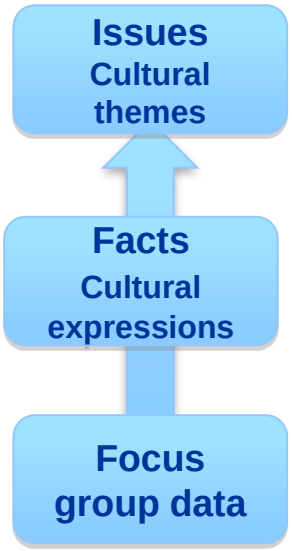
IAEA 60 Years
Atoms for Peace and Development

Normative Analysis

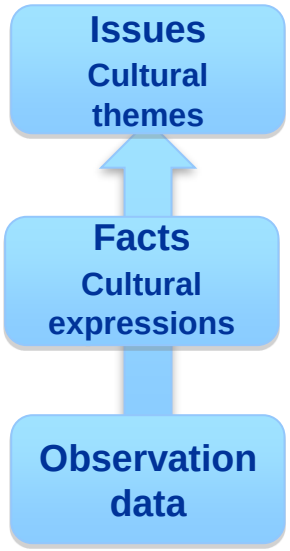
Example of the descriptive analysis process

Overarching Issues; Awareness and actions to prevent contamination



Theme
"Relaxed attitude towards radiological risks "

Facts
- **Several incidents of body contamination and one internal**
- **People express that they did not go to RP re-training for the last five years**
- **People say that RP-techs are sitting mostly in their office**
- **Managers have identified problems and taken decisions but nothing has changed**



Theme
"Contamination risks do not seem to be considered"

Facts
- **Skipping contamination area borders**
- **Not properly marked borders**
- **Chewing gum in RCA**
- **Not wearing gloves when working in the RCA where its required**

Descriptive and normative analyses

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Descriptive

‘is’

Based on data and a theory of culture

Normative

‘should’

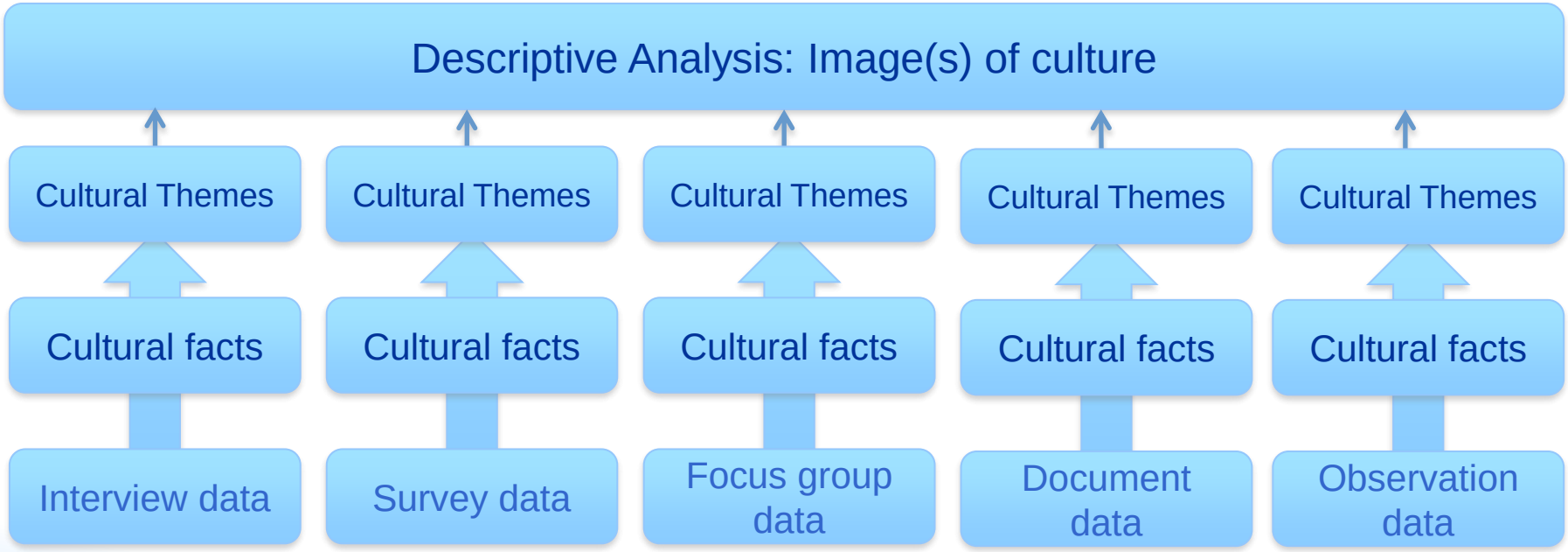
Based on data, a theory of culture *and a norm*

Normative analysis

- When moving to the normative analysis, we need a framework
- What cultural traits are wanted? Not wanted? What needs to be kept? Changed?
- Evaluation needs to be done on the level of comparative analysis
- It must be clear that this analysis is – again! – an iterative process, it can not be made in a linear manner!

Normative analysis

We need a standard for evaluation!



Normative analysis

Final Issues; Normative, evaluative analysis

Overarching Issues; Awareness and actions to prevent contamination

Normative analysis

Here, we can use the IAEA safety culture framework:

INPO/WANO

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Definition for Nuclear Safety Culture

Safety culture: An organization's values and behaviors—modeled by its leaders and internalized by its members—that serve to make nuclear safety the overriding priority.

INPO/WANO

Principles for a Strong Nuclear Safety Culture:

1. Everyone is personally responsible for nuclear safety.
2. Leaders demonstrate commitment to safety.
3. Trust permeates the organization.
4. Decision-making reflects safety first.
5. Nuclear technology is recognized as special and unique.
6. A questioning attitude is cultivated.
7. Organizational learning is embraced.
8. Nuclear safety undergoes constant examination.

Definition of Nuclear Safety Culture

Nuclear safety culture is the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment

US NRC Traits of Positive Nuclear Safety Culture

1. **Leadership Safety Values and Actions**—Leaders demonstrate a commitment to safety in their decisions and behaviors.
2. **Problem Identification and Resolution**—Issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.
3. **Personal Accountability**—All individuals take personal responsibility for safety.
4. **Work Processes**—The process of planning and controlling work activities is implemented so that safety is maintained.
5. **Continuous Learning**—Opportunities to learn about ways to ensure safety are sought out and implemented.
6. **Environment for Raising Concerns**—A safety-conscious work environment is maintained where personnel feel free to raise safety concerns without fear of retaliation, intimidation, harassment, or discrimination.
7. **Effective Safety Communication**—Communications maintain a focus on safety.
8. **Respectful Work Environment**—Trust and respect permeate the organization.
9. **Questioning Attitude**—Individuals avoid complacency and continuously challenge existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action.

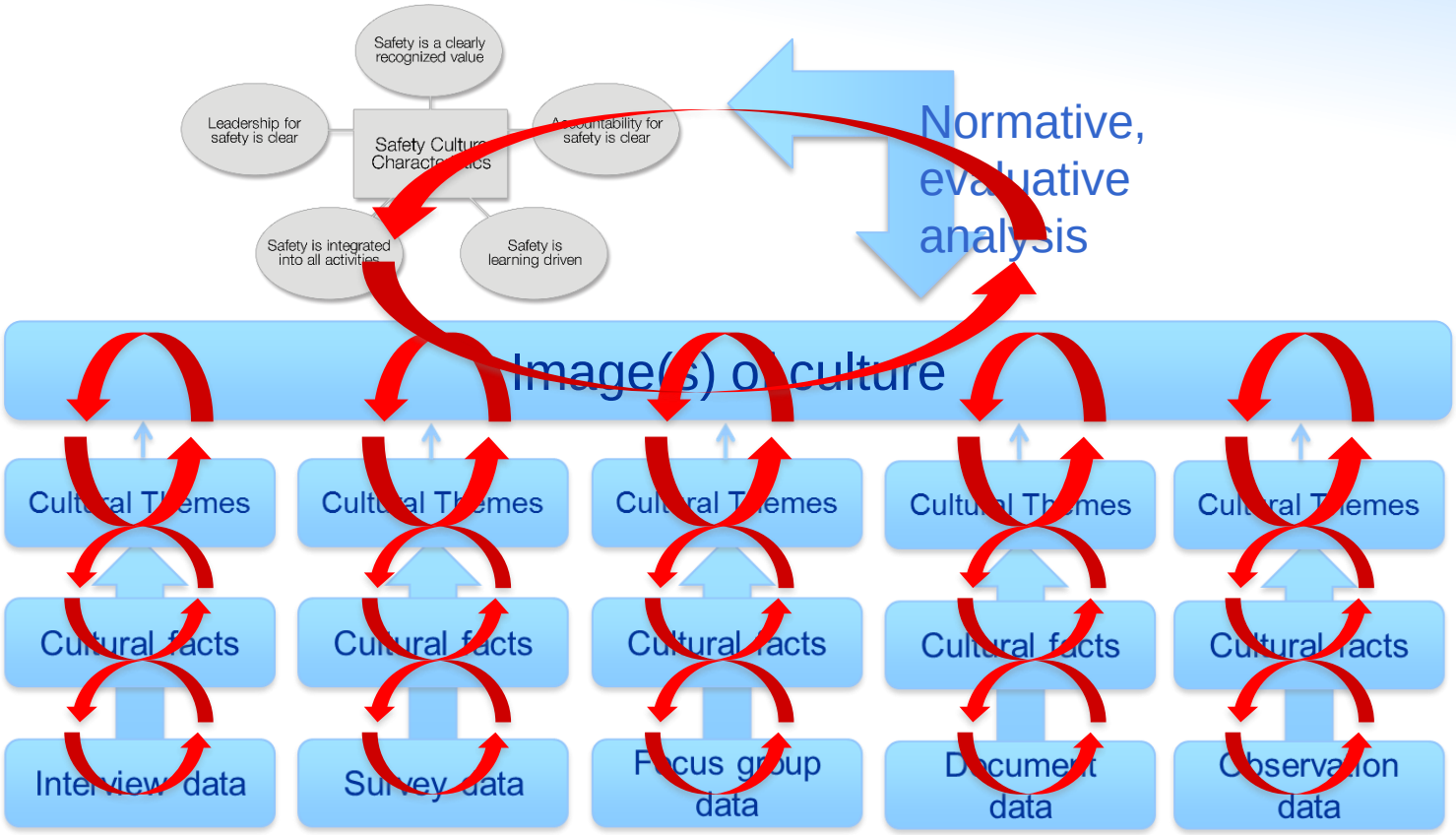
Normative analysis

Normative, evaluative analysis

Descriptive Image(s) of culture

Cultural Themes	Cultural Themes	Cultural Themes	Cultural Themes	Cultural Themes
Cultural facts	Cultural facts	Cultural facts	Cultural facts	Cultural facts
Interview data	Survey data	Focus group data	Document data	Observation data

Logic of analysis…



- The non-linearity of the process means that there will be a constant flow between data, conclusions and evaluation
- In this, it is of paramount importance to keep one's mind clear on whether working at a normative or descriptive level!

A reminder (a few no-no's)

- Don't allow preconceptions (irrational/rational, safe/unsafe, right/wrong) take charge!
- Be observant on how the method (interview situation, transcription, group composition…) creates 'facts'!
- Never treat the actor's point of view as an explanation!
- Don't be seduced by the well articulated!
- Be aware of and separate the descriptive from the normative!
- The normative analysis means moving from organizational culture to safety culture; this means all cultural aspects will not be included in the normative analysis.
- Don't reduce complexities and paradoxes!

Analysis process

Summarizing, we can talk about four steps:

- Analysis of the different data sources
- Drawing conclusions from the different sources, according to their own logic
- Comparing to the IAEA framework for safety culture
- Identifying strengths and areas for improvements

Summary

- Normative analysis is an evaluation of ‘what is’ in relation to a framework of ‘what should be’
- IAEA, WANO-INPO, US NRC – very similar frameworks for what is a strong safety culture
- Don’t accept the organization’s explanations, look for the patterns across the stories
- Compare over-arching themes to normative framework to identify strengths and areas for improvement
- Complexities, paradoxes and sub-cultures will persist – culture is not homogeneous!
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Thank you!