

# Intent-driven Autonomous Networks

**Kevin McDonnell**

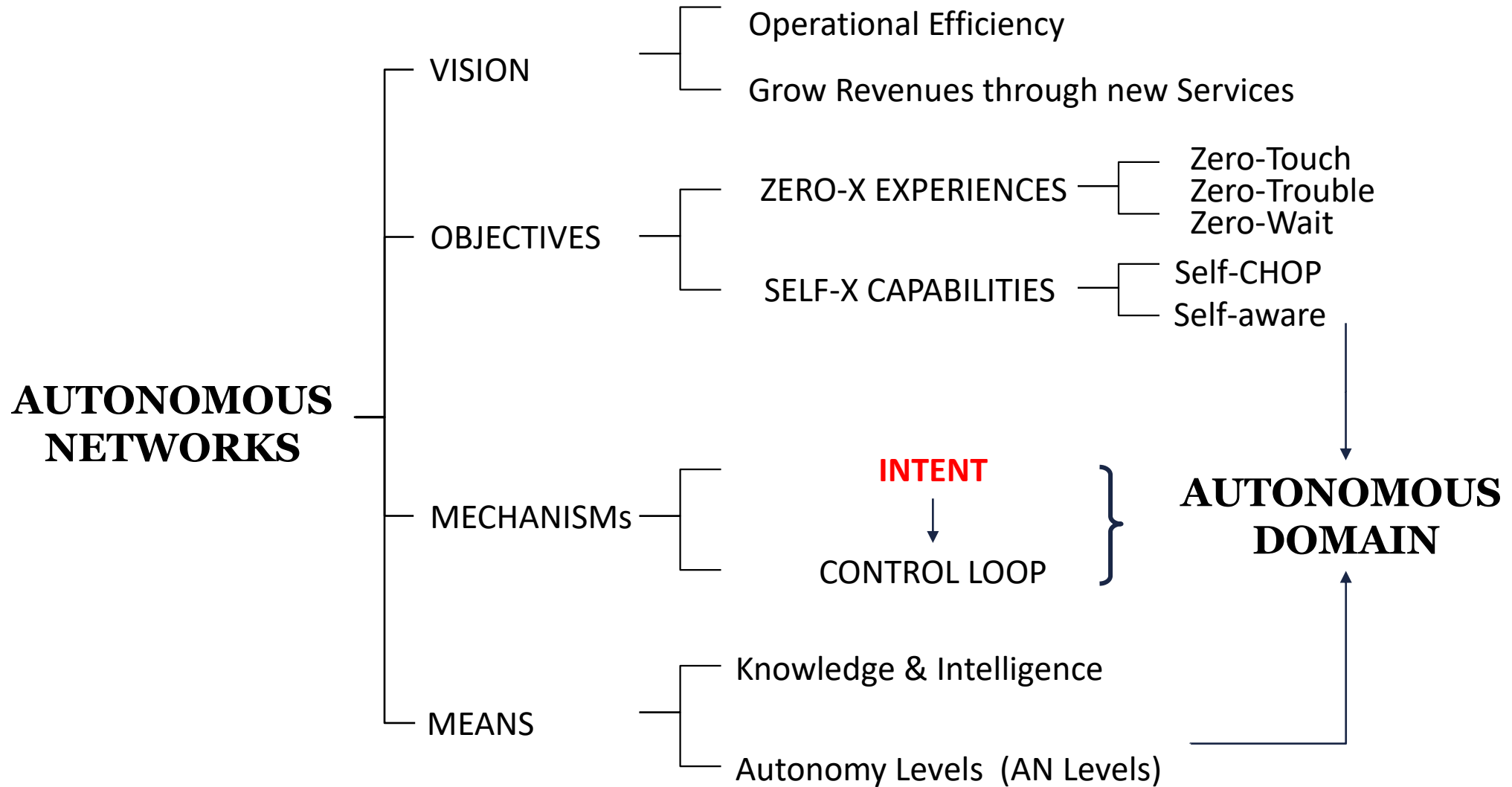
*Senior Director, Intelligent Automation, Huawei*

14<sup>th</sup> January 2022

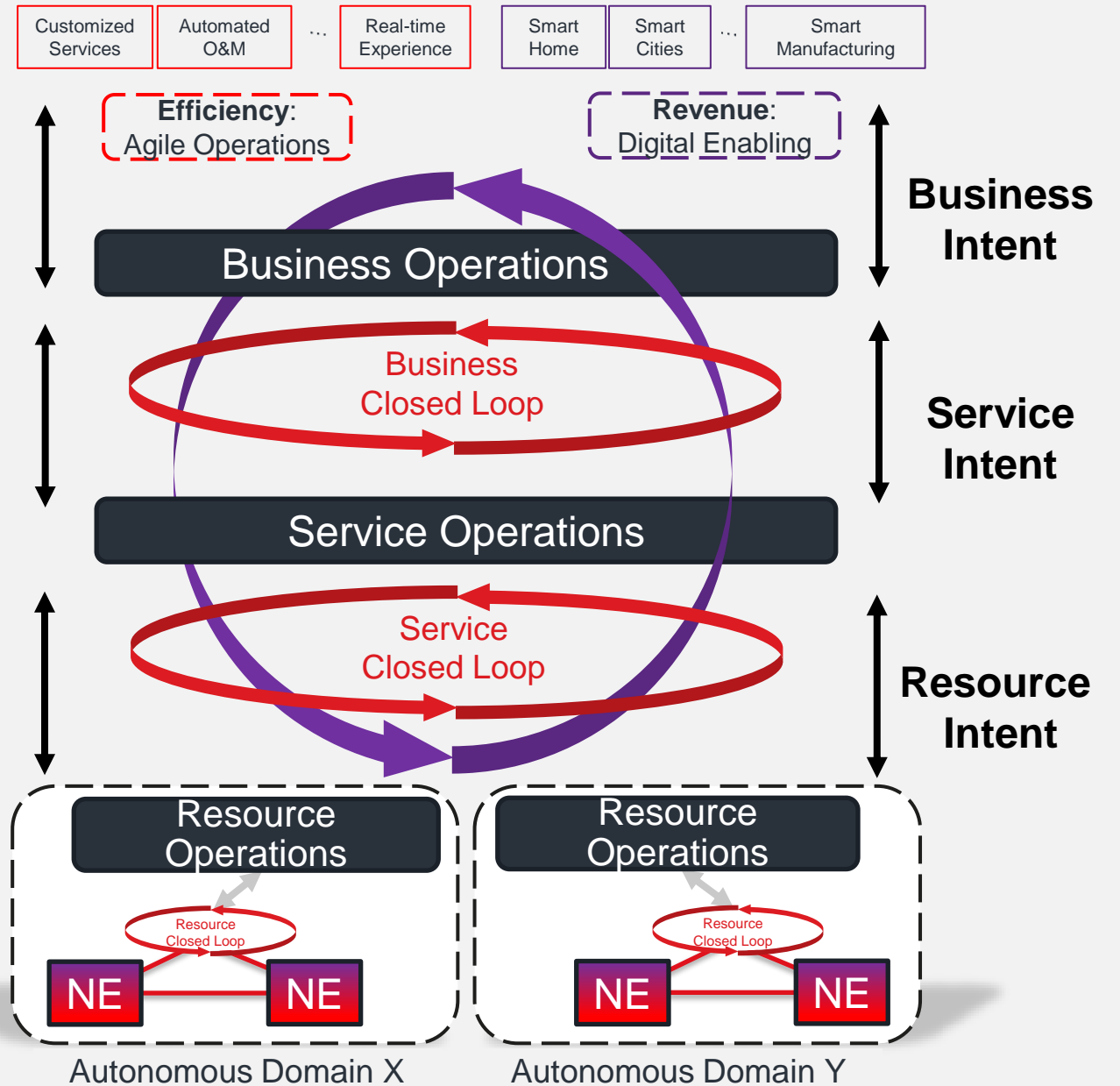
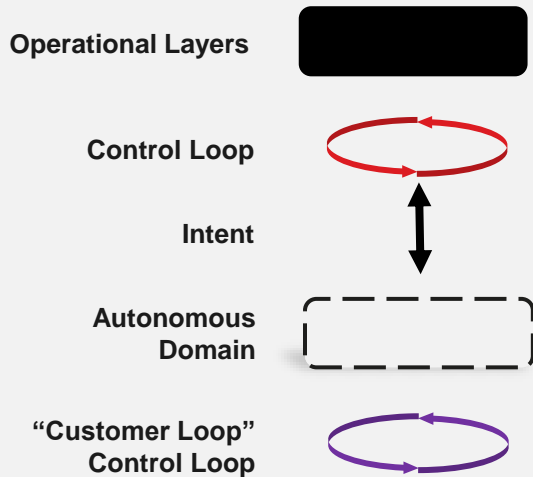
tmforum

# Autonomous Networks

## Concepts



# Autonomous Network Framework



# AN Reference Architecture

# Architectural Principles

IG1251



Intent

**01: Decoupled operations layers for operational flexibility**

**02: Intent-driven, open interfaces**

**03: Closed Loop Automation**

**04: Endogenous Intelligence**

**05: Single-Domain Autonomy**

**06: Cross-Domain Collaboration**

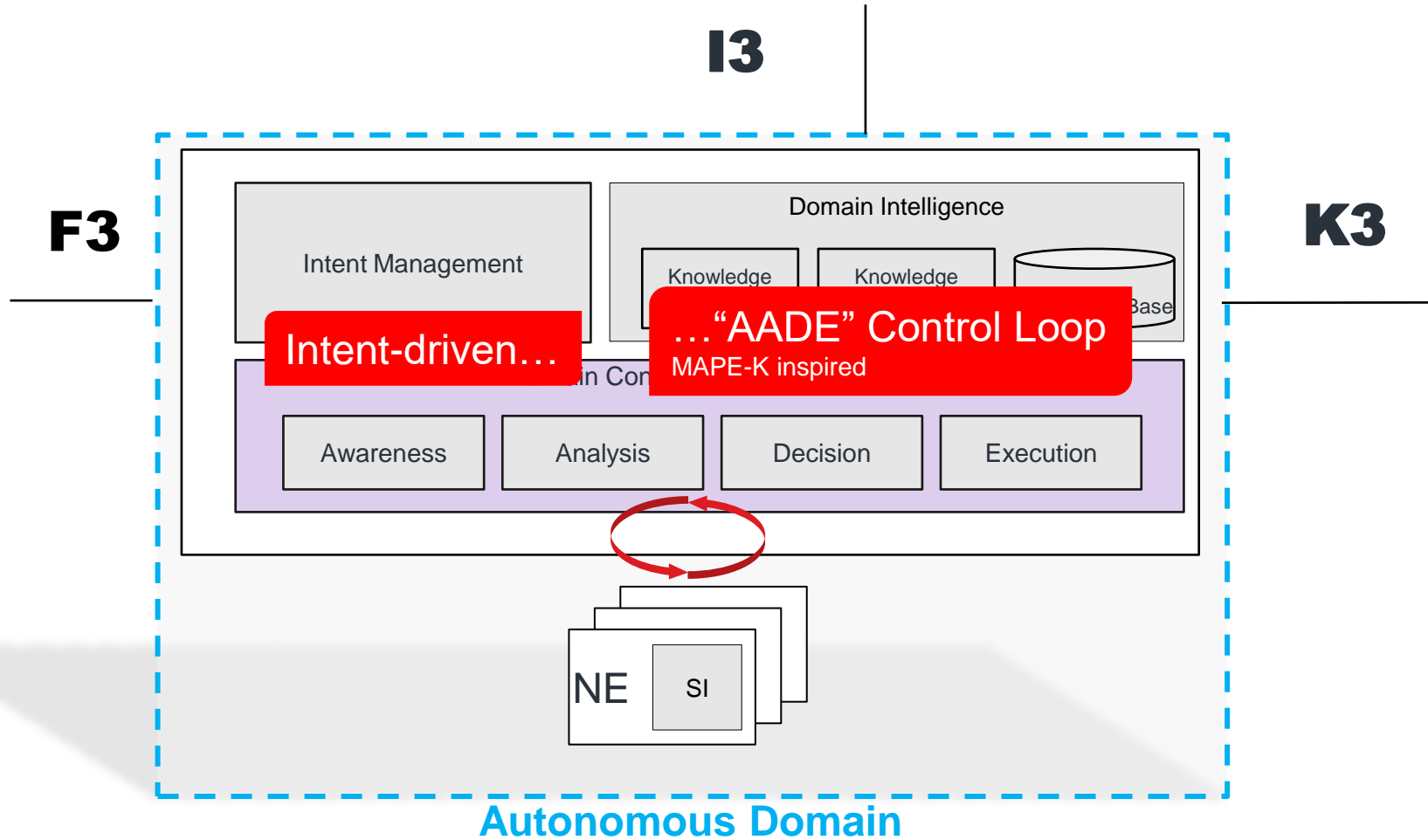
**07: Supports interactions between Autonomous Domains of different Autonomy Levels**



Autonomous Domain

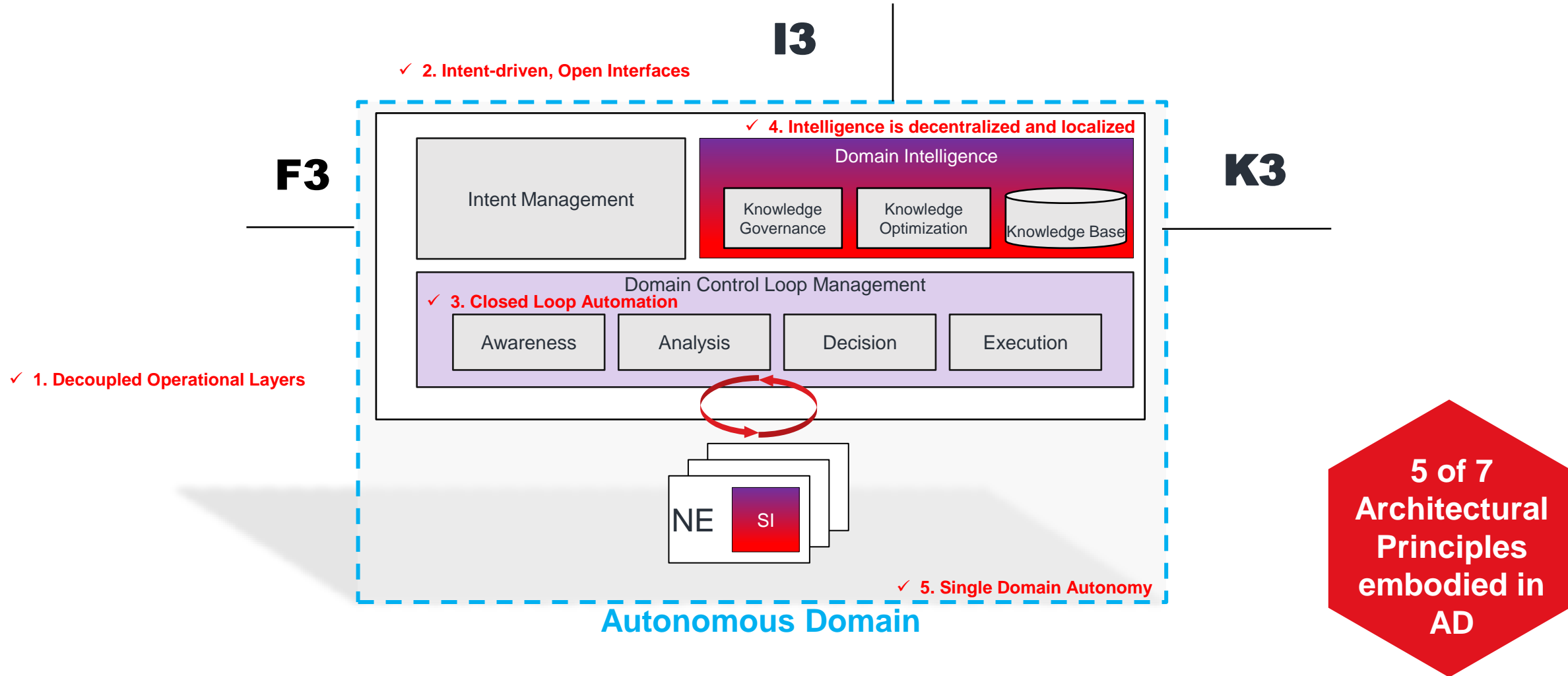
# Autonomous Networks Reference Architecture (IG1251)

## Autonomous Domain



# Autonomous Networks Reference Architecture (IG1251)

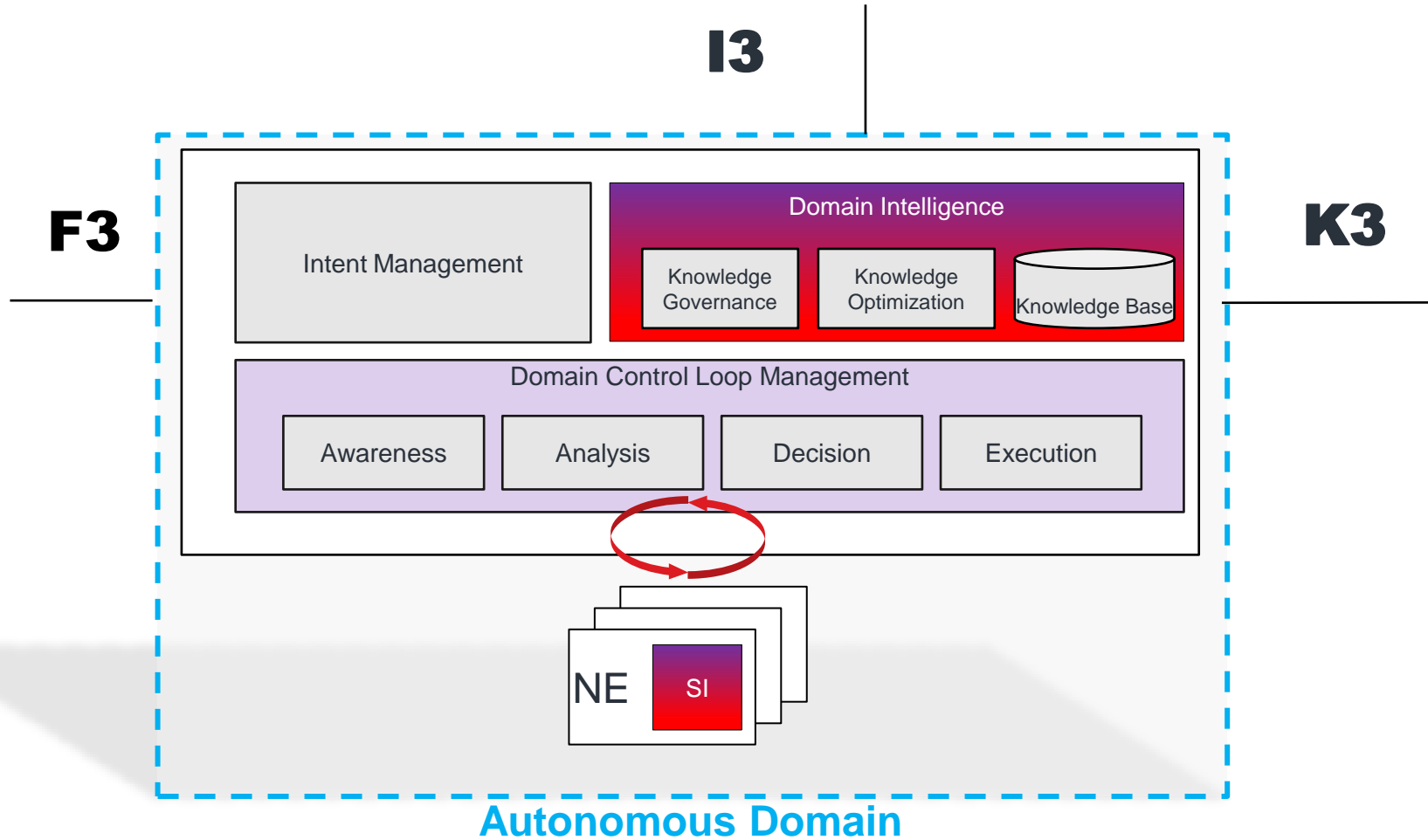
## Autonomous Domain (AD)



5 of 7  
Architectural  
Principles  
embodied in  
AD

# Autonomous Networks Reference Architecture (IG1251)

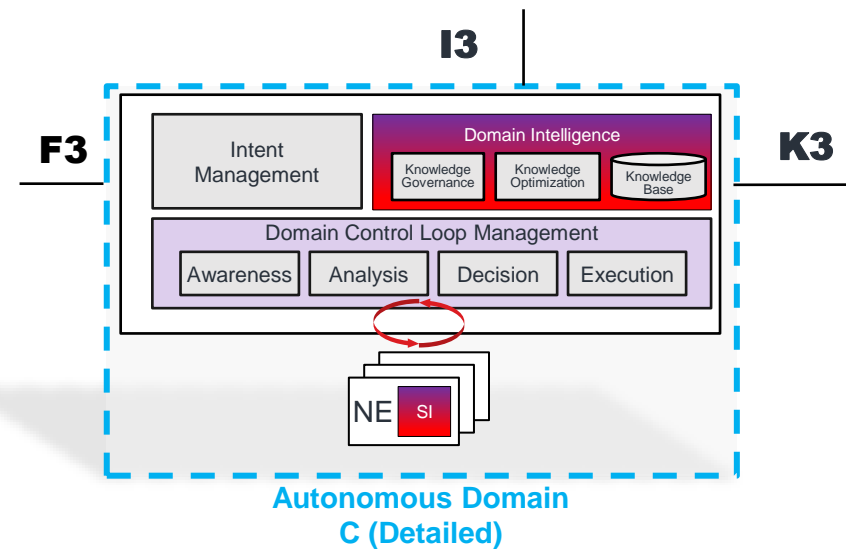
## Autonomous Domain





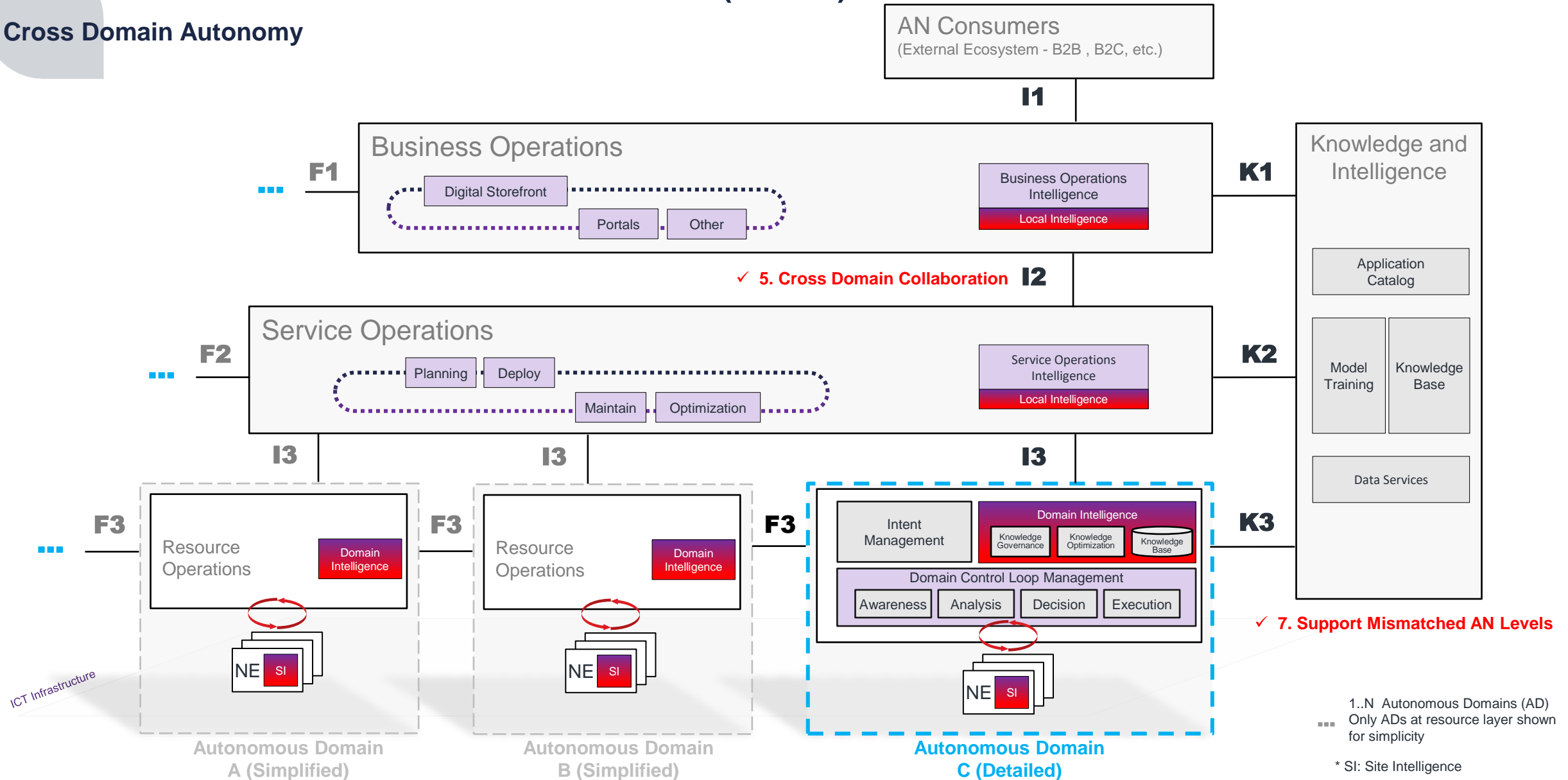
# Autonomous Networks Reference Architecture (IG1251)

## Reference Points

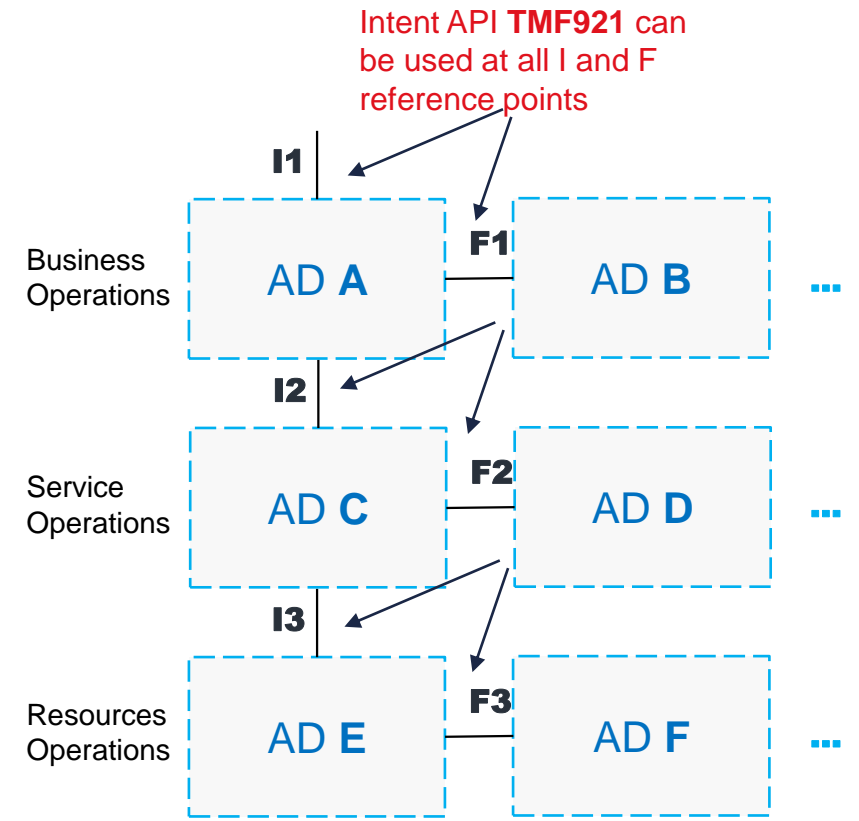
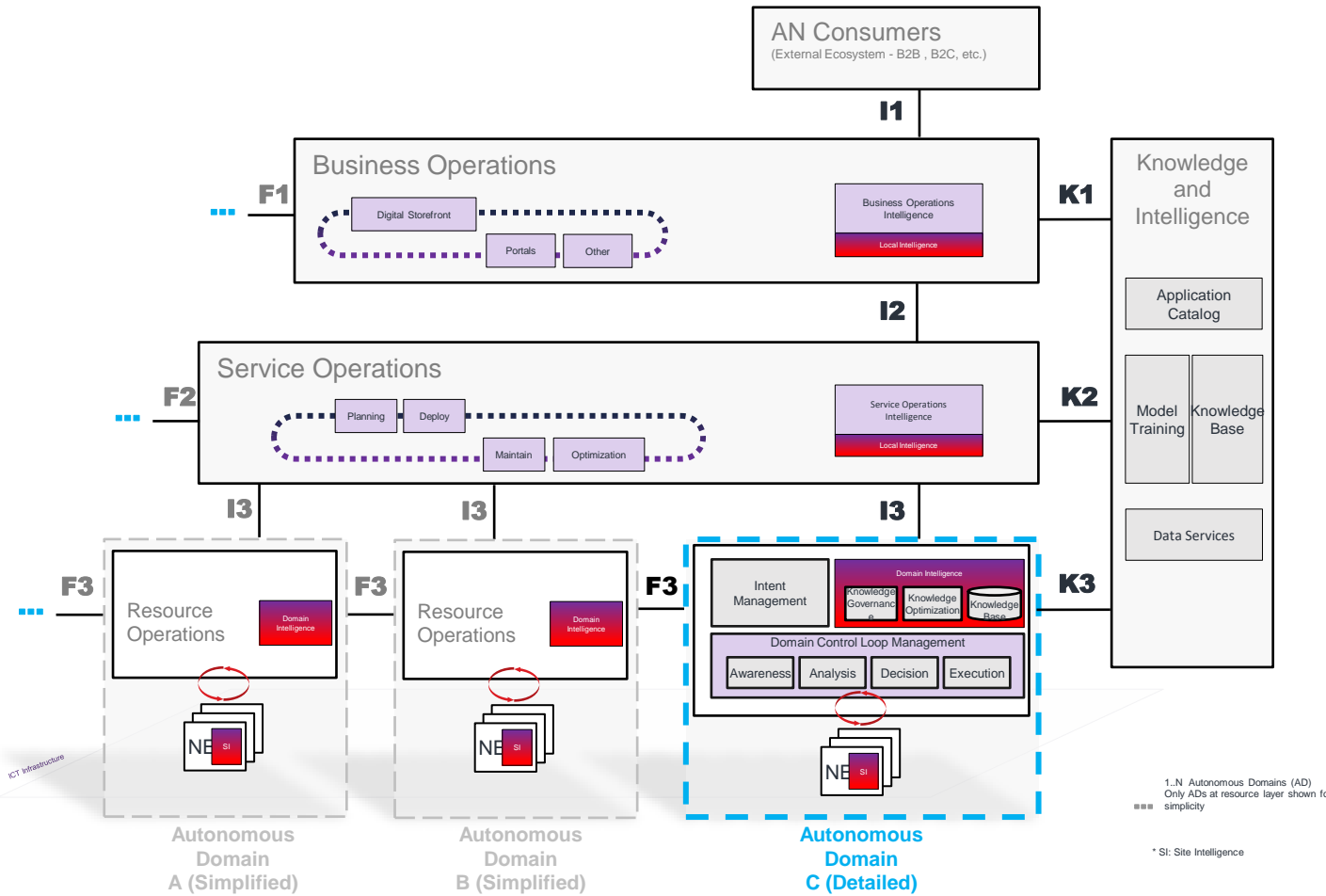


# Autonomous Networks Reference Architecture (IG1251)

## Cross Domain Autonomy



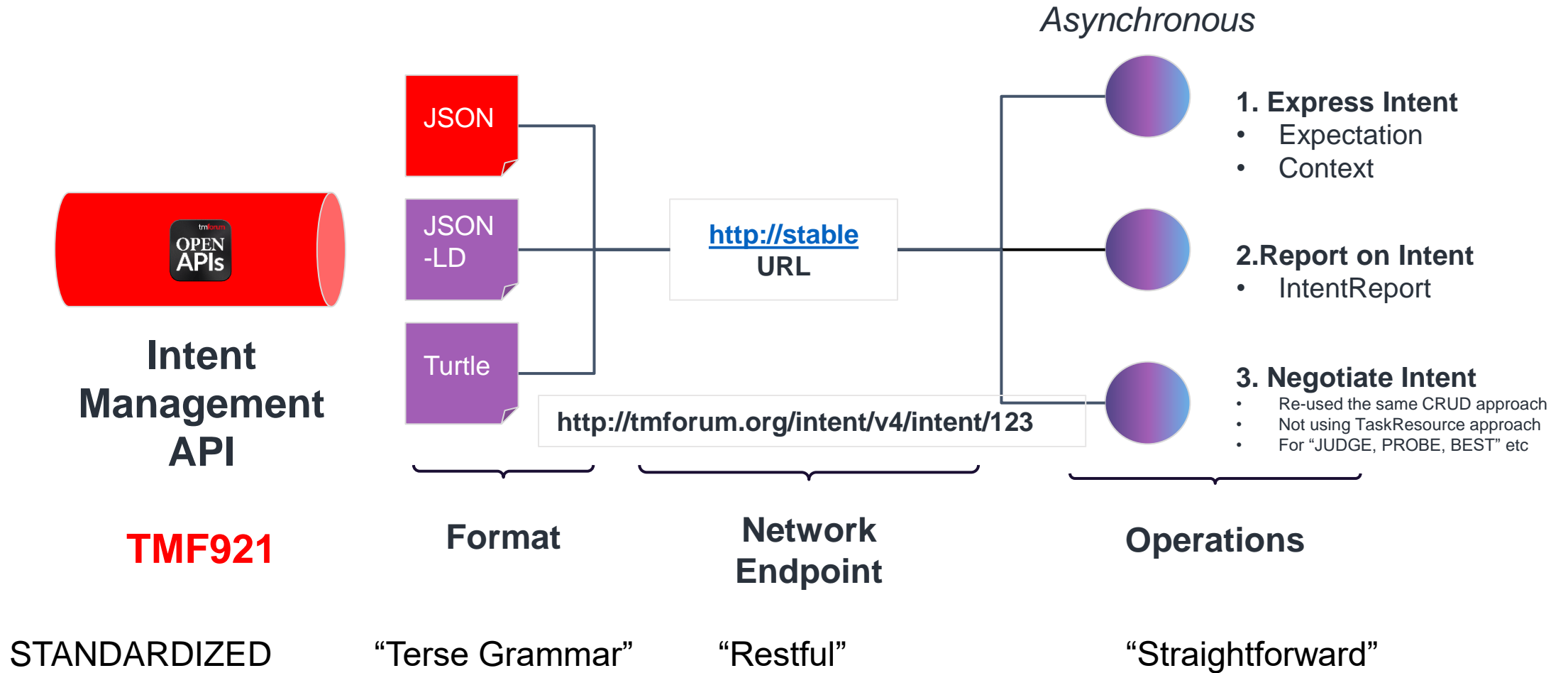
# A Single Intent Interface Specification used throughout RA



**Intent API can be used at I and F Reference Points**

**AN Reference Architecture (IG1251)**

# TM Forum Intent API



tmforum

thank  
you