



Message Over the Medium:

Communication Loops in the CMMI

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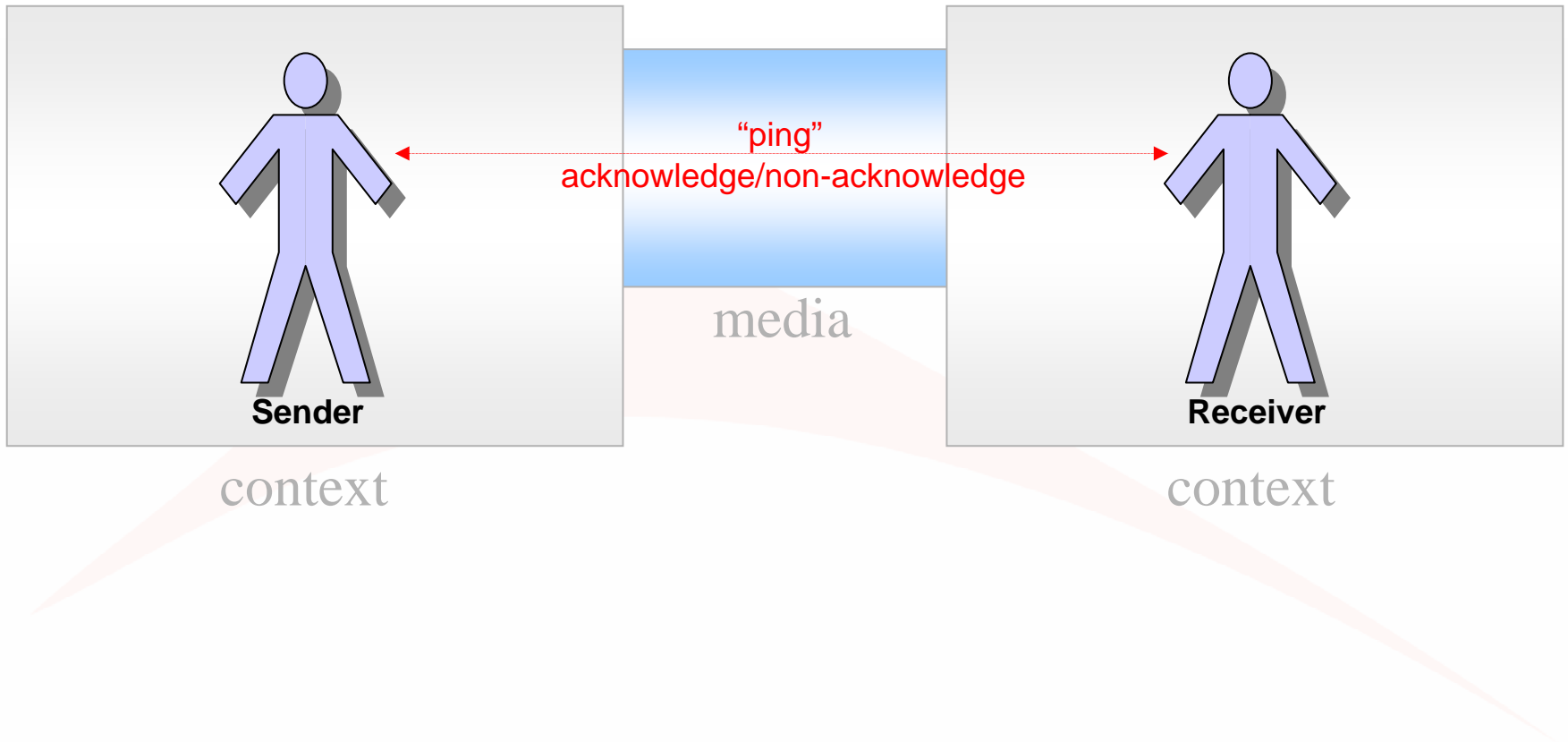
First Things First...

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- Elements of communication

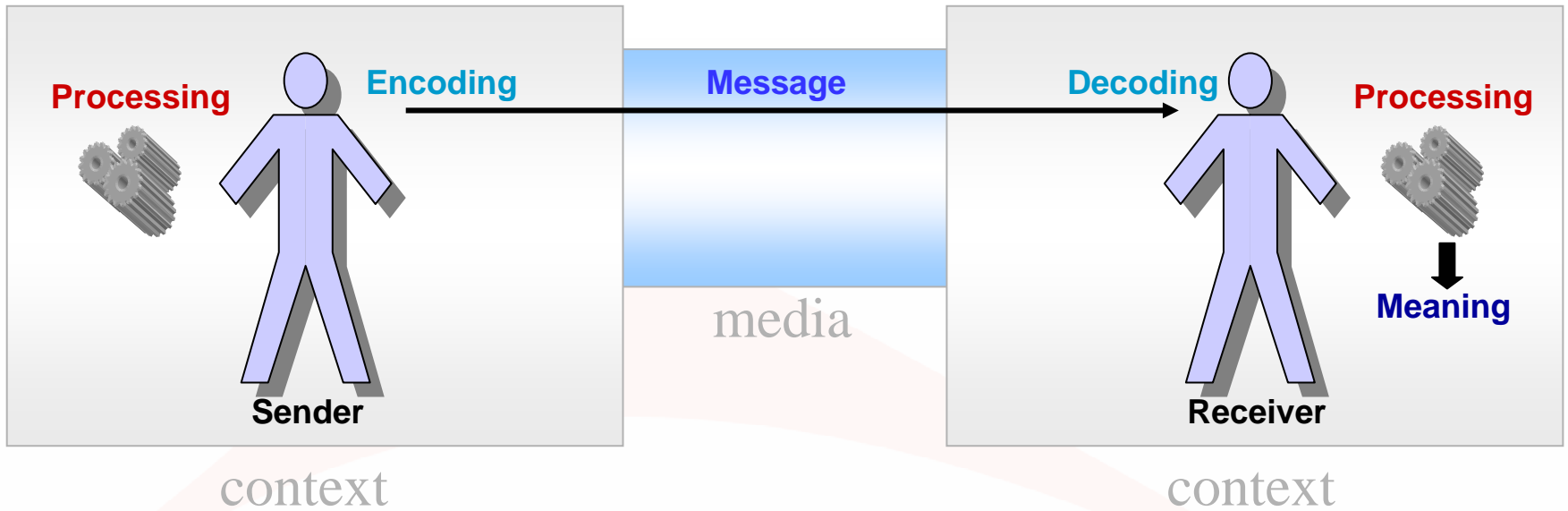
Elements of Communication

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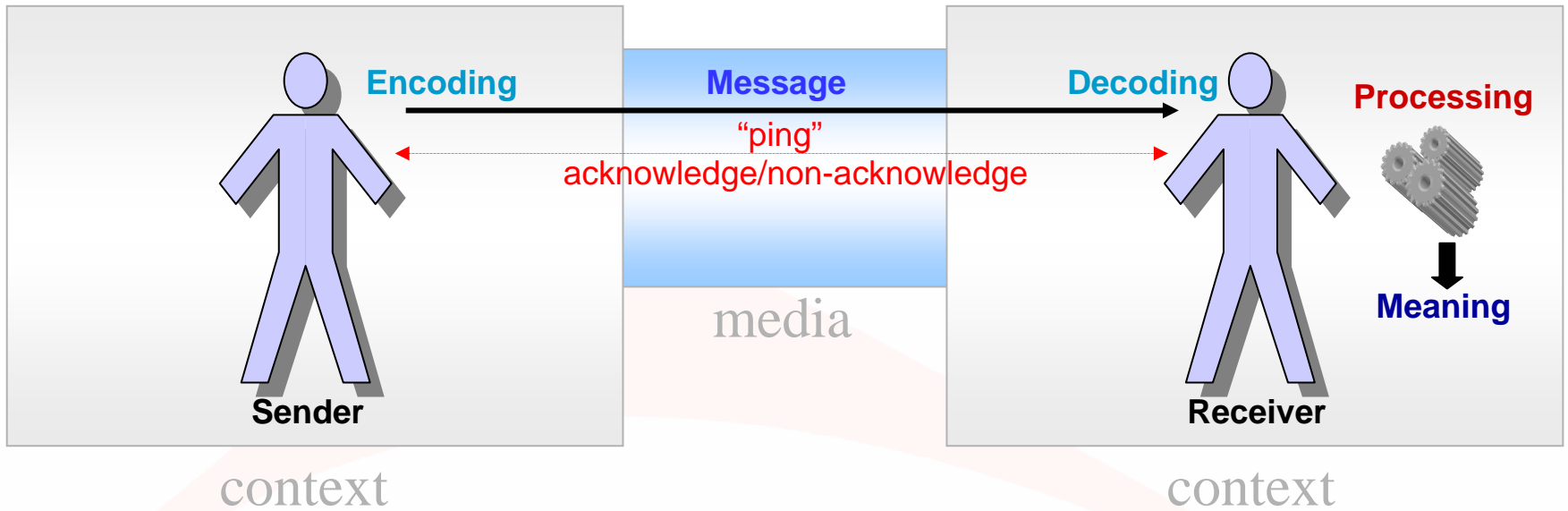
Elements of Communication

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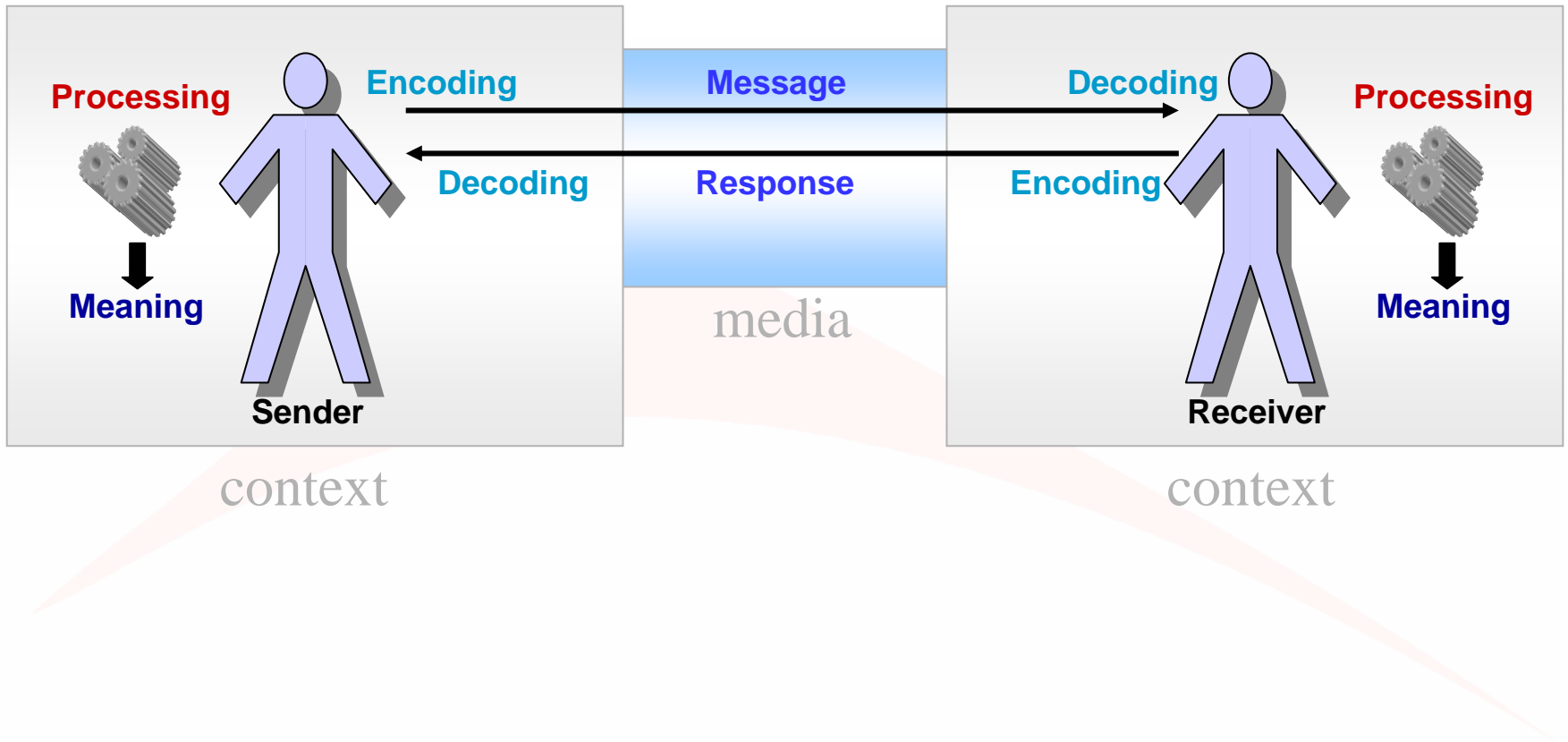
Elements of Communication

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Elements of Communication

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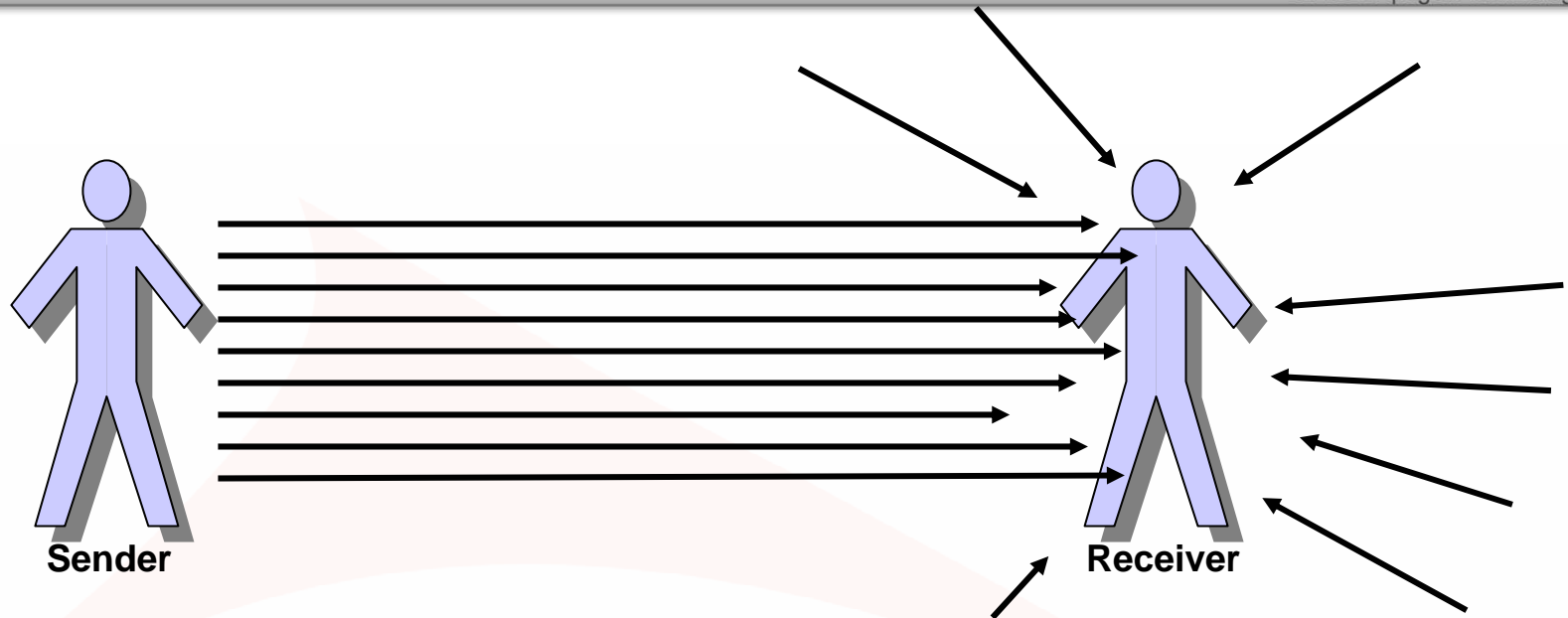
Elements Summary

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- Sender
- Receiver
- “Handshaking”
- Medium
- Message
- Contexts
- Meaning

Potential Issue – Noise via Overload

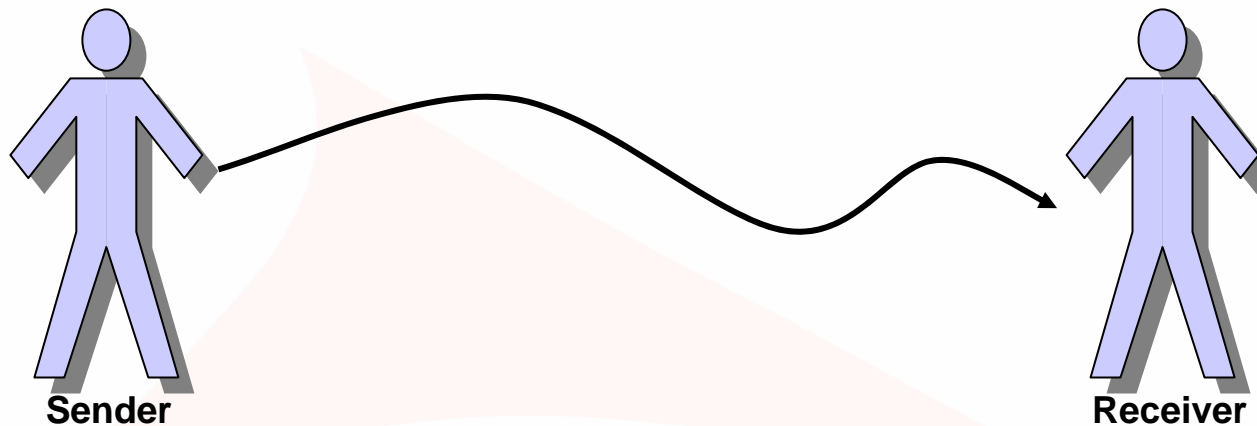
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- Unfiltered communication
- Environmental factors
- Input Selection challenges
 - Mission and objectives clarity
 - Sender coordination
 - Recipient filtering

Potential Issue – Noise via Distortion

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- Context mismatch
- Medium unreliability
- Faulty encoding/decoding
- Synchronization issues
- Mixed Messages
- Interrupted signals

■ Typical Errors

- Confusing the model with process
- Neglecting the bottom line
- Compartmentalization of improvement efforts
 - By project domain
 - By function
- Maturity Level Mandates

■ Common consequence: inability to measure and discuss impact of changes

■ Usual Outcome: using the documentation (medium) as indicators of success

How Issues Arise

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- Encoding, decoding, context issues often are intangible
- The medium is tangible and attracts attention
- The “medium over the message” syndrome surfaces
- Focusing on the medium can aggravate noise issues, resulting in a vicious cycle

Common Symptoms of Media Fixation

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- Format Wars
- Referring to documents (not the combinations of tools, personnel, and methods) as “the process.”
- Top-down-only view of process definition

Solution: Focus on Communication

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- The model implies all components of communication loops
- The model doesn't tell us specifically what we should say
- The model does indicate what we should be able to communicate about

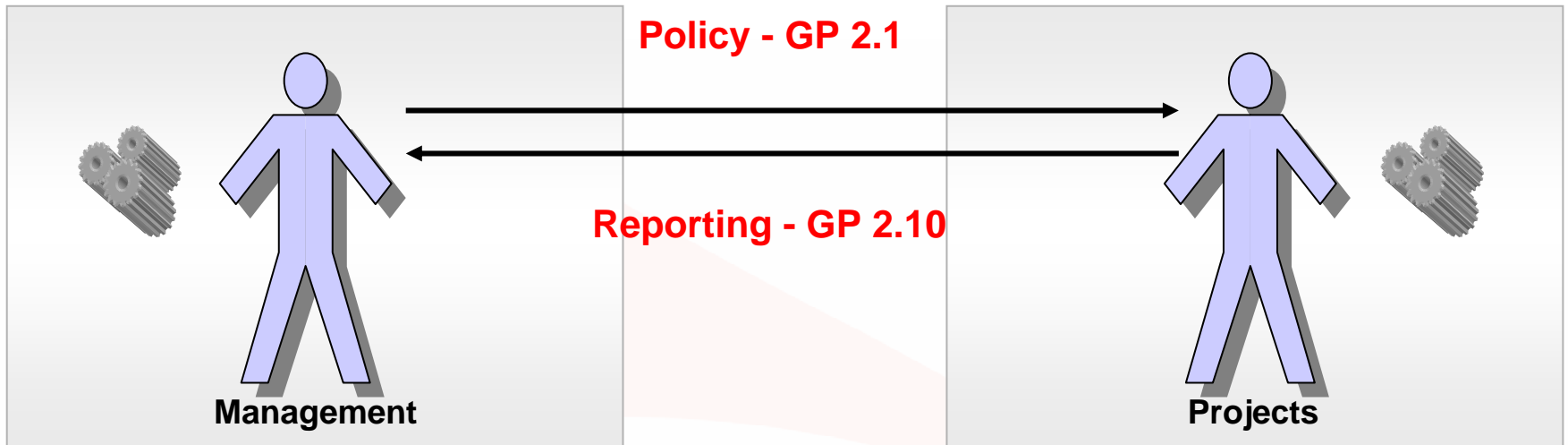


The Generic Practices

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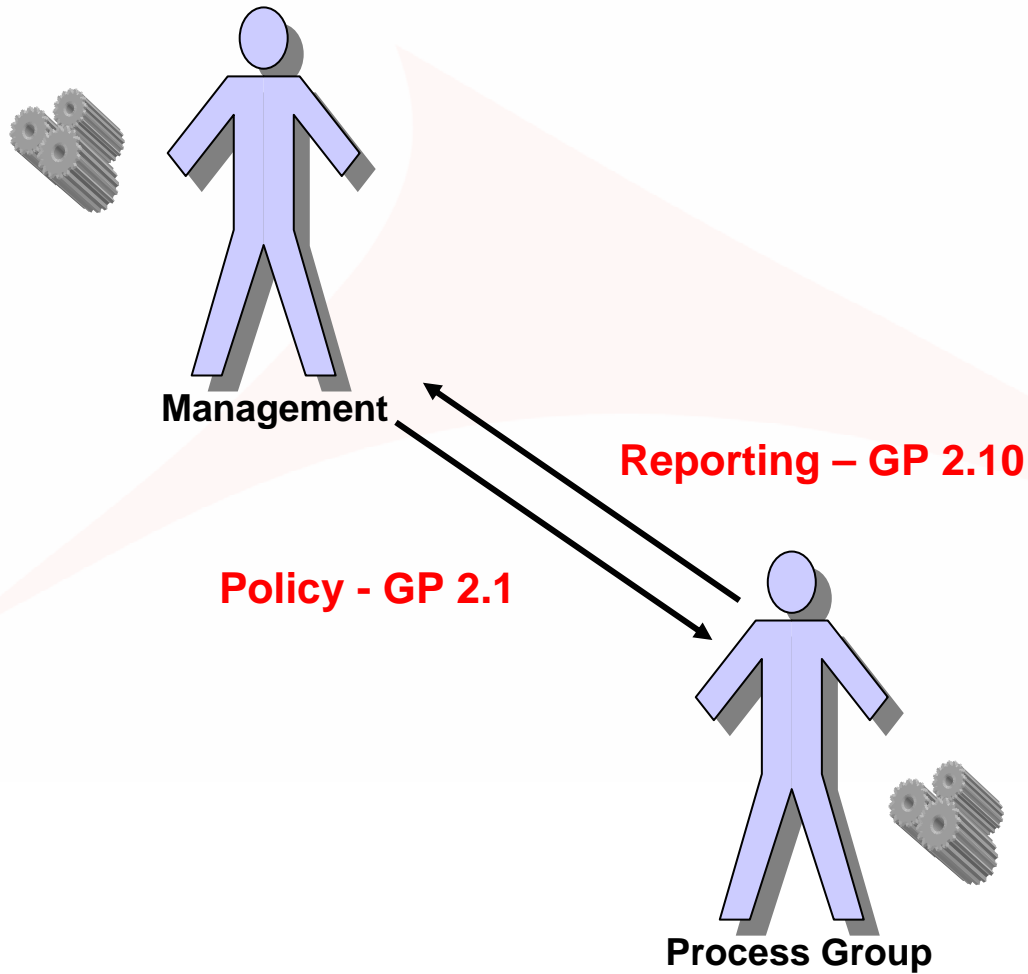
Loop – Policy and Reporting

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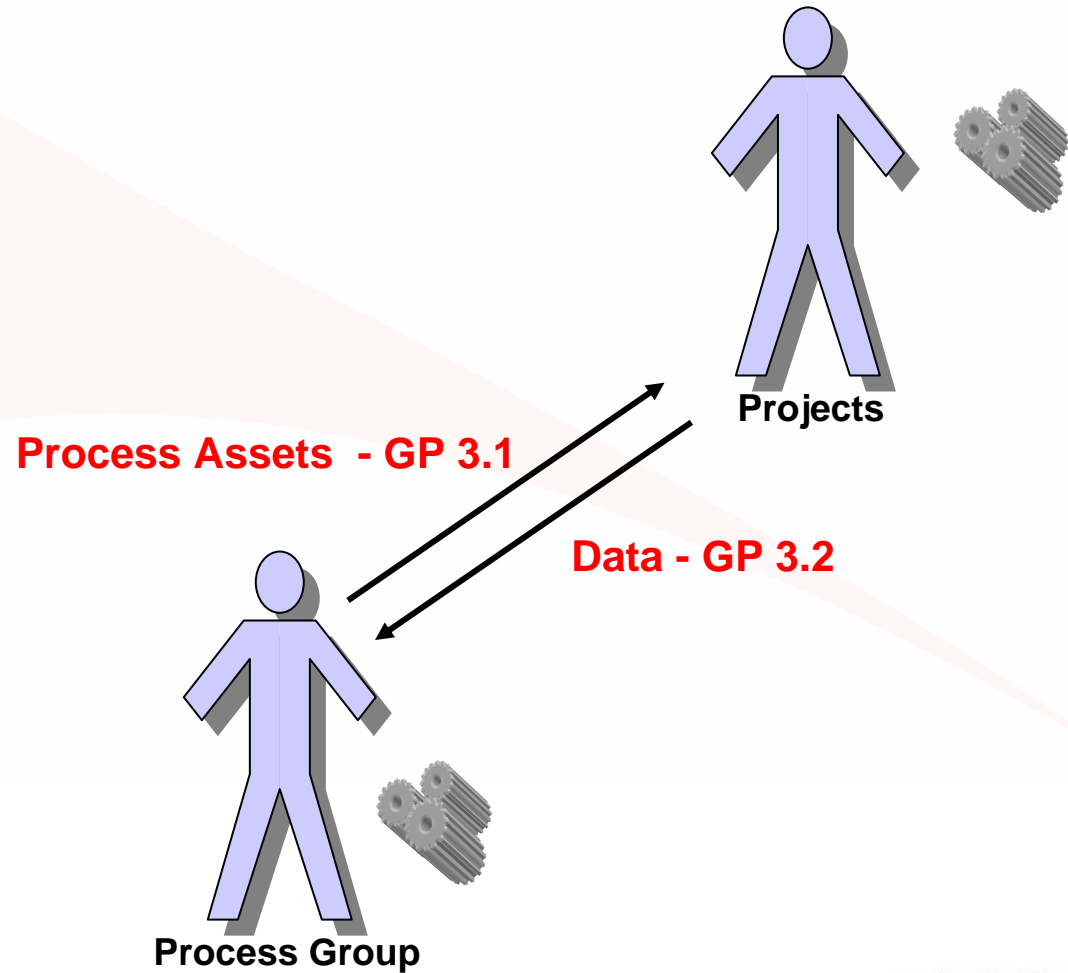
Policy and Reporting -

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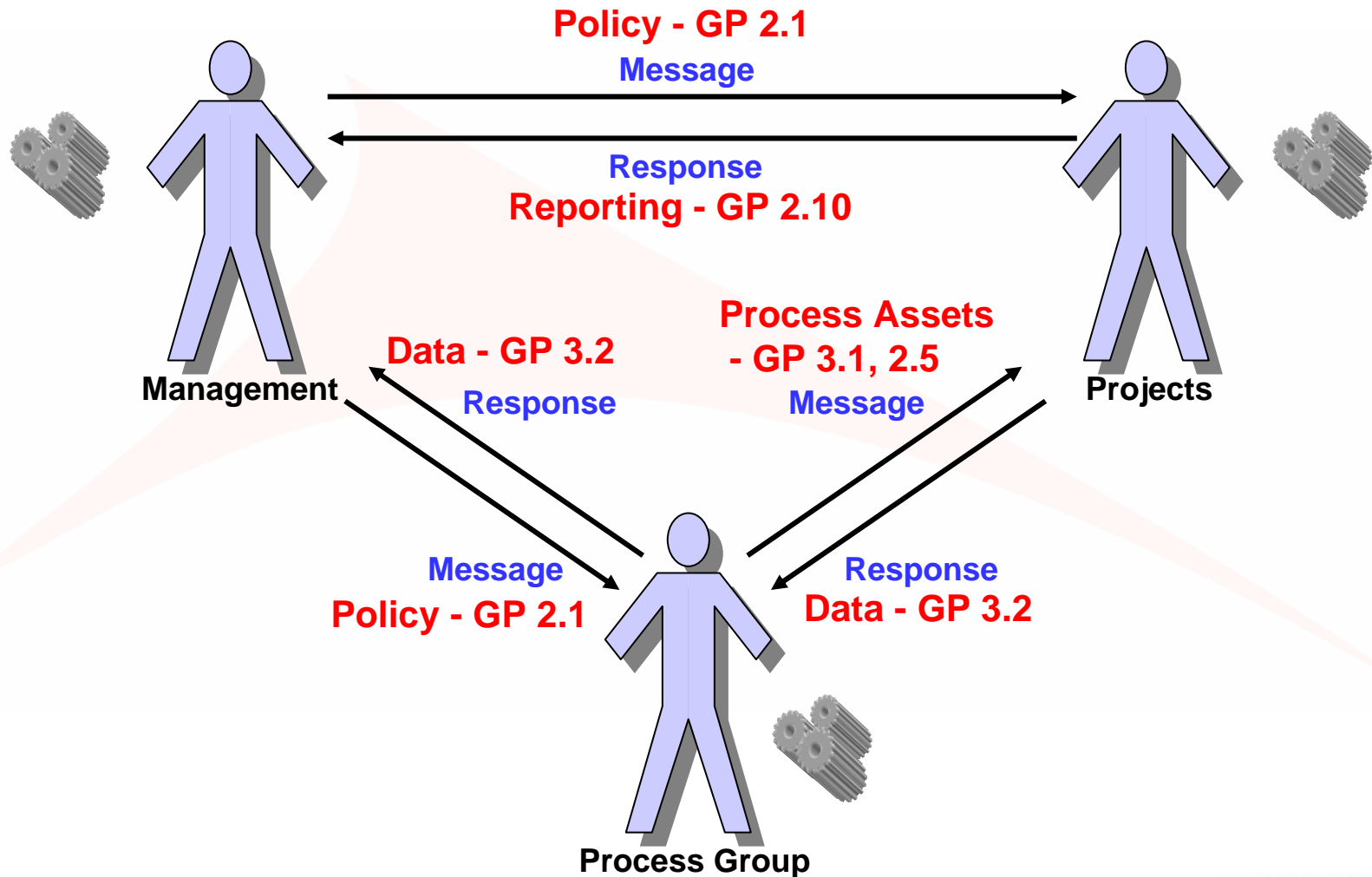
Loop – Process Communication

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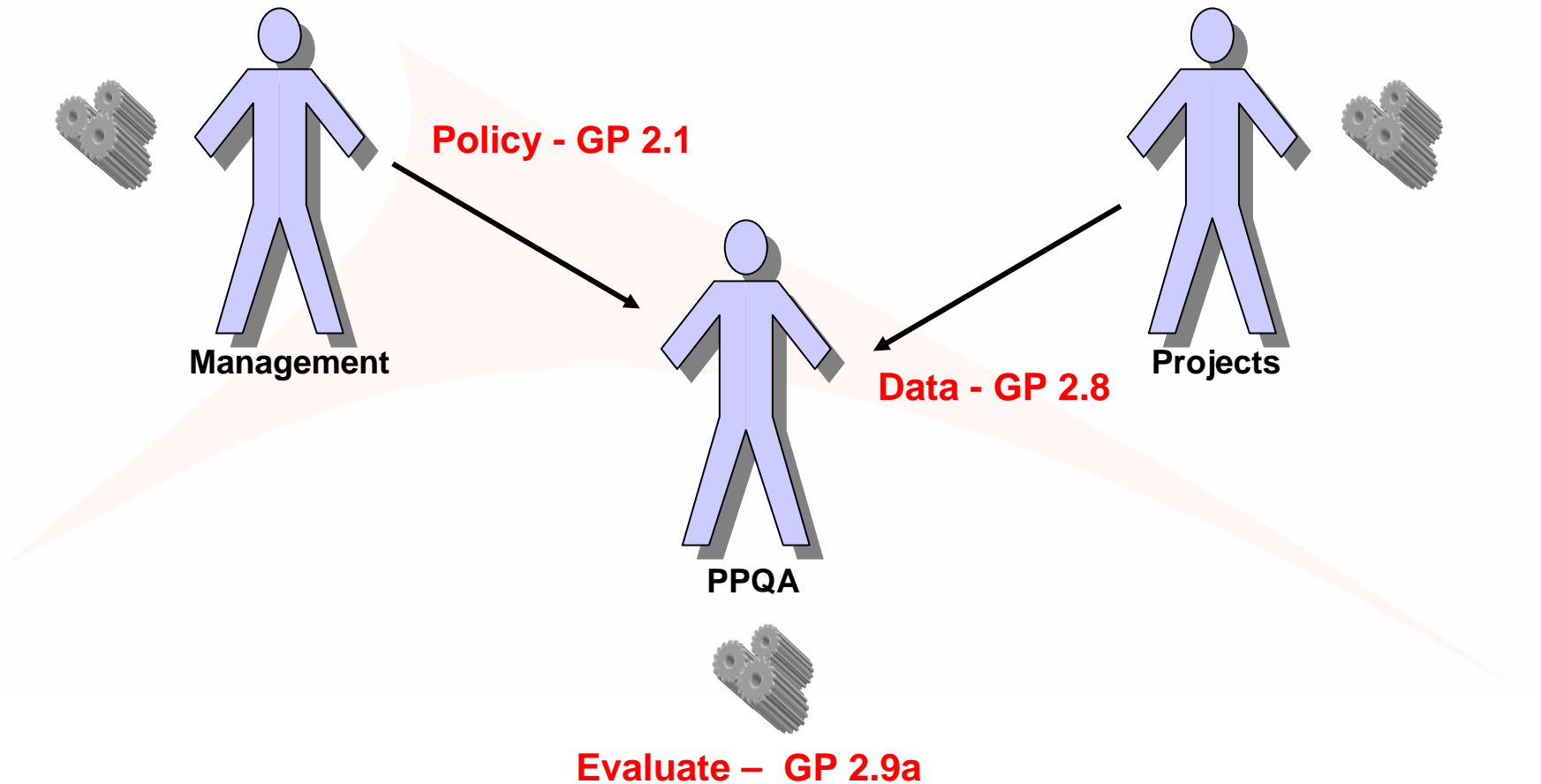
Multi-Level Communication

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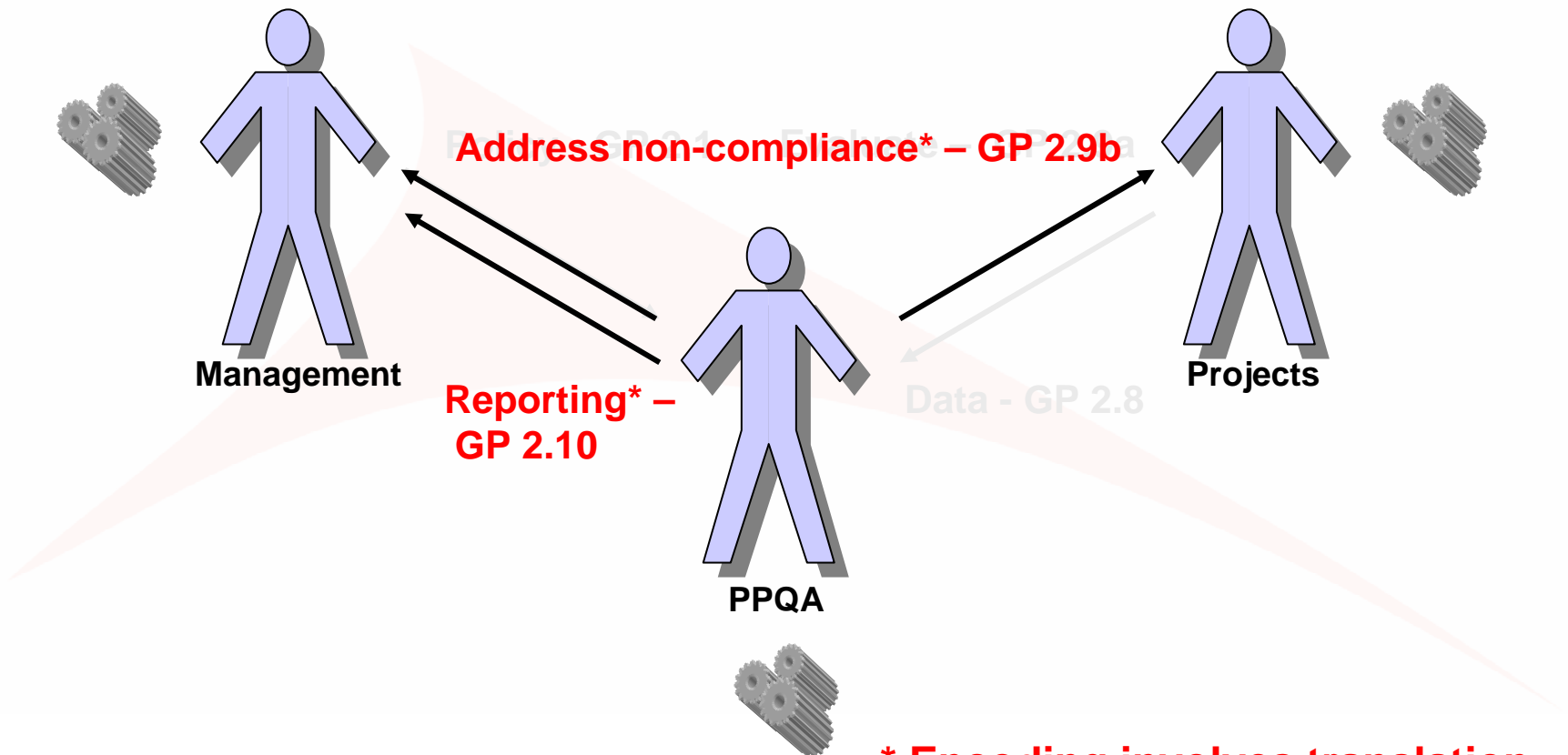


Loop – Objective Evaluation

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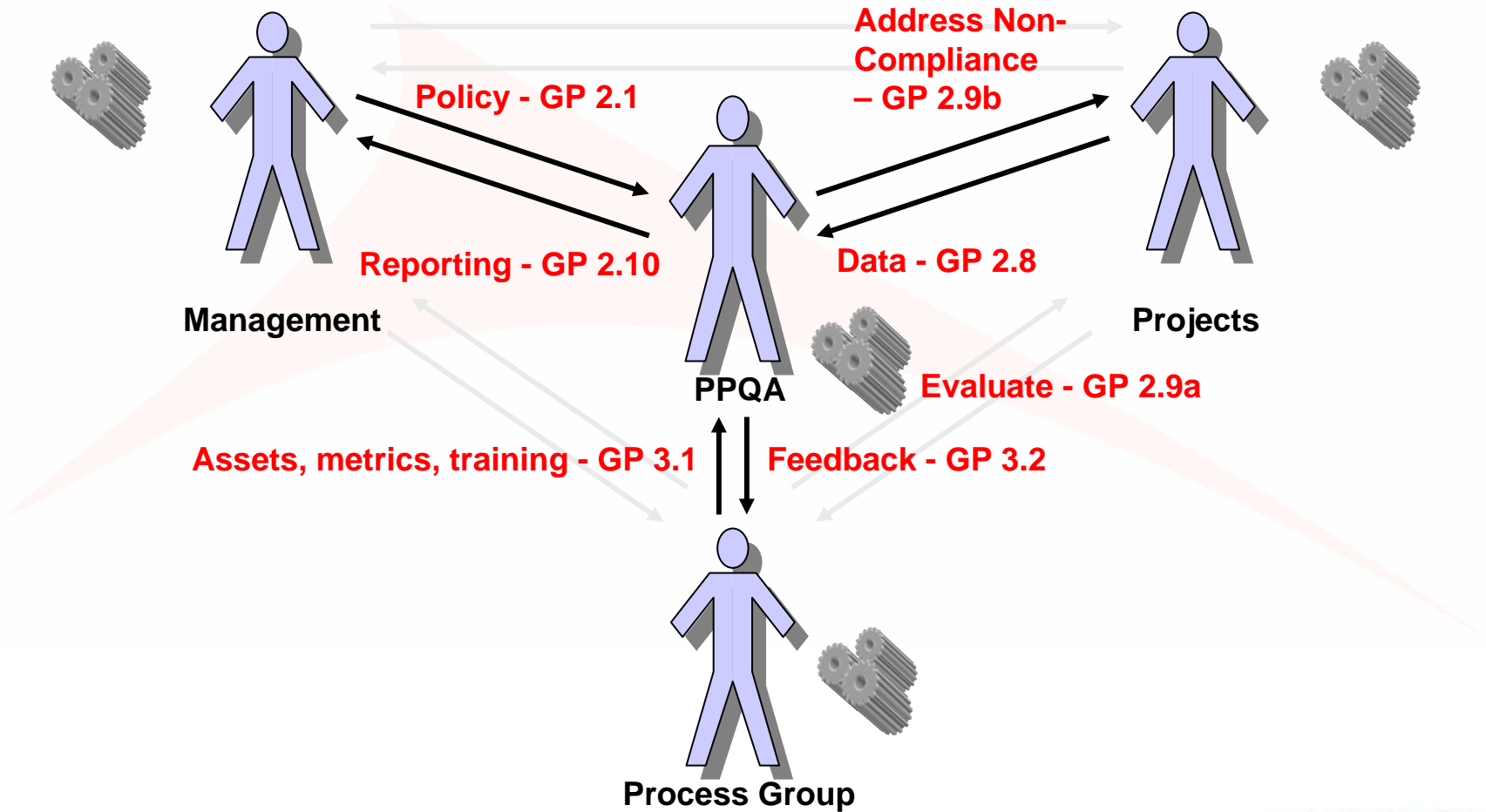
Adherence

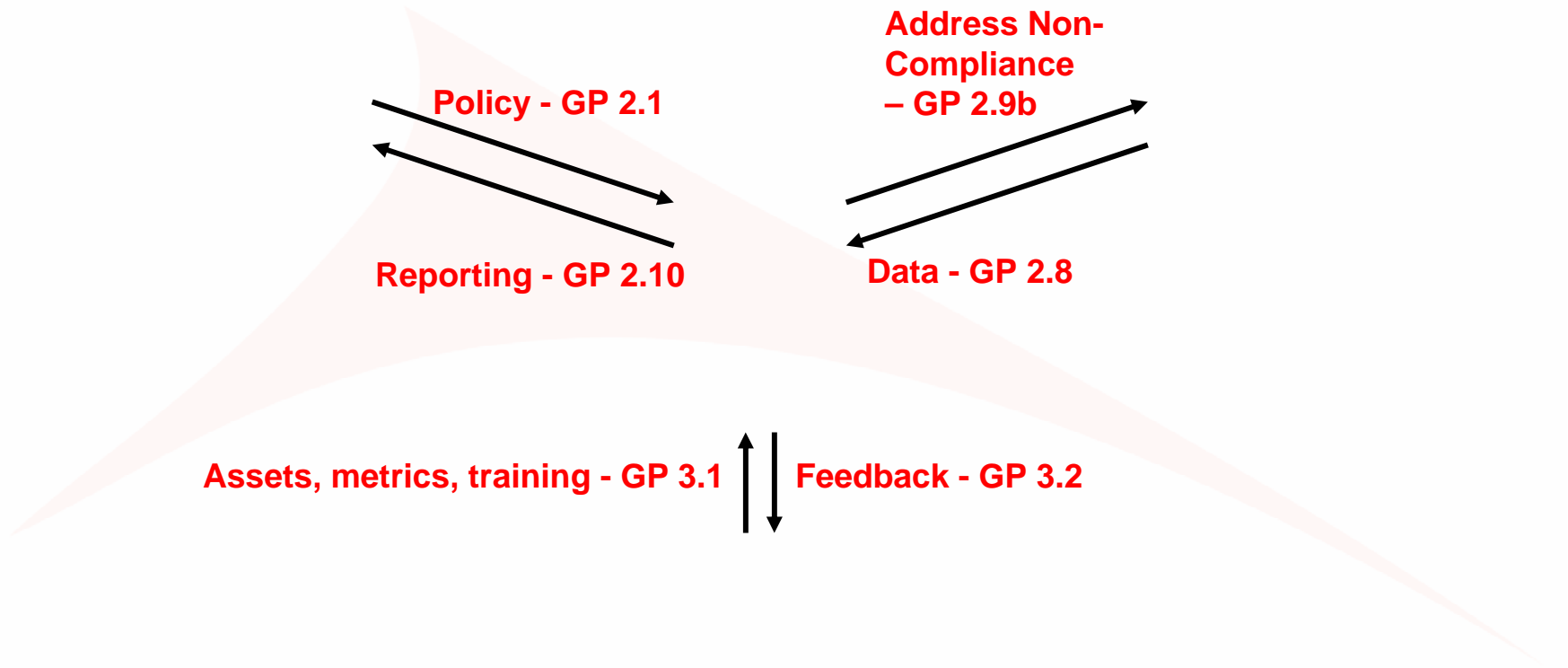


*** Encoding involves translation**

Objective Reporting

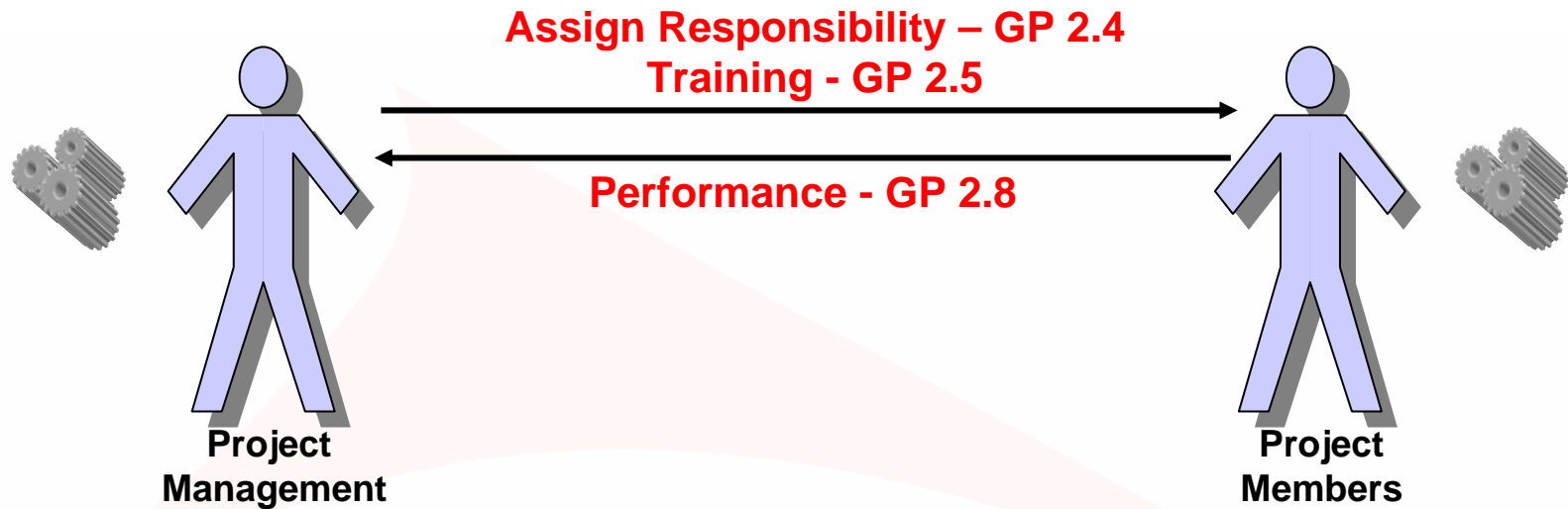
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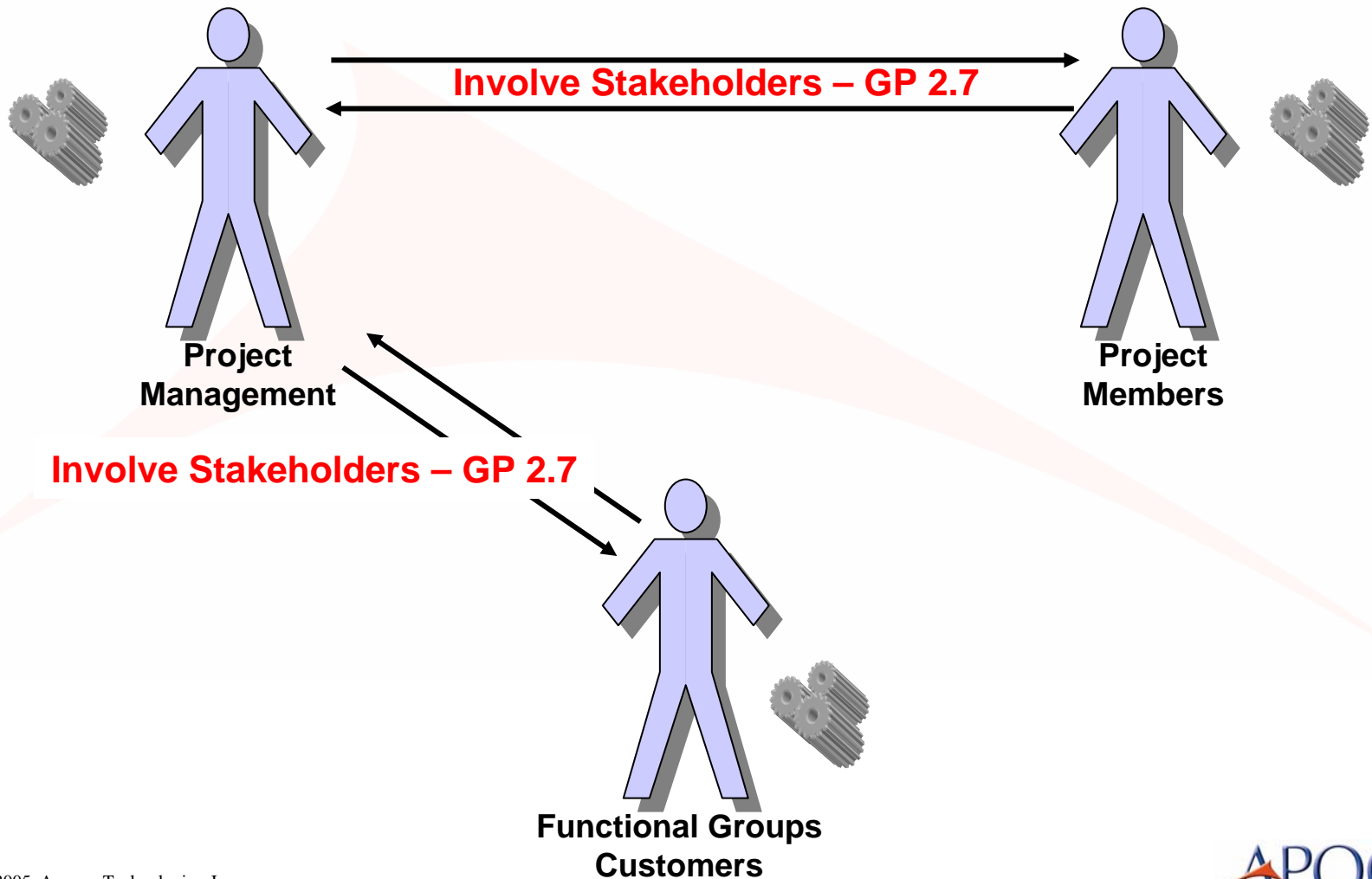
Loop – Skills and Responsibilities

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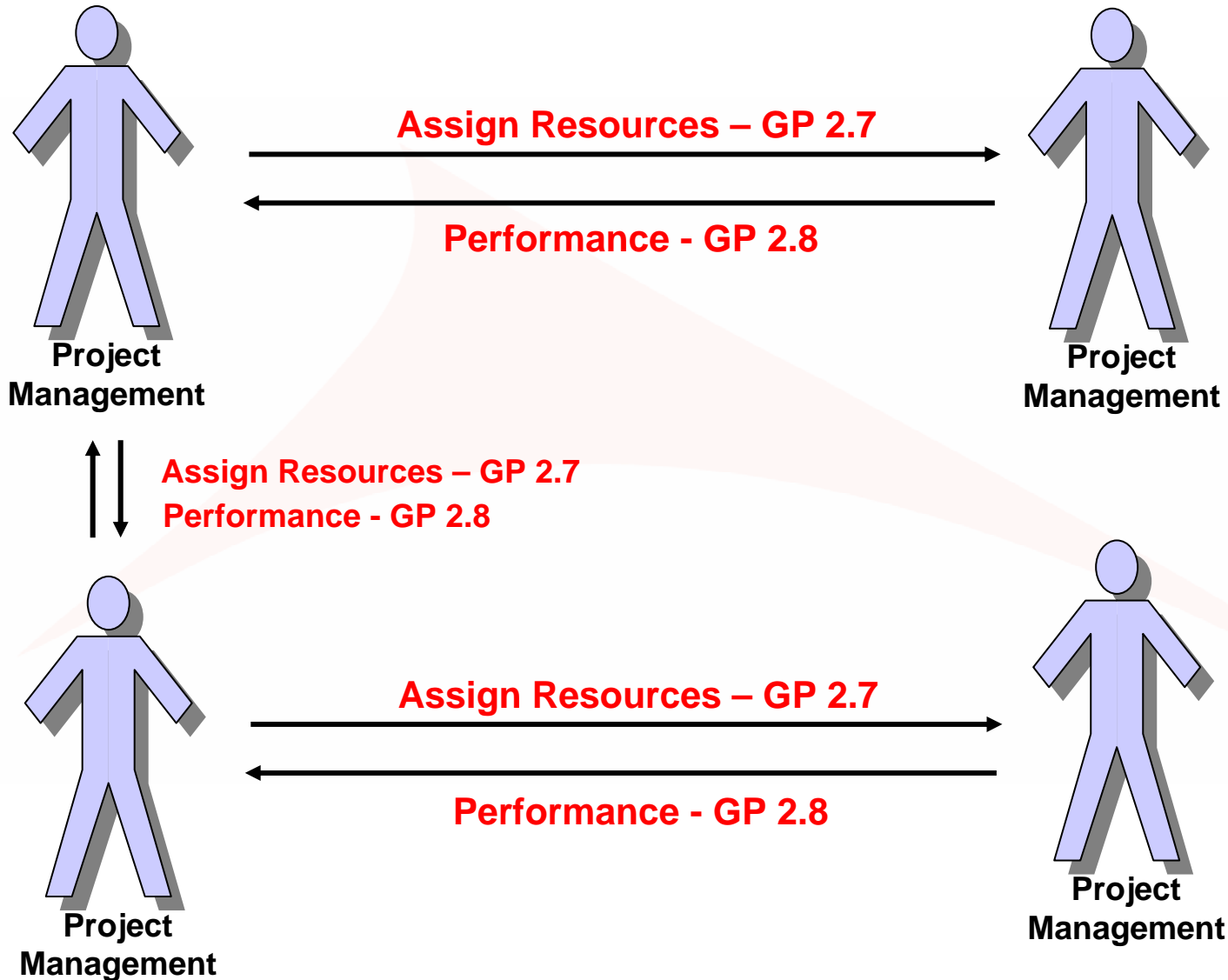
Loop - Stakeholders

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Loop – Tools and Resources

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Specific Practices

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- **Communication Infrastructure**
 - Sustaining channels (media)
 - Providing access
- **Communication Relationships**
 - Management-project communications
 - External communications
 - Intra-group communications within projects
 - Communications between projects and supporting groups
- **Communication Contexts**
 - Product development
 - Process management activities
 - Commitments and agreements
 - Action item management
 - Status reporting

- Common lexicon and operational definitions
- Understanding of business context at applicable levels
 - The model contains roughly 75 references to business context, drivers, situations, etc.
- Identification of appropriate stakeholders

Examples from the Specific Practices

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■ Product Development

- RD.SP.3.2 “Establish a definition of required functionality” → “...communicates the manner in which the product will be used.”
- PI.GP.2.7 “Communicating new, effective product integration processes to give affected people the opportunity to improve their performance”

■ Process Management

- RD.SP.3.2 “Establish a definition of required functionality” → “...communicates the manner in which the product will be used.”
- PI.GP.2.7 “Communicating new, effective product integration processes to give affected people the opportunity to improve their performance”
- MA.SP.1.2.3 “Specify Operational Definitions” → “Communications” establishes context for communication

Examples (continued)

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■ Agreements

- SAM.SP.1.3 “Establish Supplier Agreements” implies a host of communications.

■ Action Item Management

- VER.SP.2.2 “When issues arise during the peer review, they should be communicated to the primary developer of the work product for correction.”
- PPQA.SP.2.1 “Communicate and ensure resolution of noncompliance issues”

■ Status Reporting

- PMC.SP.1.3.3 “Monitor project risks” → “Communicate risk status to relevant stakeholders.”
- PMC.SP.1.6.1 “Conduct Progress Reviews” → “Regularly communicate status on assigned activities and work products to relevant stakeholders “
- CM.SP.3.1.2 “Ensure...access,” Examples of “...communicating configuration status.”
- MA.SP.2.4 “Communicate Results”

- The CMMI describes communications, both explicitly and by implication
- Media *is* a critical element, but not the only one
- The media serves the messages in communication
- Improper focus on the media may distort or completely subvert the message
- Understanding complete communication loops and how the CMMI relates to them preserves the critical messages

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