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Defence Research and Development Canada

An intelligence process model based on a collaborative approach

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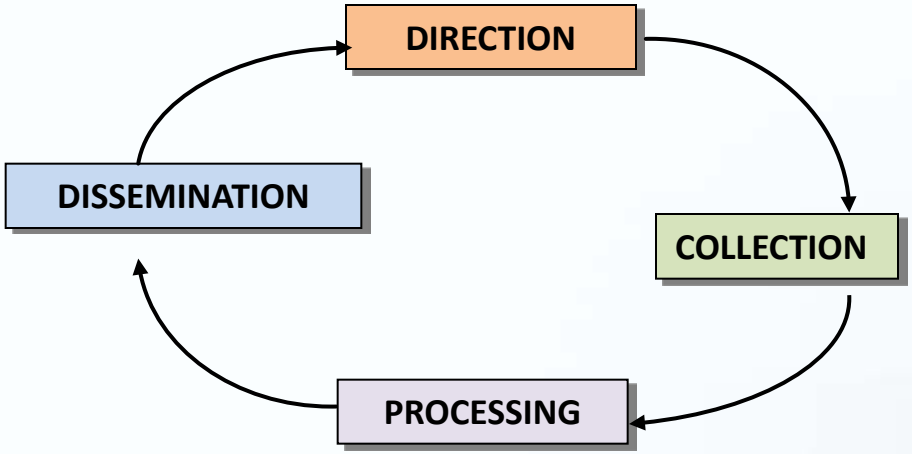
Outline

- **The Intelligence cycle**
  - **Canadian, US, NATO**
  - **Criticisms and previous work**
- **All-source intelligence process model**
  - **Level 1 representation: high level model**
  - **Level 2 representation: roles**
  - **Level 3 representation: detailed model**
- **A collaborative approach: an imperative to the success of the model**
  - **Challenges and issues**
  - **Enablers**

Intelligence cycle

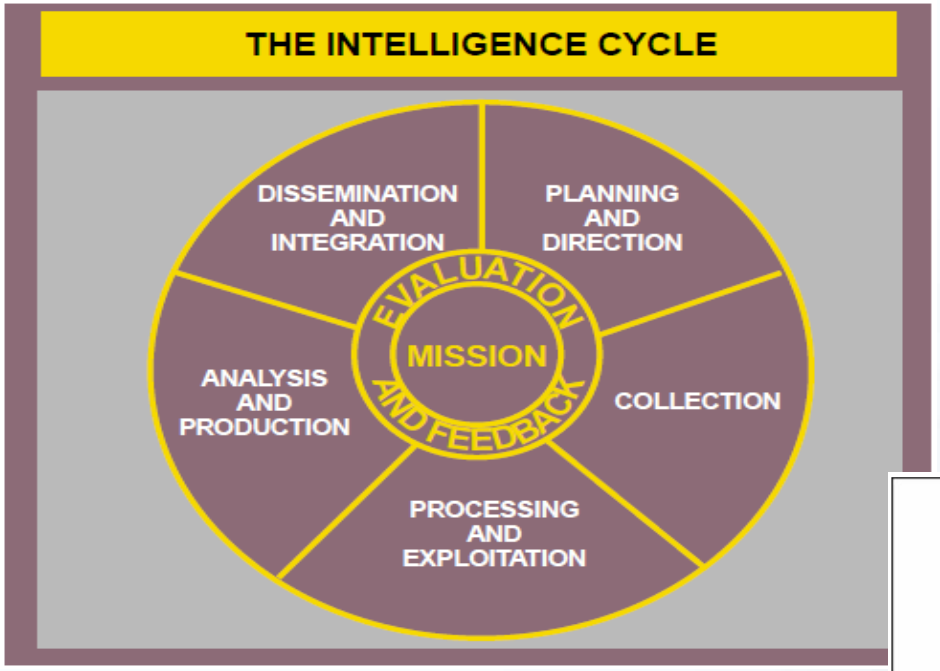
The Canadian Intelligence Cycle (Joint and Land)



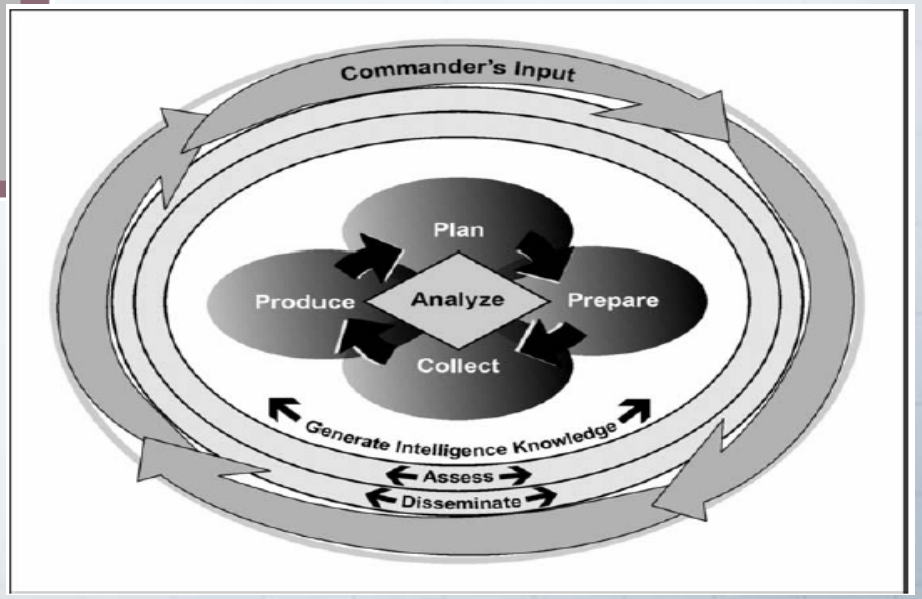
The Allied Joint Intelligence Doctrine Representation

Intelligence cycle

The US Joint Intelligence Cycle



The US Army Intelligence Process



Main critics on the intelligence cycle

- Treverton Gregory F., (2003) **Reshaping National Intelligence for an Age of Information**, Cambridge university Press, 266p.
- Geraint Evans, (2009) "**Rethinking Military Intelligence Failure, Putting the Wheels Back on the Intelligence Cycle**", Defense Studies, vol 9, no 1, pp. 22-46.
- Lowenthal Mark M., (2009), **Intelligence from Secrets to Policy**, Fourth Edition, CQ Quarterly, 364 p.
- Hulnick Arthur S., (2006) "**What's Wrong with the Intelligence Cycle**", Intelligence and national Security, vol 21, no 6, pp. 959-979.
- Treverton, Gregory F., Jones Seth G., Boraz Steven, Lipscy Phillip, (2006), "**Toward a Theory of Intelligence**", RAND Corporation Conference Proceedings series.
- Agrell Wilhelm, (2002) "**When everything is intelligence – nothing is intelligence**", The Sherman kent Center for Intelligence Analysis, Occasional Papers, vol 1, no 4.
- Treverton (2005) "**The next step in reshaping intelligence**", RAND occasional paper.
- Richard A. Best Jr. (2010) "**Intelligence Issues for Congress**", Congressional Research Service Report for Congress.
- Lahneman, W.J., (2010), **The Need for a New Intelligence Paradigm**, International Journal of Intelligence and CounterIntelligence, Vol 23, pp. 201-225.
- Etc.

Main critics on the intelligence cycle

- **Intelligence collection process is not only driven by the decision makers**
  - Intelligence “pushing”, not policy “pulling”
  - The intelligence cycle is more likely to be determined by what intelligence can collect and what it can infer about the needs of policy.
- **Intelligence support the decision-maker rather than to inform it**
  - Infirm the idea that the decision makers wait for the delivery of intelligence before making policy decisions.
- **Collection and analysis actually work in parallel**
  - Because of restrictions of information sharing, psychological barriers, fears of compromising sources, and security concerns, the intelligence collection process and the intelligence analytic process not only operate in parallel, they are sometimes quite independent of each other.
- **The traditional intelligence cycle is not iterative**
  - Repeated refinement of requirements, initial collection may reveal gaps, resulting in new collection requirements, consumers may change their needs or ask for more intelligence, etc.
- **The traditional intelligence cycle does not include consumption and feedback**
  - What has been useful, what has not, which areas need continuing or increased emphases, which can be reduced, etc.

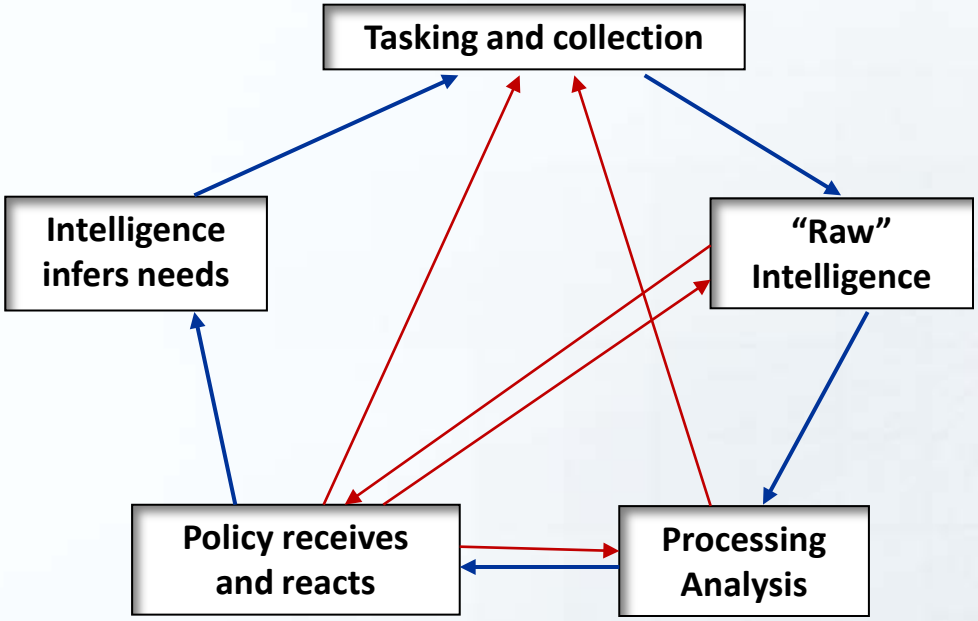
Main critics on the intelligence cycle

- **The traditional intelligence cycle assumes the same process whatever the objective**
  - Regardless of complexity and cognitive demands (e.g. in preparing a long-range assessment, a national intelligence estimate, a brief on a current situation, etc.).
- **Stovepiping: A major problem for the cycle**
  - The output of different collection systems separated from one another and thus, it prevents one discipline from cross-checking another.
- **The traditional intelligence cycle complicates the tasks of recognizing from where errors can occur**
  - Cannot recognize from where errors can occur. It does not indicate who or what may affect the completion of a step and the resources needed to begin the next step.
- **The traditional intelligence cycle lack in representing evaluation activities**
  - What about data/information/intelligence quality ?
- **The traditional intelligence cycle fit with the industrial mindset of the mid-twentieth century**

Other intelligence models

- **Treverton's "real intelligence cycle"**

  Treverton Gregory F., (2003) *Reshaping National Intelligence for an Age of Information*, Cambridge University Press, 266p.



Other intelligence models…

- The multilayered intelligence cycle

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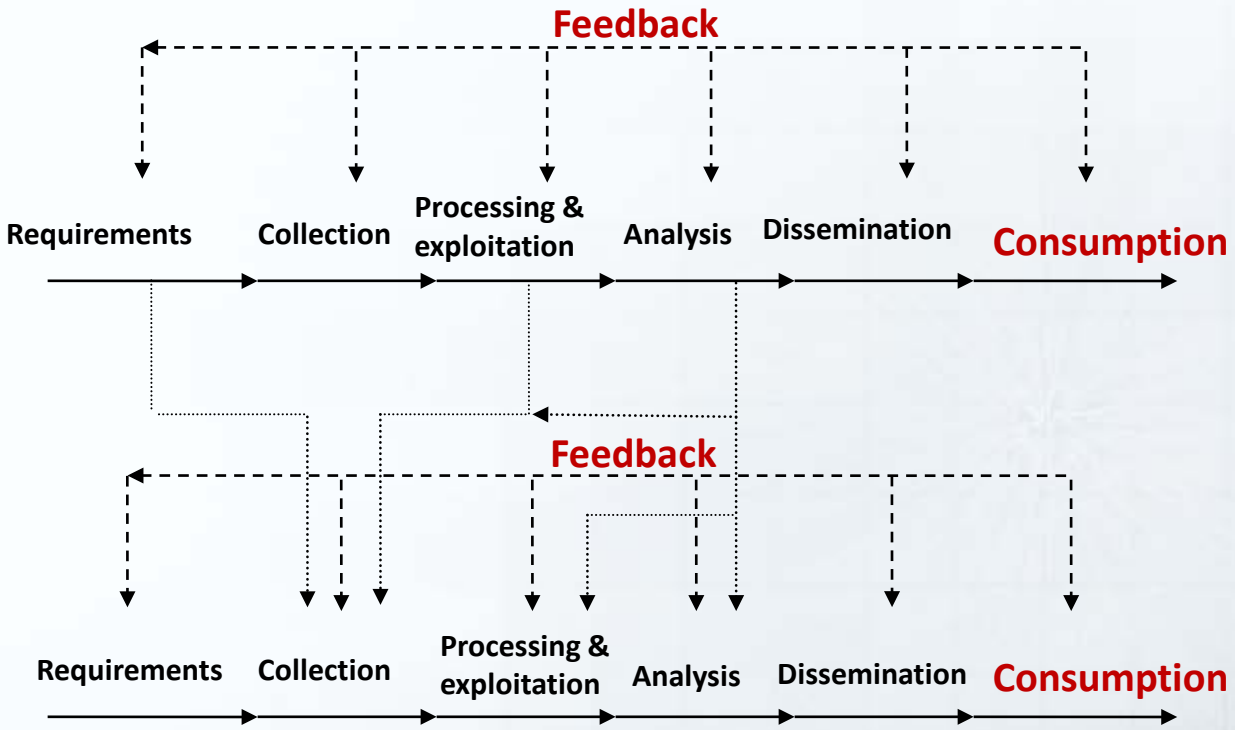
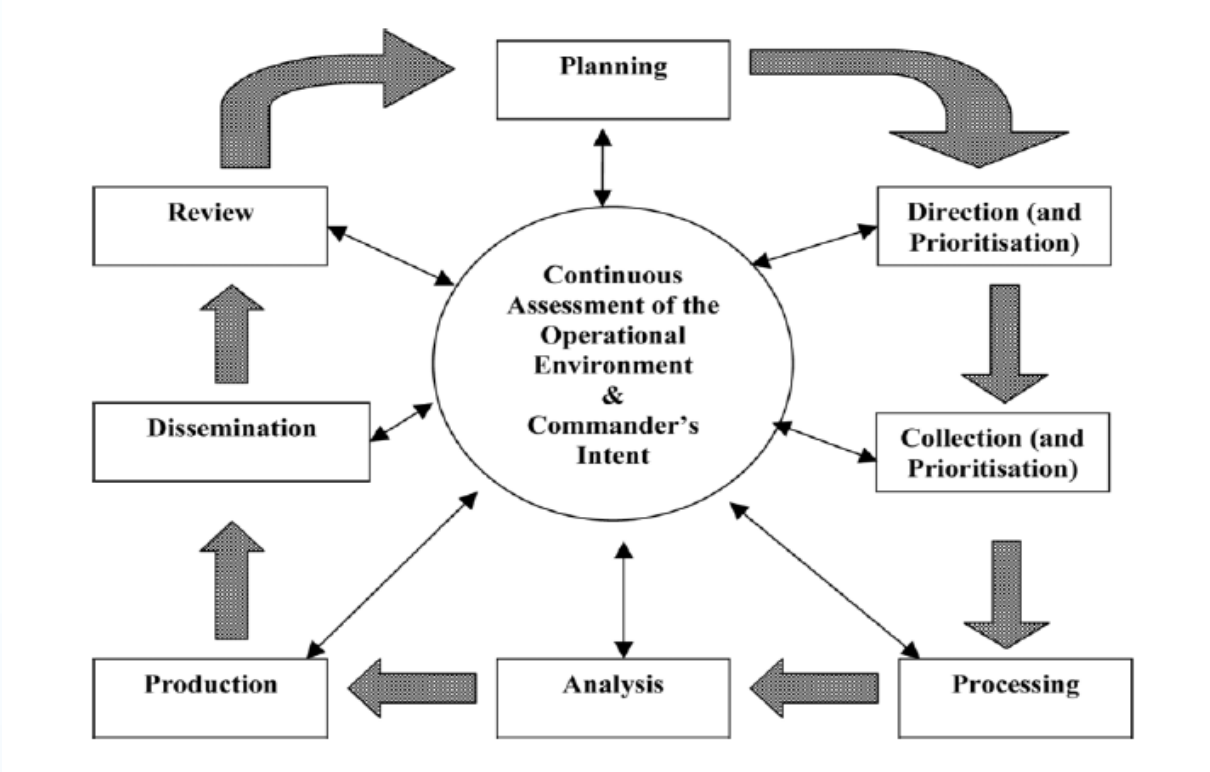


Other intelligence models…

- The Hub and Spoke intelligence cycle

Geraint, E., (2009), "Rethinking Military Intelligence Failure: Putting the Wheels Back on the Intelligence Cycle", Defence Studies, vol 9 no 1, pp. 22-46.



An All-Source Intelligence Model

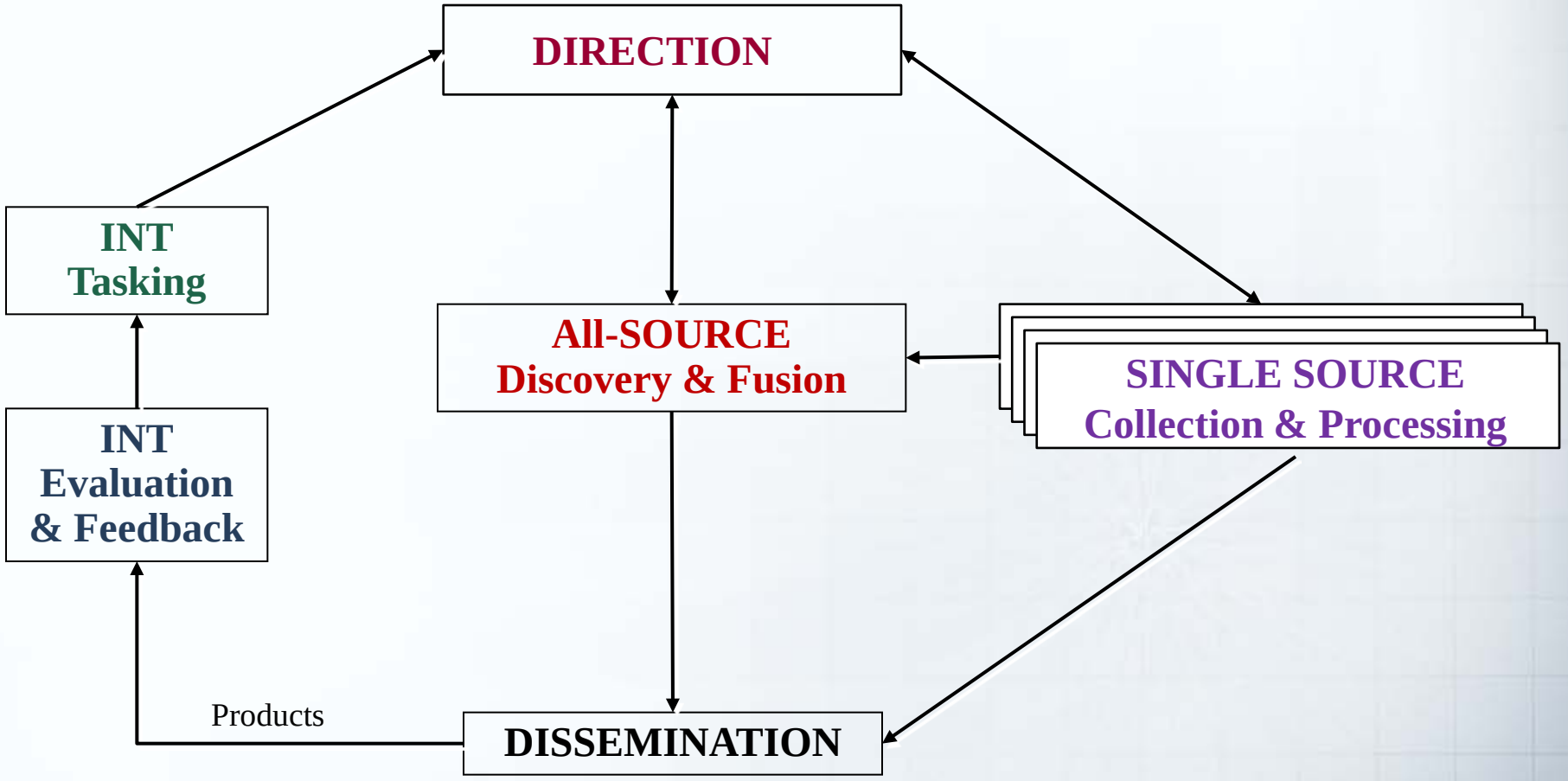
All-Source Intelligence Model

- **Definition**
  - All-source intelligence is the products, organizations, and activities that **incorporate all sources of information and intelligence**, including OSINT, in the production of intelligence. All-source intelligence is both a separate intelligence discipline and the name of the process used to produce intelligence from multiple intelligence or information sources. (US Army doctrine for intelligence).
- The traditional intelligence cycle model lacks in representing the process from an all-source perspective.
  - All-source activities are encompassed within the processing step of the process
  - Lack of understanding of the processes, the involved actors, the relationships of all activities single source and all-sources…

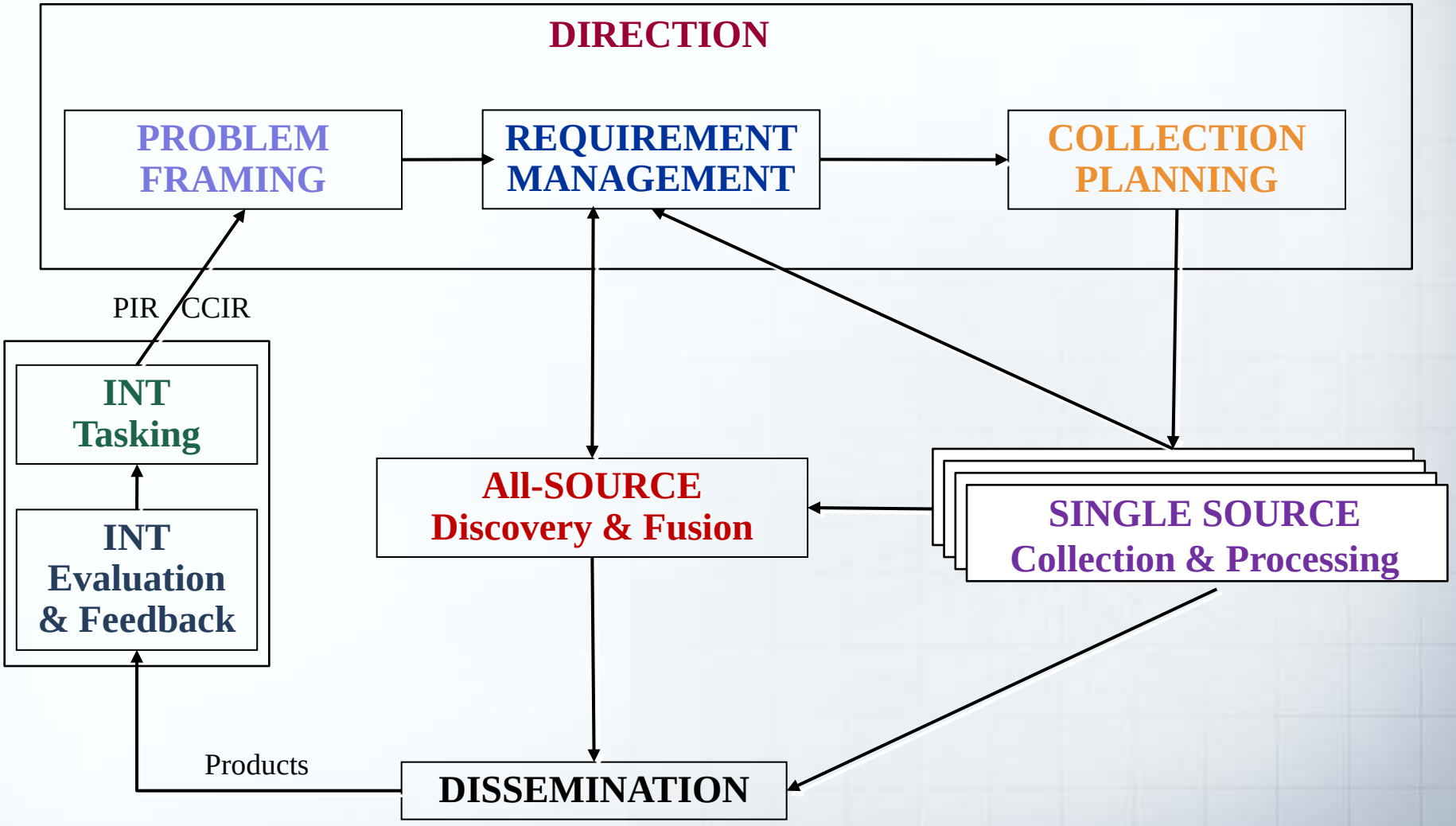
All-Source Intelligence Model

- **Objective of this work**
  - To propose a model for the all-source intelligence process.
    - Highlight the all-source intelligence activities.
    - Regroup the activities according to the resources doing the job
    - Reinforce the relationships between intelligence producers and the users (continuous dissemination and feedback)
- **Approach**
  1. Understand Single Source Intelligence Processes
  2. Single Source VS All-Source: difference and relationship
  3. All-source activities/processes: Where in the intelligence cycle ?
  4. What does it imply ? What makes the success of All-Source activities.

All-Source Intelligence Model (level 1)



All-Source Intelligence Model (level 2)



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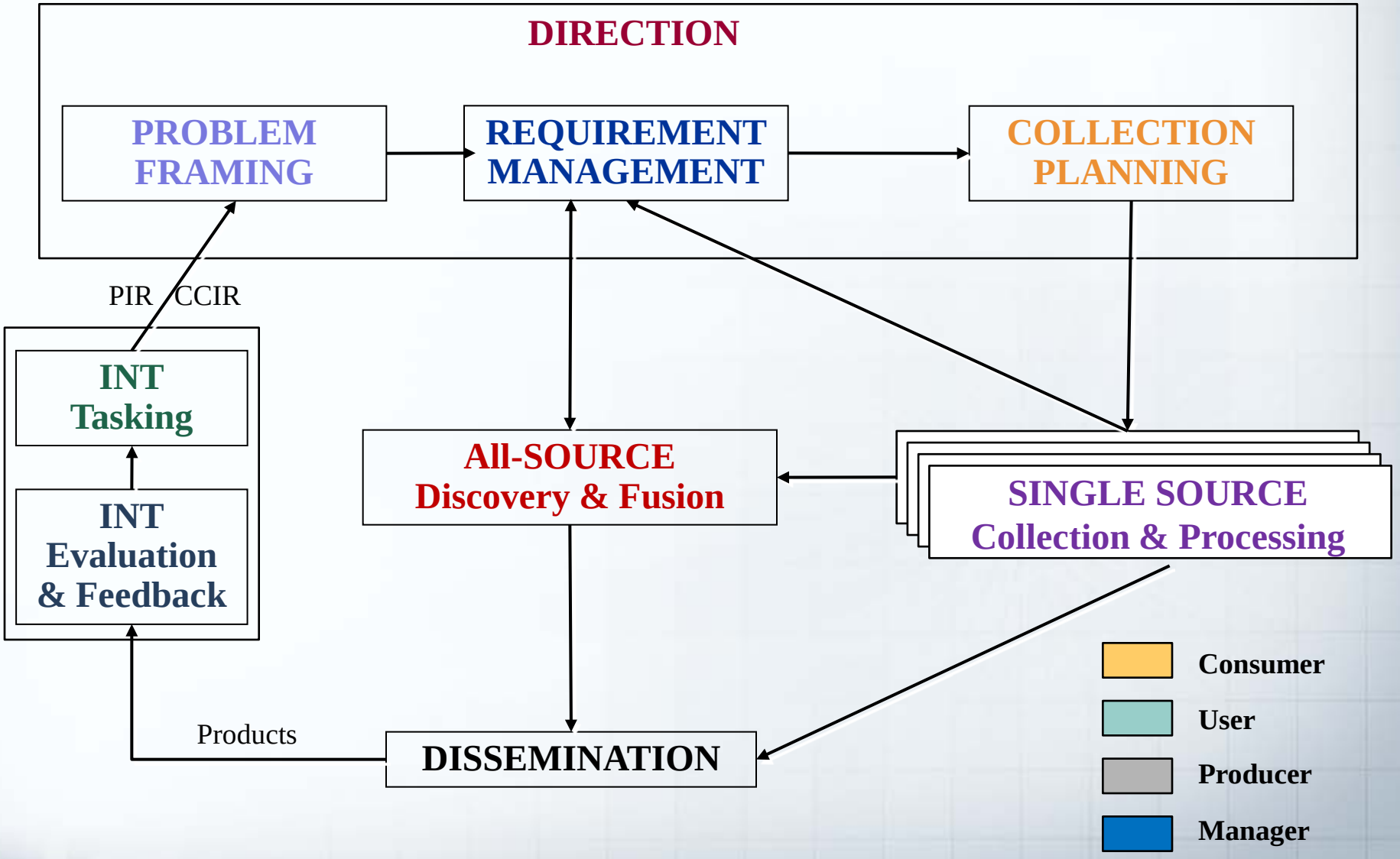

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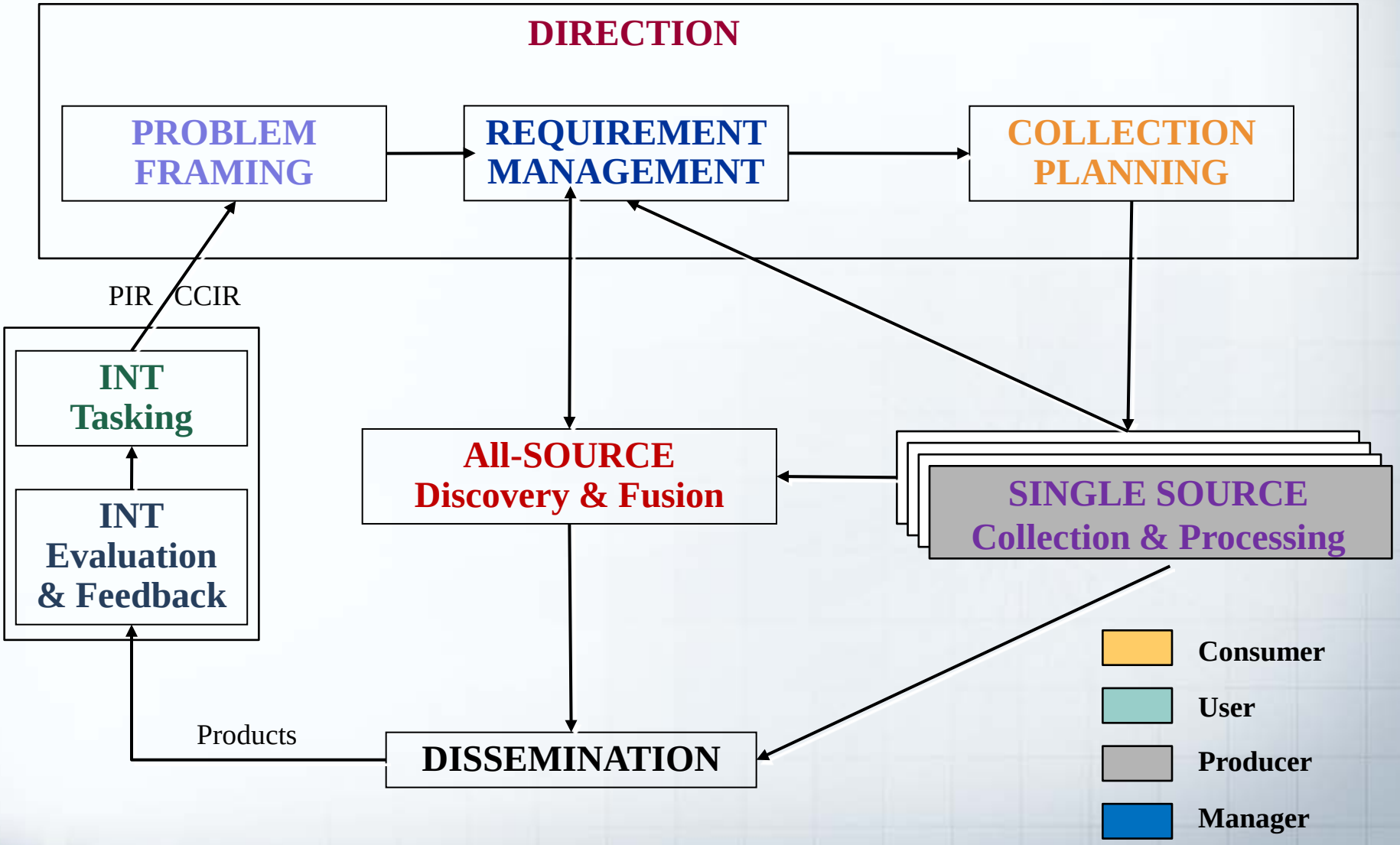

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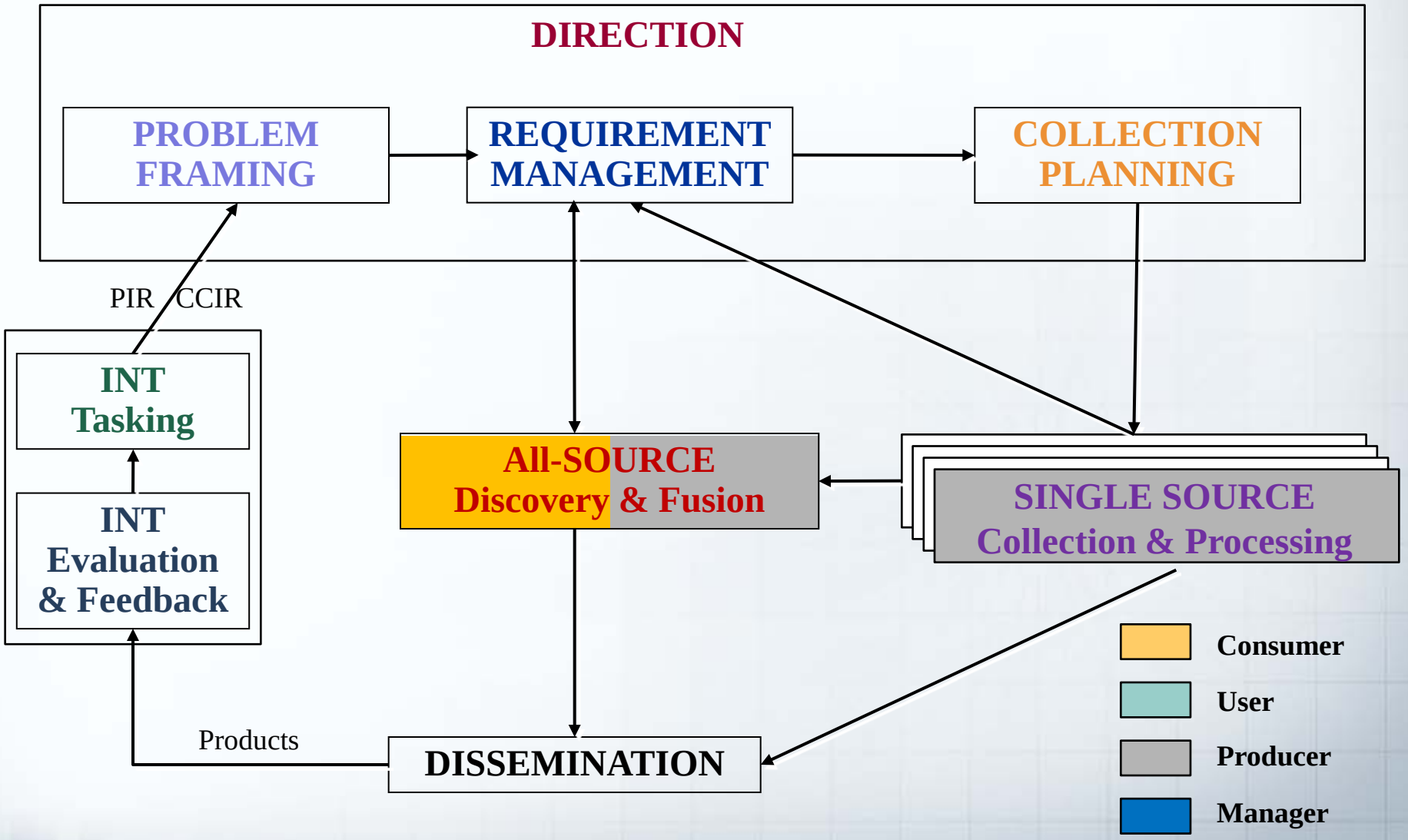

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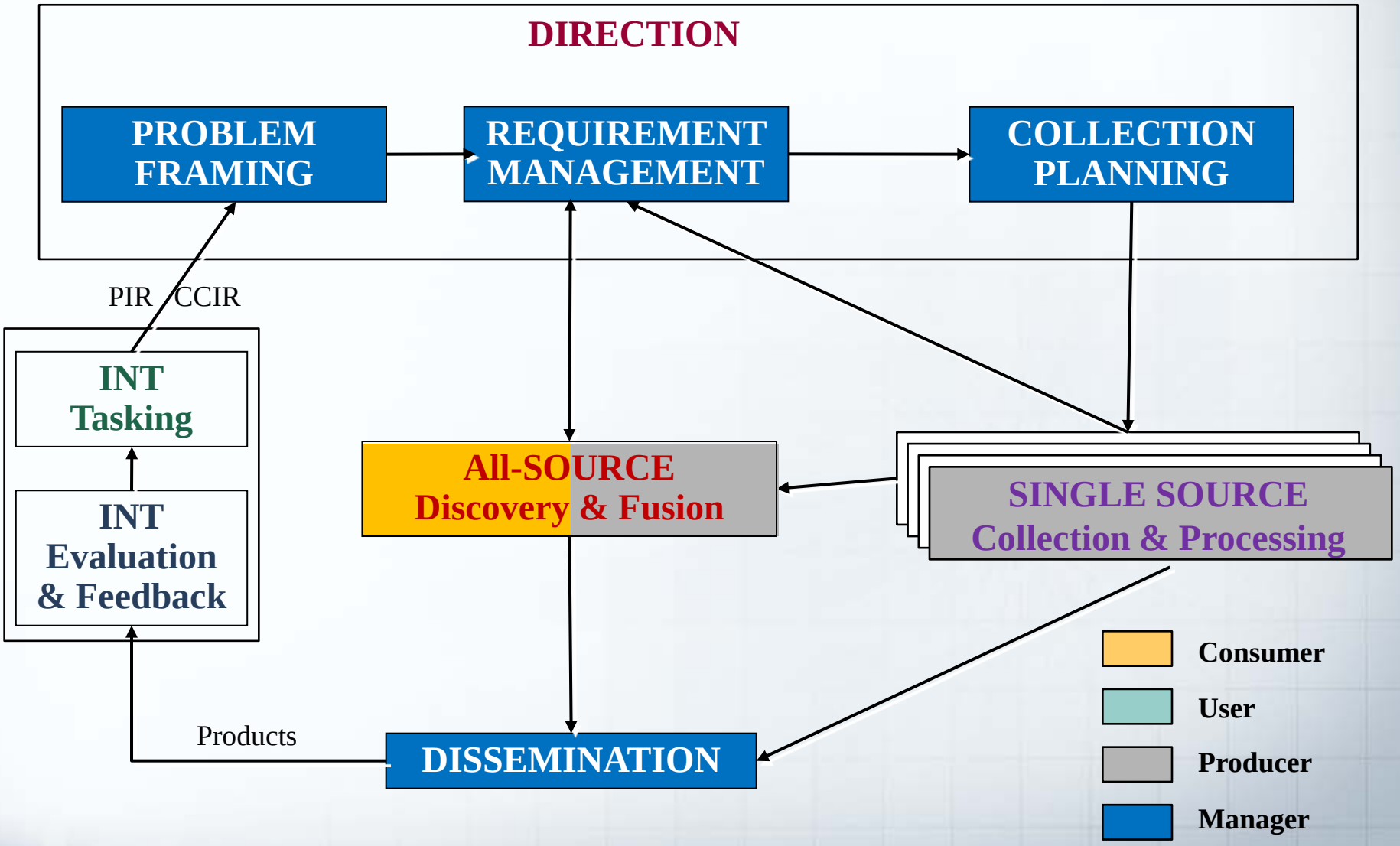

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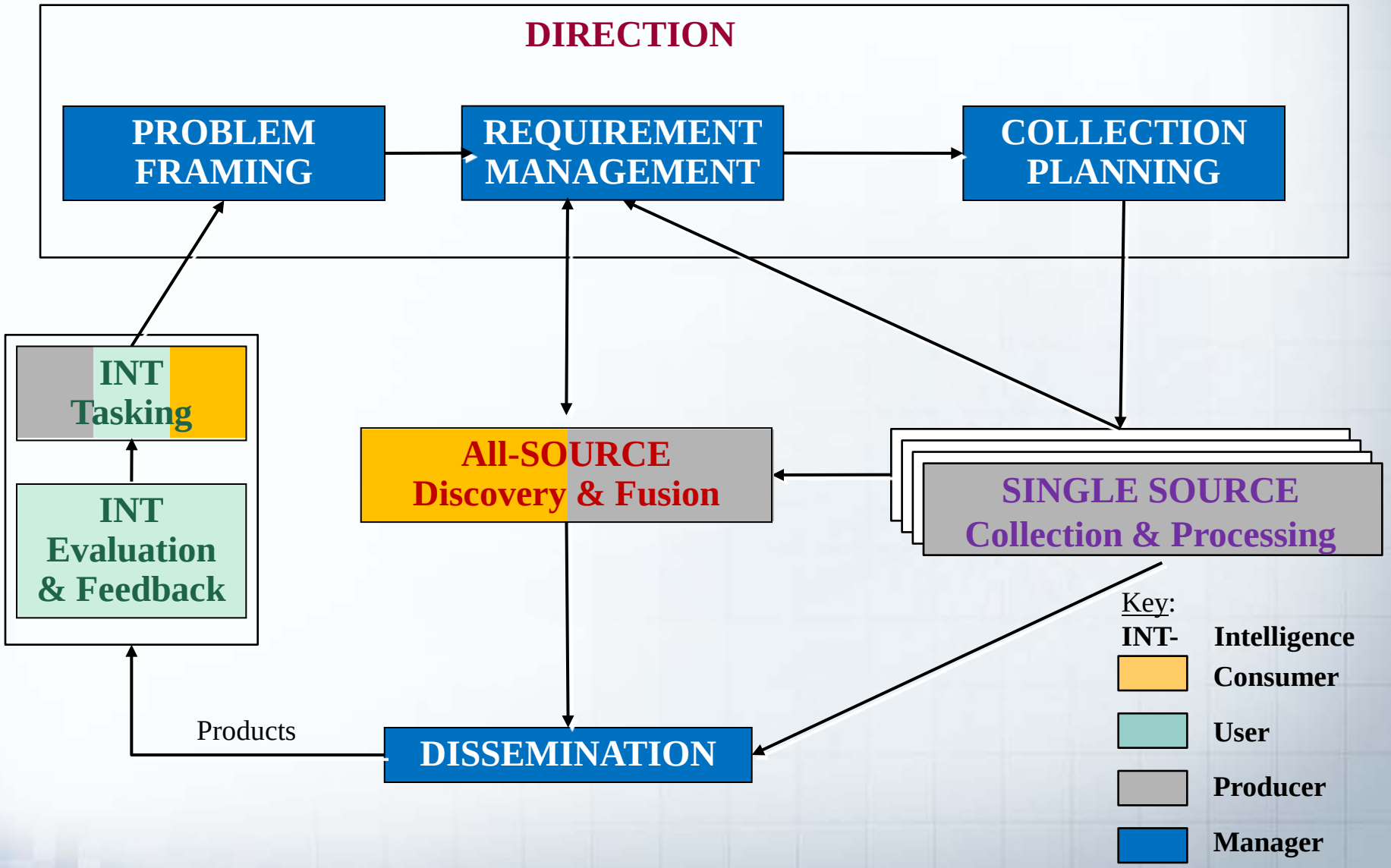
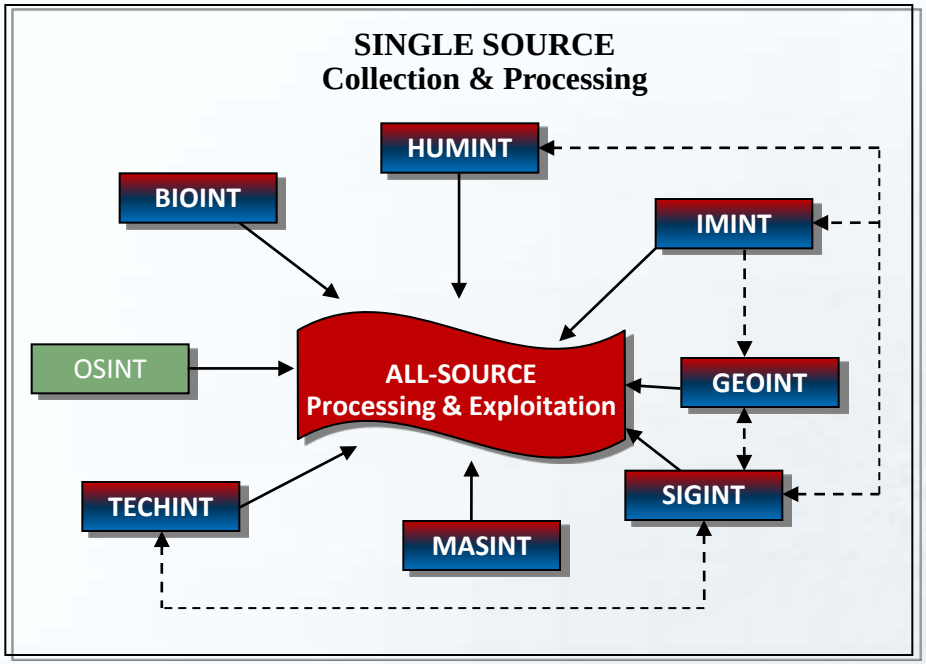


All-Source Intelligence Model (level 3)

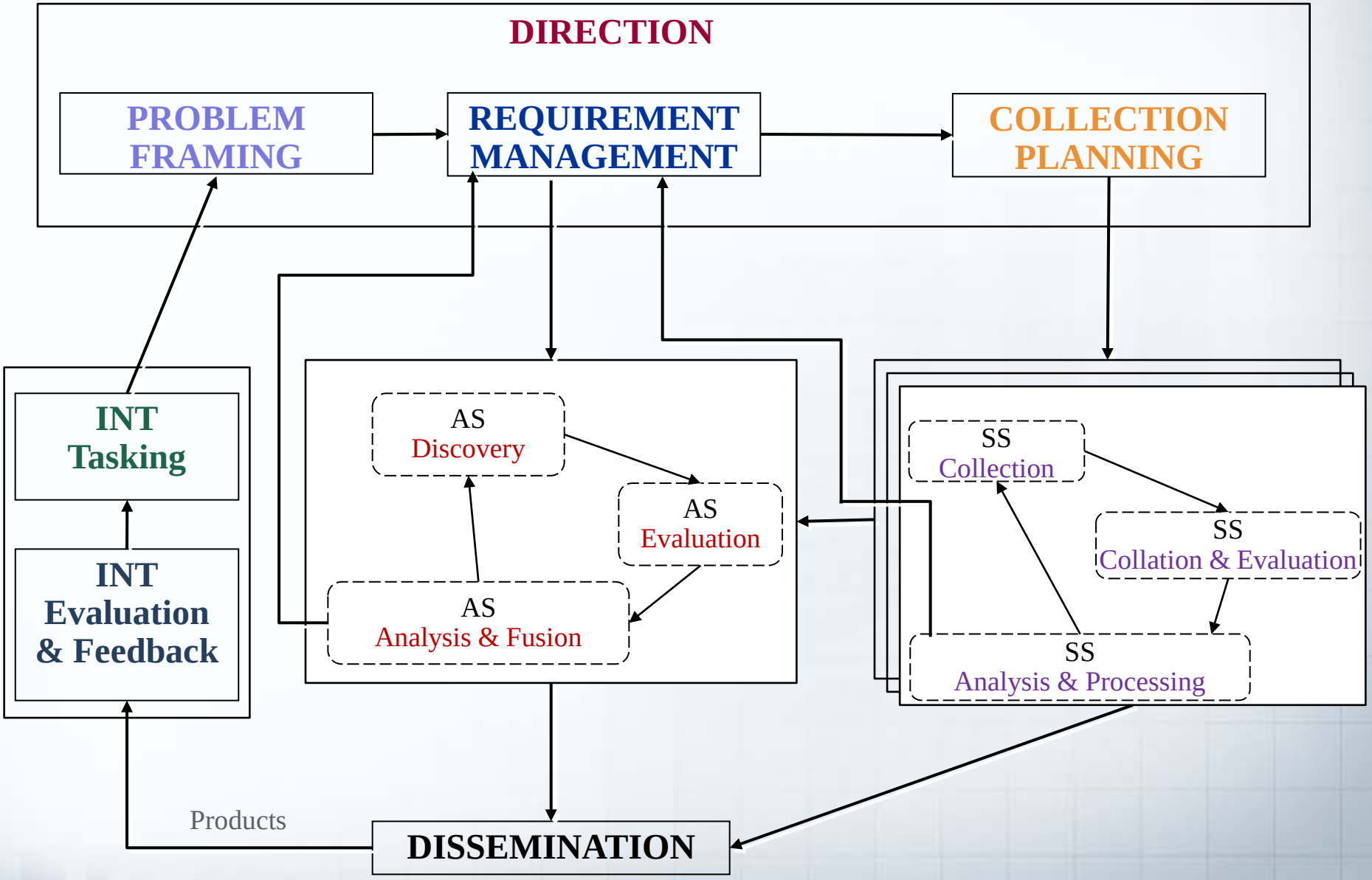
- Detailing Single Source (SS) and All-Source (AS) processes



All-Source Intelligence Model (level 3)

- The Single Source intelligence processes consist of:
  - Acquiring (data),
  - Sorting, filtering, indexing and organizing (information),
  - Evaluating (information reliability and source credibility)
  - Reasoning (analyzing and synthesizing) to create intelligence,
  - Disseminating that intelligence to users.
- The All-Source intelligence process consists of:
  - A discovery of single source intelligence produced within each discipline (HUMINT, IMINT, GEOINT, TECHINT, etc.);
  - Evaluation of the quality of SS intelligence products
  - Analysis and fusion to produce AS intelligence
  - Dissemination to the user.

All-Source Intelligence Model (level 3)



A collaborative approach: an imperative to the success of the model

- **Challenges and issues:**
  - **Technological issues**
    - Limited sharing: no link between different organisations and systems.
    - Stove piping: each intelligence agency has its own networks and data repositories that make it very difficult in an all-source perspective to piece together facts and suppositions that, in the aggregate, could provide valuable warning.
    - Difficult to discover or access collected information outside of collection stovepipes. Analysts could often be unaware that information has been collected.
  - **Cultural issues:**
    - Collection and analysis processes are independent (restrictions, psychological barriers, fears of compromising sources, security concerns, etc.)
    - "Need to know" culture rather than "Need to share", focused on "Data ownership" rather than "Data stewardship".

A collaborative approach: an imperative to the success of the model

- **Enablers**
  - **IKM services**
    - Common data standards (metadata tagging standards, security marking) and core services for organizing, discovery, filtering and delivery of information while guarding against information overload.
    - Advances discovery processes and procedures
    - Retrieval protocols
  - **Security concerns**
    - Information protected and auditable.
    - Tools and mechanisms to manage identities, authorize, authenticate, and audit users and ensure confidentiality
    - Establishing rules and procedures for accessing information and a sharing policy should be established

A collaborative approach: an imperative to the success of the model

- **Enablers**
  - **Trust environment**
    - Trusted systems
    - Virtual collaboration environment
    - Tradeoff between common trust and protection of sources, methods and sensitive information
  - **Trust-based culture**
    - Need to share culture VS need to know culture
    - Developing incentives (at the institutional, leadership and workforce levels), awards and assessment programs.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