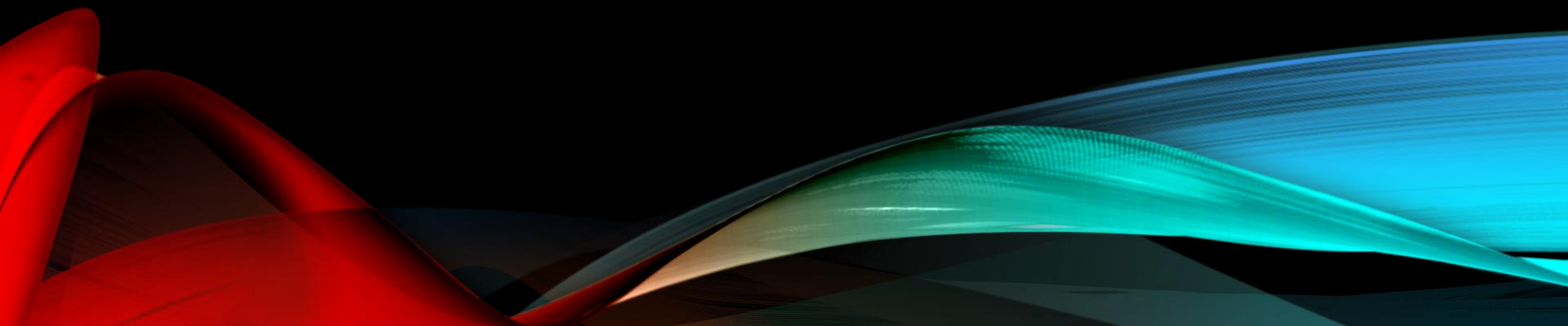
COST-PLUS-INCENTIVE-FEE (CPIF) EXAMPLE (3)

- Actual cost: $120, contractor earnings:
- (AC + FF) + SS% x (TC – AC)
- (120 + 10) + (.2 x (100 - 120)) = **$126 (earns $6)**
- **Final price**: $126
- $126 - $120 = $6
- **Final fee**: $6

COST-PLUS-INCENTIVE-FEE (CPIF) EXAMPLE (4)

- Actual cost: $80, contractor earnings:
- (AC + FF) + SS% x (TC – AC)
- (80 + 10) + (.2 x (100 - 80) = **$94 (earns $14)**
- **Final price**: $94
- $94 - $ 80 = $14
- **Final fee**: $14

POINT OF TOTAL ASSUMPTION



POINT OF TOTAL ASSUMPTION (PTA)

- Only applies to fixed price incentive fee (FPIF) contracts.
- The ceiling price is the highest price the buyer is willing to pay

POINT OF TOTAL ASSUMPTION (PTA) EXAMPLE

- PTA = ((Ceiling Price - Target Price)/Buyer's Share Ratio) + Target Cost
- Target price = $135,000, Ceiling price = $145,000, Buyer's share = .80, Target (predicted) cost = $100,000.
- (($145,000 – $135,000)/.80) + $100,000
- PTA = $112,500
- Note: If the actual cost in this example is more than $112,500, those costs are deemed to be from seller mismanagement.

QUESTIONS?