

# Intent for Green Services

<draft-contreras-nmrg-green-intent-00>

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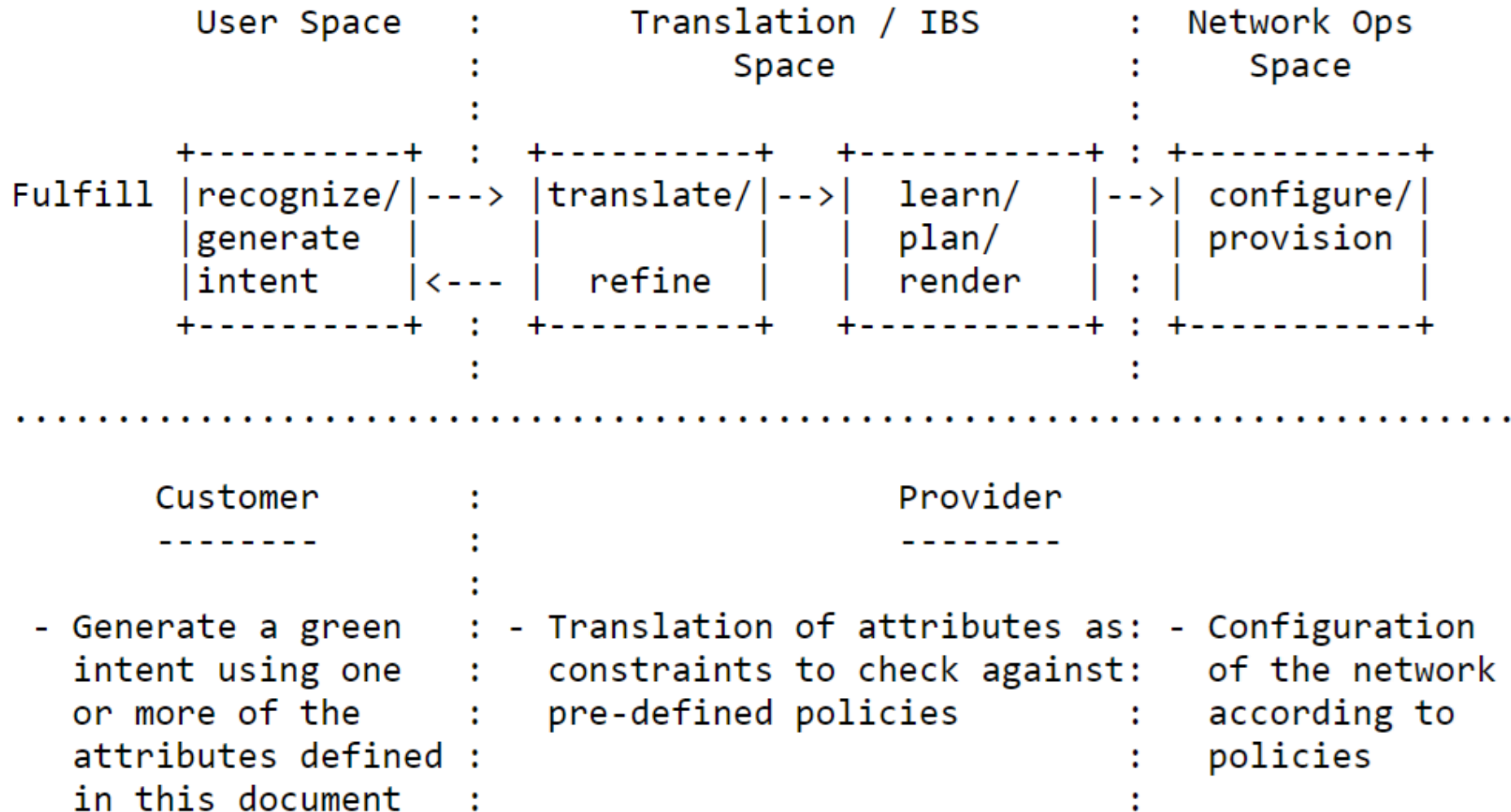
# Motivation

- There is an increasing interest on incorporating sustainable dimension to the provision of communication services
- Sustainability goals are moving the industry towards the objective of providing services in a more efficient way from the perspective of energy consumption
- The purpose is then to allow customers to express their desired intents in terms of the green service objectives that they expect from the network provider
- Such objectives can be related not only to the energy consumption itself, but also to the CO<sub>2</sub> footprint associated to the service.
- This document primarily focuses on the structure and attributes of an intent targeting green services

# Intents Targeting Green Services Expectations.

- **Energy consumption.** This attribute refers to the overall consumed energy, specifying a threshold value of consumption (e.g., less than such threshold).
- **Energy efficiency.** This attribute relates to the ratio of energy per a given unit related to the service (typically such unit refers to unit of traffic, e.g., bits per Joule), specifying a threshold value of efficiency (e.g., greater than such threshold).
- **Carbon emissions.** This attribute refers to the overall carbon intensity of the service (i.e., grams of CO<sub>2</sub> per kWh), specifying a threshold value of emissions (e.g., less than a given threshold).
- **Use of renewable energy** (expressed as a rate). This attribute relates to ratio of renewable energy used for the service (e.g., greater than a given threshold), as well as, potentially, the source of renewable energy.
- These attributes do not necessarily be present at the same time in the green intent.

# Green Intent Lifecycle Fulfillment





# Next steps

- Collect feedback from the RG
- Keep working on the implementation of the described intent
- Link the green intent with other on-going efforts such as [I-D.cx-opsawg-green-metrics] and [I-D.petra-path-energy-api]