



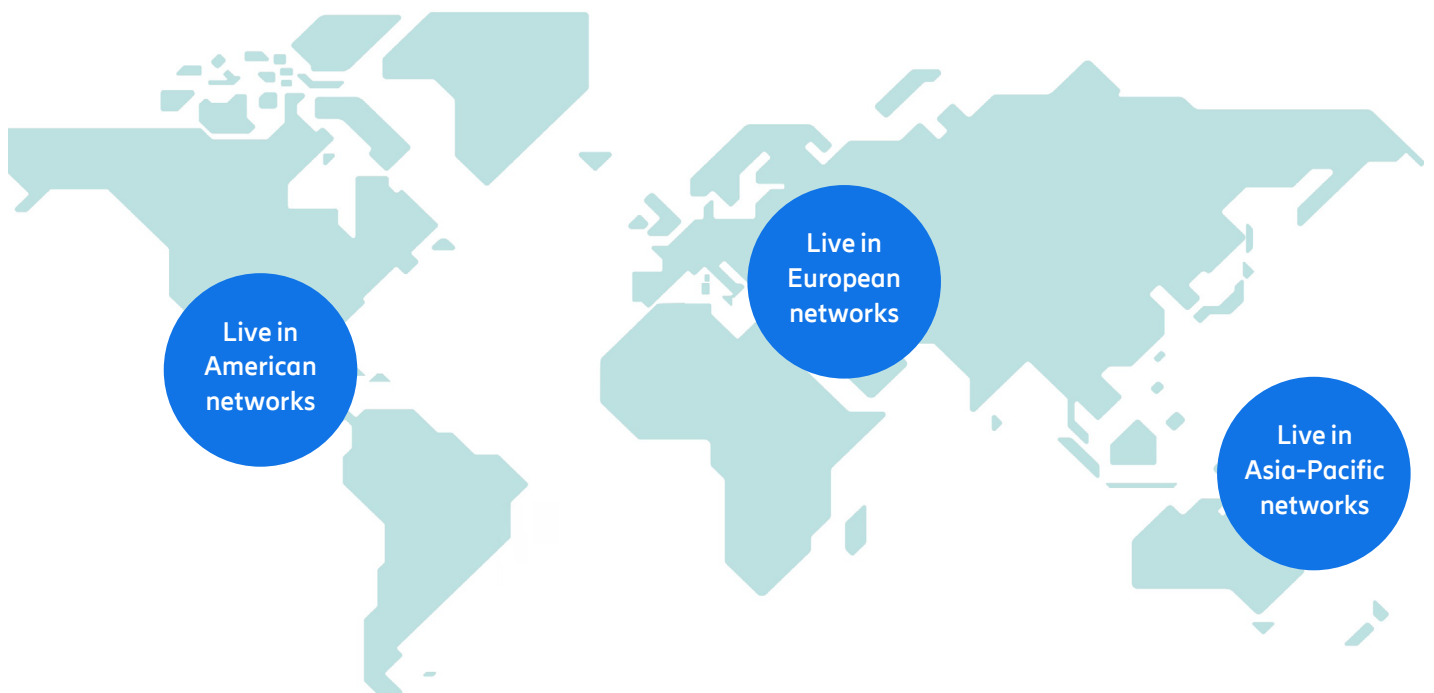
ERICSSON

# In-service software upgrade

Reducing operations TCO

# ISSU in 5G Core

Perform core network software upgrades while maintaining full user traffic. In-service software upgrade (ISSU) proven in live networks.



## Business benefits : OPEX reduction

- 2X faster SW deployment
- Reduce core network sites by up to 30%
- Perform software upgrades during the day
- Maintain excellent network KPIs and user experience

# Benefits of in-service software upgrade

ISSU (In-service Software Upgrade) allows 4G and 5G core network software upgrades without interrupting live user services.

- Traffic continues to be processed seamlessly during the upgrade.
- You can perform the upgrades any time of the day, ensuring uninterrupted network traffic.

## Faster upgrade lead times

With ISSU, no traffic offloading is required, enabling lead-time reduction with several days per site and instance.

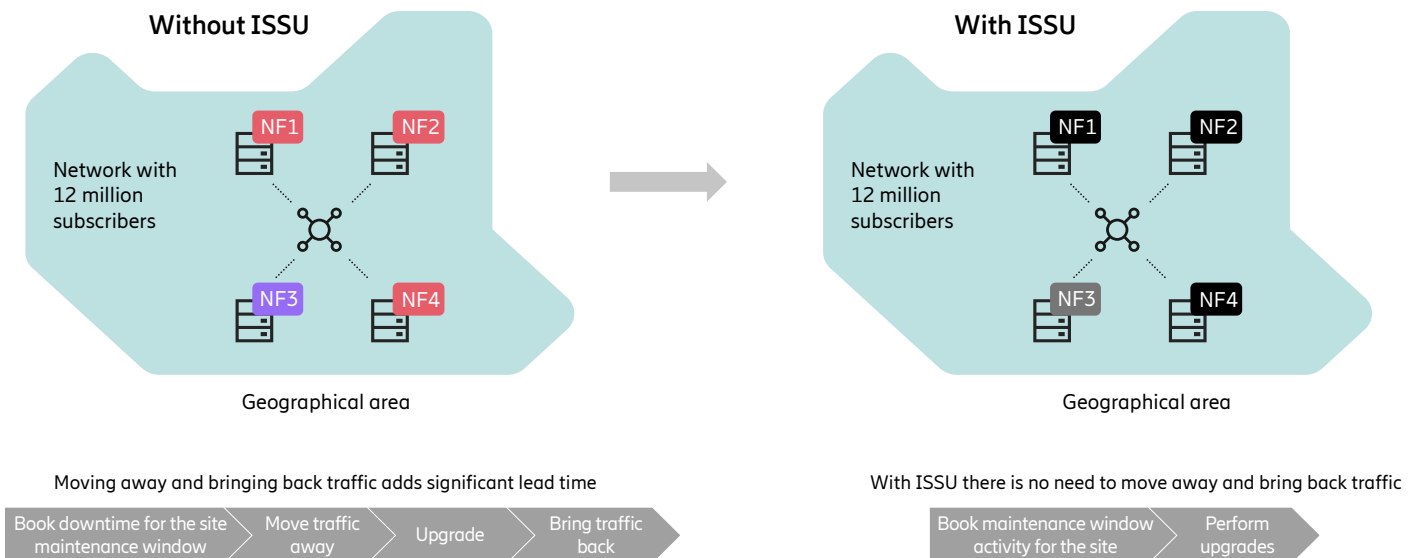
## No network over-dimensioning

The system will process traffic during the upgrade, while maintaining redundancy, and eliminating the need for network over-dimensioning.

For example, a CSP could reduce the number of sites, from 5 to 4 in small or medium sized networks.

## Seamless rollback

If required, the system can easily revert to the previous software version, maintaining optimal performance and KPI stability during upgrades.

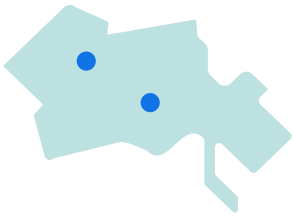


NF = Network Functions
  Over dimensioning required
  Planned site downtime for upgrades
  In service software upgrade

# Benefits for different network sizes

## Small CSP network

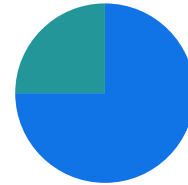
2 sites, each with one Packet Core Controller and one Packet Core Gateway



Today, software upgrades can compromise geographical redundancy. With ISSU capacity is kept intact during the upgrade and redundancy is maintained

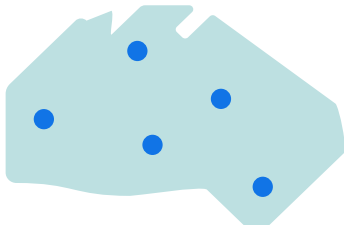
## Benefit

No need to over dimension



## Medium CSP network

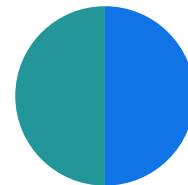
5 sites, each with one Packet Core Controller and one Packet Core Gateway



A medium sized network could be reduced from 5 sites to 4 sites, or from 4 sites to 3.

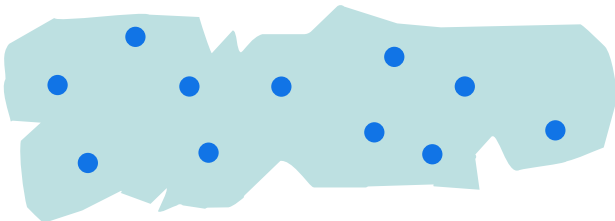
## Benefit

Combination of no need to over dimension and faster deployment



## Large CSP network

15 sites, each with one Packet Core Controller and one Packet Core Gateway



Legacy methods often require a few days to offload and a few days to restore traffic before and after upgrades. With ISSU, offloading is not necessary as traffic continues to be processed.

For example, with 3 days for offload and 3 days for restoration:

### Legacy:

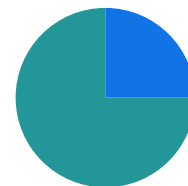
15 sites × 6 days × 2 products  
= 180 days per upgrade cycle.

### ISSU:

No offload time, significantly reducing upgrade lead times.

## Benefit

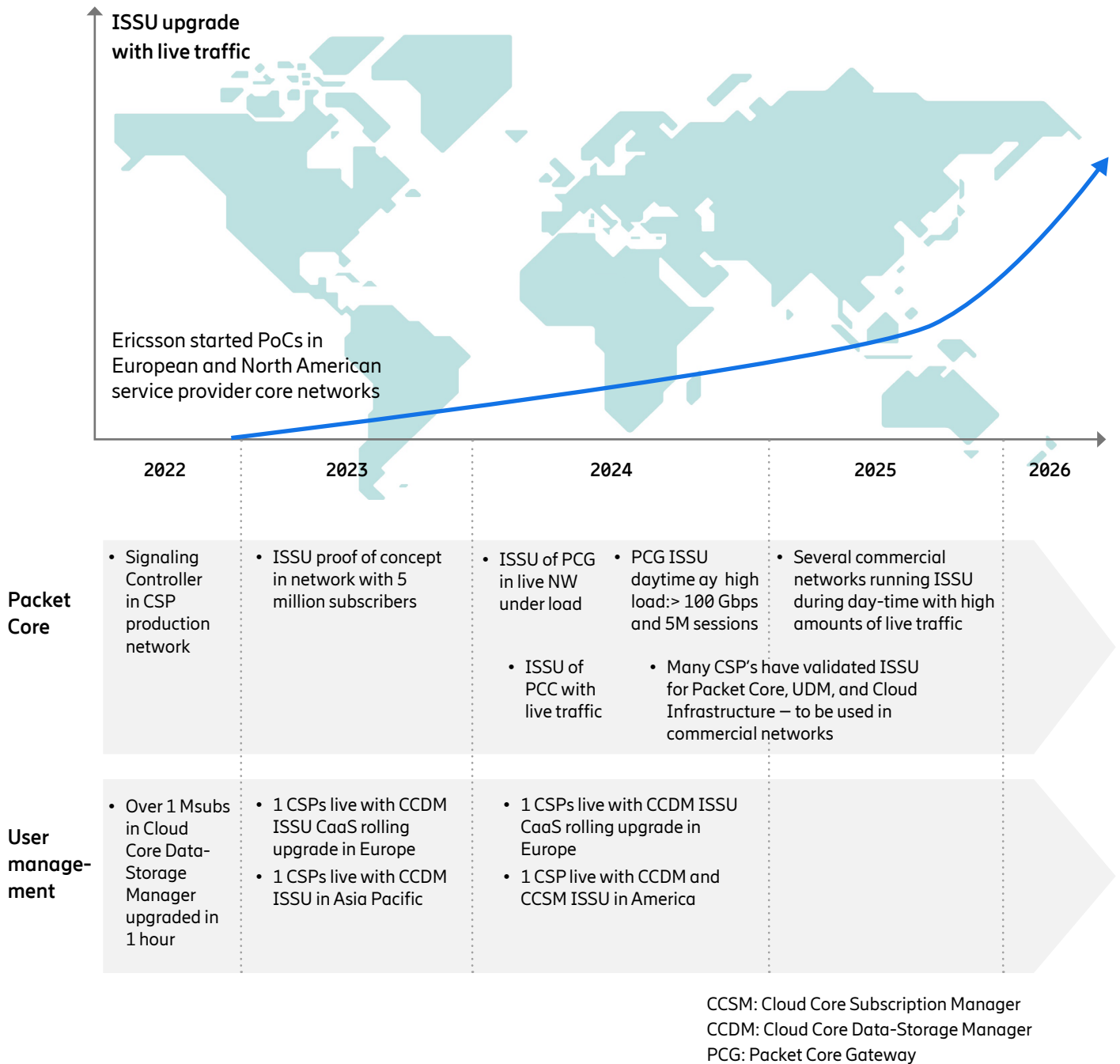
Faster deployment



- Resource efficient deployments
- Lead time efficient deployments

With ISSU the system is not taken out of service - reducing risk and securing network KPIs

# Journey with our customers to in-service software upgrades for commercial traffic



## Further reading:

Learn more about [5G core](#)

Ericsson's high-performing networks provide connectivity for billions of people every day. For nearly 150 years, we've been pioneers in creating technology for communication. We offer mobile communication and connectivity solutions for service providers and enterprises. Together with our customers and partners, we make the digital world of tomorrow a reality.