Network Measurement Intent

draft-yang-nmrg-network-measurement-intent-00

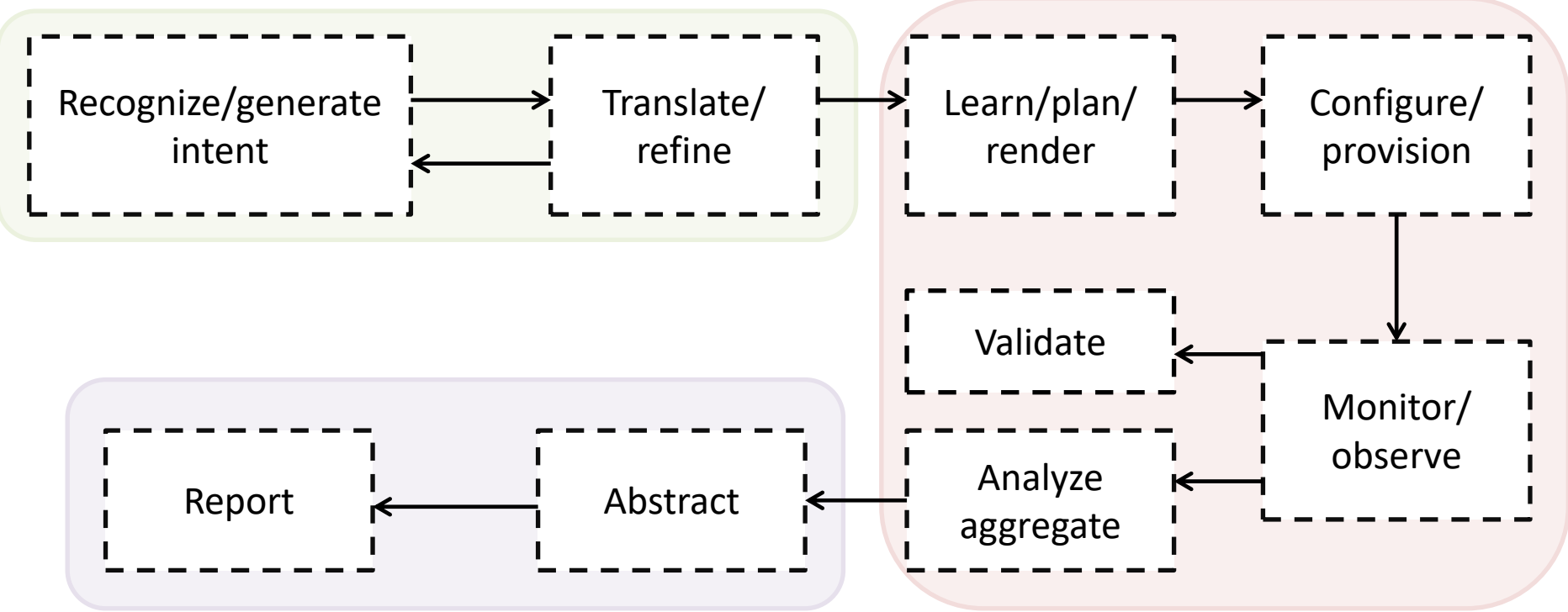https://datatracker.ietf.org/doc/draft-yang-nmrg-network-measurement-intent/
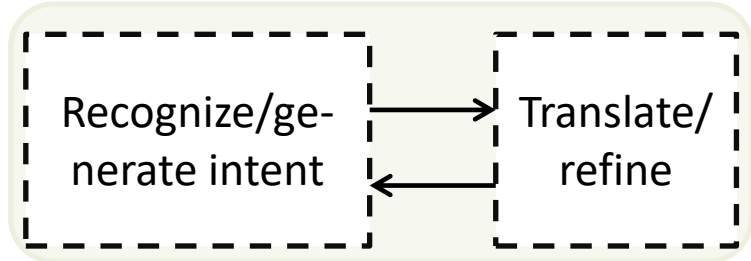
Intent based network framework

draft-irtf-nmrg-ibn-concepts-definitions-02

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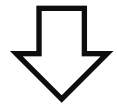# Network measurement intent

- Based on user/network operator's demand for network status
- Automatic collection of network status information on demand

◆ Taking the performances of busy network measurement intent as an example

```
┌─────────────┐     ┌─────────────┐
│ Recognize/ge-│────→│ Translate/  │
│ nerate intent│←────│ refine      │
└─────────────┘     └─────────────┘
```

➢ Determine the network busy time of the day based on historical data learned by AI.
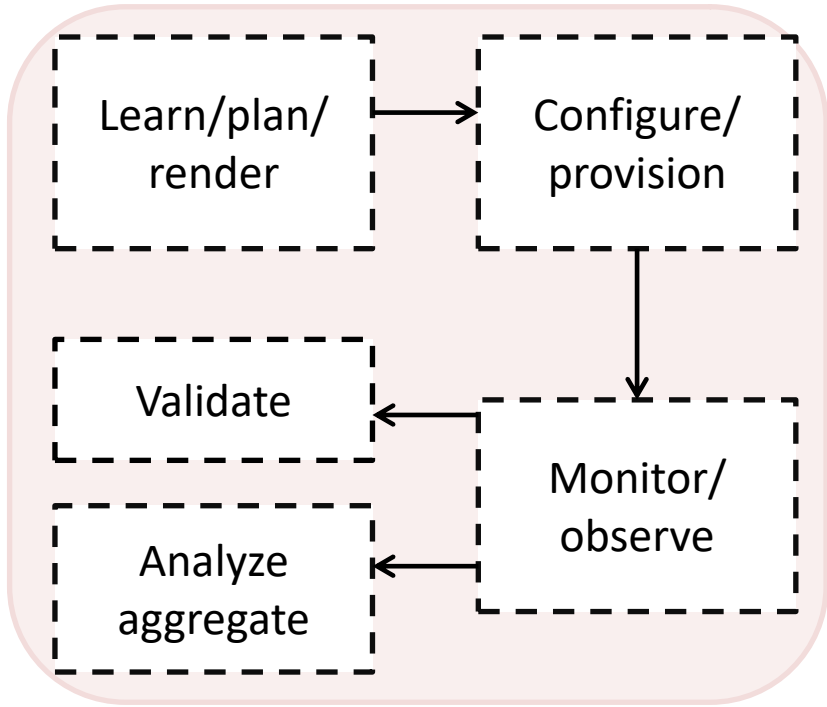➢ Determine the content need to be measured

➢ Based on the required measurement content
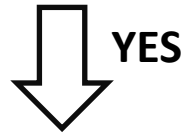➢ Based on equipment support degree

⇩

Determine the measurement

⇩

Verify whether the measurement scheme is feasible.

```
┌─────────────┐     ┌─────────────┐
│ Learn/plan/ │────→│ Configure/  │
│ render      │     │ provision   │
└─────────────┘     └─────────────┘

┌─────────────┐     ┌─────────────┐
│ Validate    │←────│ Monitor/    │
└─────────────┘     │ observe     │
┌─────────────┐←────└─────────────┘
│ Analyze     │
│ aggregate   │
└─────────────┘
```
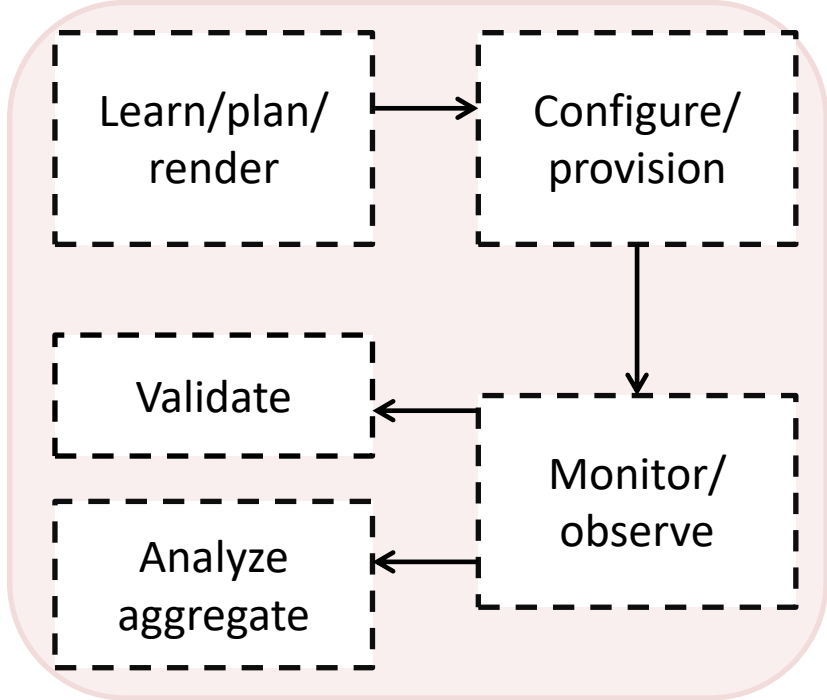
Network measurement intent

➤ Determine whether the network is busy

YES

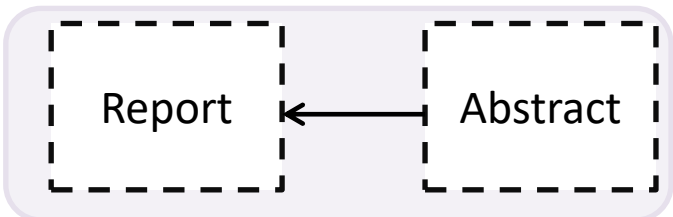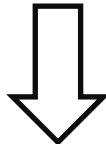Perform automatic network deployment, such as in CLI mode.

•The network measurement data is collected automatically.

```
┌ ─ ─ ─ ─ ─ ┐      ┌ ─ ─ ─ ─ ─ ┐
   Learn/plan/   →    Configure/
     render              provision
└ ─ ─ ─ ─ ─ ┘      └ ─ ─ ─ ─ ─ ┘
                            ↓
┌ ─ ─ ─ ─ ─ ┐      ┌ ─ ─ ─ ─ ─ ┐
    Validate     ←
└ ─ ─ ─ ─ ─ ┘        Monitor/
                       observe
┌ ─ ─ ─ ─ ─ ┐
    Analyze      ←
   aggregate
└ ─ ─ ─ ─ ─ ┘      └ ─ ─ ─ ─ ─ ┘
```

•Verify whether the threshold meets the requirement
•Verify whether the network measurement intent is satisfied

Either of the two conditions is not satisfied

```
┌ ─ ─ ─ ─ ─ ┐    ┌ ─ ─ ─ ─ ─ ┐
   Report    ←      Abstract
└ ─ ─ ─ ─ ─ ┘    └ ─ ─ ─ ─ ─ ┘
```

➤Report the result
➤Modify the network measurement intent

Benefits

- Automation：Realize automatic network measurement and automatic analysis of measurement results

- Intelligence：Realize intelligent anomaly detection, anomaly prediction and automatic repair when the measurement result is not in conformity with the expectation

- Closed-loop control：Continuous optimization of network measurement results based on network measurement intent

Next Steps

- To refer IBN reference framework, then update the manuscript and refine the implementation steps in the corresponding functions.

- To work with IBN use case team, then incorporate this case into the coming draft of IBN use case.

- **Looking forward to the comments, suggestions and questions.**

Thanks!