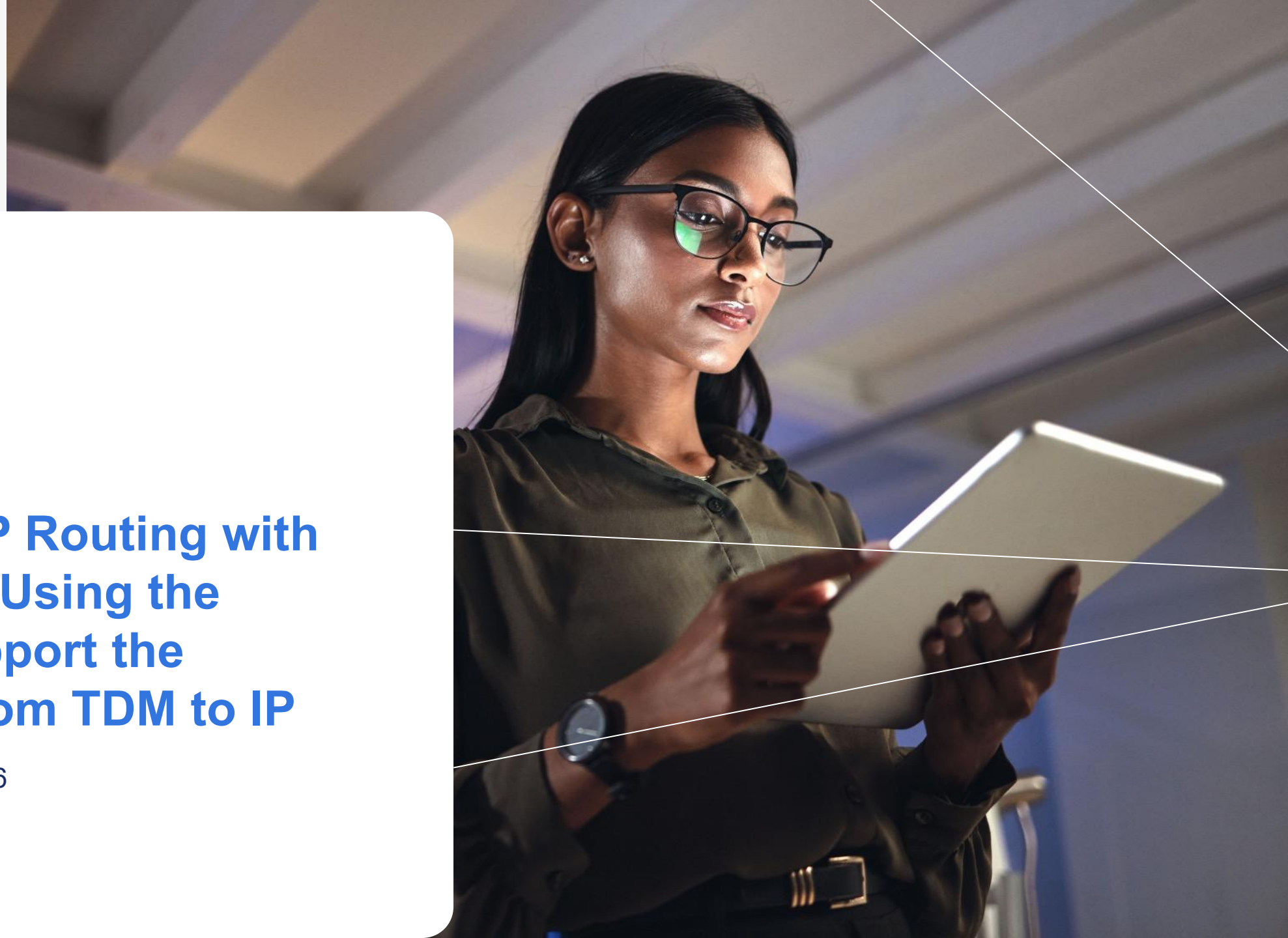


# Advancing IP Routing with Confidence: Using the LERG to Support the Transition from TDM to IP

September 15-17, 2026

© 2026 TNS Inc. – All rights reserved

# The Challenge in the TDM to IP Transition

- Routing is becoming more complex across TDM + IP environments
- Limited visibility into IP routing availability
- Risk to call completion and interconnection accuracy
- Growing pressure from regulatory + network modernization timelines

© 2026 TNS Inc. – All rights reserved

# FCC NPRM: Transition to All-IP and Modernization of Voice Regulations

- FCC is accelerating the transition from TDM to all-IP interconnection
- Proposes sunsetting legacy TDM interconnection and collocation obligations by Dec 31, 2028
- Seeks to redefine the interconnection framework for an IP environment
- Examining FCC authority and potential rules for IP-to-IP interconnection
- Targets elimination of outdated economic structures
  - Intercarrier compensation (ICC), access charges, tariffing
  - Accelerates transition to bill-and-keep
- Aims to remove barriers to IP investment and network modernization
- Emphasizes need for balanced transition
  - Market stability and rural provider impact
  - Public safety, NG911, telecom relay services and consumer protections
- Signals related proceedings will address compensation, tariffing, and legacy rules

© 2026 TNS Inc. – All rights reserved

# IPNNI ALIII Subgroup

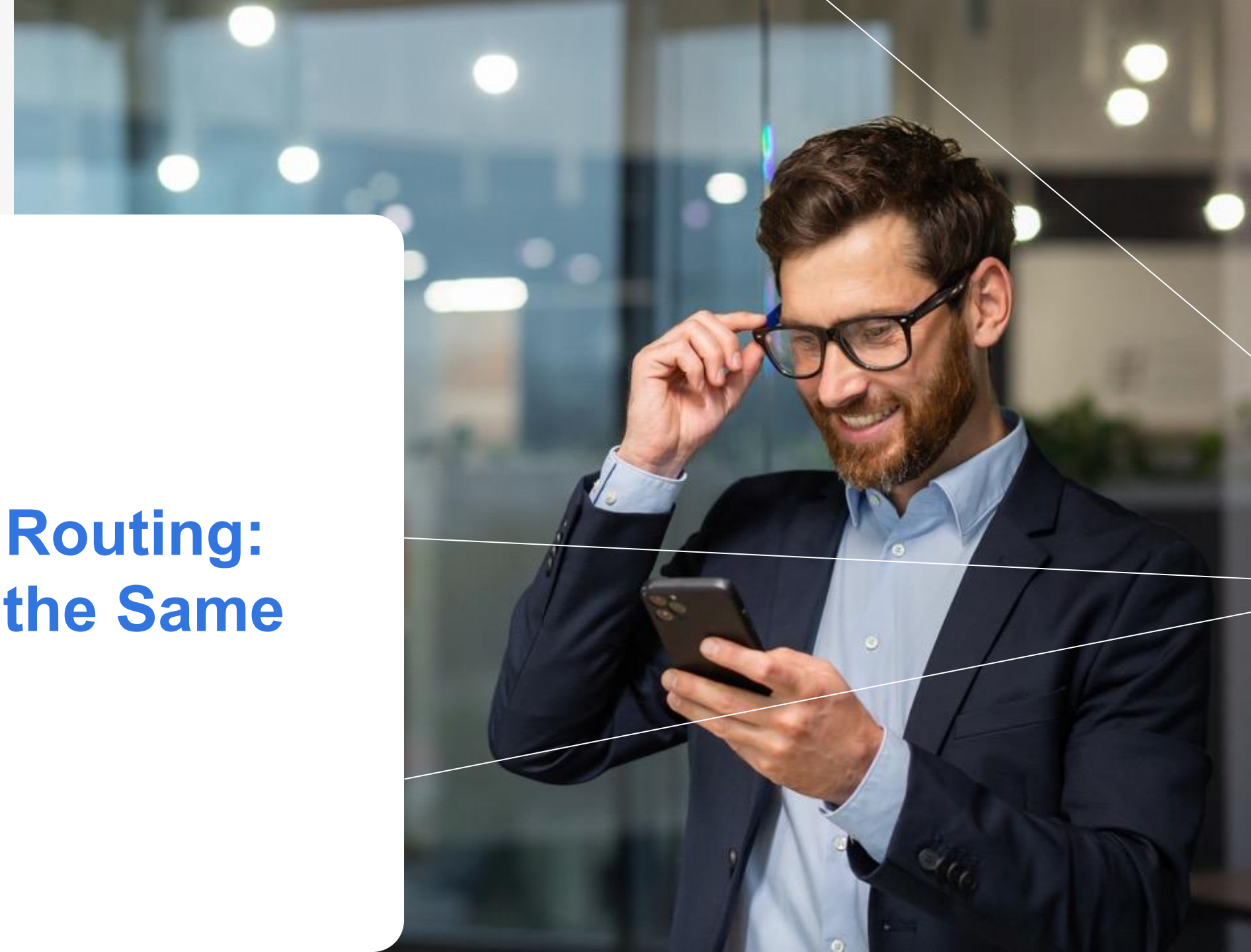
- Advance Agreement-Less IP interconnection over the Internet (ALIII) in the ATIS / SIP Forum IP-NNI Task Force (ALIII)
- Enable IP-to-IP voice interconnection without bilateral agreements
- Leverage FQDNs and DNS to route calls to terminating providers
- Evaluate the role of existing numbering and routing data sources (e.g., NPAC, LERG Routing Guide)
- Align with FCC IP transition and numbering dockets
- Reinforces the need for authoritative FQDN + routing data sources to support IP call delivery

© 2026 TNS Inc. – All rights reserved

# Rural Carriers Concerns

- Oppose public-internet routing as a national default.
- Argues it creates a "two-tier system" where large providers peer physically among themselves while small/rural providers get best-efforts service with no SLAs.
- Propose one default physical IP POI per state (using FCC's IXPs) plus a "rural transport rule" requiring interconnection within an ETC's designated service area.
- Voluntary public-internet use remains permitted.
- Rural call completion.
- Reliability, quality of service guarantees, low latency and security concerns with ALIII.

© 2026 TNS Inc. – All rights reserved



# IP and TDM Routing: What Stays the Same

© 2026 TNS Inc. – All rights reserved

# TDM and IP Routing

1. TDM and IP both rely on shared, neutral data sources to ensure reachability, interoperability and transparency —LERG and NPAC, with Domain Name System (DNS) added for IP.

2. Routing follows the same model: identify destination, check porting, consult LERG, then select ISUP (TDM) or SIP (IP).

3. IP adds identifiers (FQDNs, SIP URIs) within the existing provisioning and routing framework.

4. TDM and IP share parallel call-flow components, supporting a hybrid transition.

© 2026 TNS Inc. – All rights reserved

# What LERG/BIRRDS Support Today for IP

## BIRRDS

supports designating an LRN, NPA-NXX* or NPA-NXX-X** as "IP-Capable

## PROVIDERS

associate an FQDN with any IP-Capable LRN, NPA-NXX or NPA-NXX-X

## LERG

publishes these IP routing elements and makes them available industry-wide

* Central Office Code (CO Code)
** Thousands-Block

© 2026 TNS Inc. – All rights reserved

# How LERG/BIRRDS Supports IP Today

**Publishes authoritative IP routing data via existing AOCN workflows—no new systems required.**

Captures IP routing data (flags + FQDNs) in current interfaces

No need for new APIs or database replacements



**Enables DNS-based IP routing without disrupting legacy flows.**

FQDNs translate to IP via DNS lookups

Supports SIP routing while maintaining LRNs/TDM during transition

© 2026 TNS Inc. – All rights reserved

# What Alternate Route Database System (ARDS) and RouteSelect Support Today for TDM and IP

## ARDS

Publish multiple TDM and/or IP routes per NPA-NXX* and/or LRN

## PROVIDERS*

Associate FQDNs with any IP-Capable LRN, NPA-NXX**

## RouteSelect

Publish and distribute additional TDM + IP routing options industry-wide

Enables secondary and tertiary routing options

* CO Code Holders and Alternate Route Providers
** Central Office Code (CO Code)

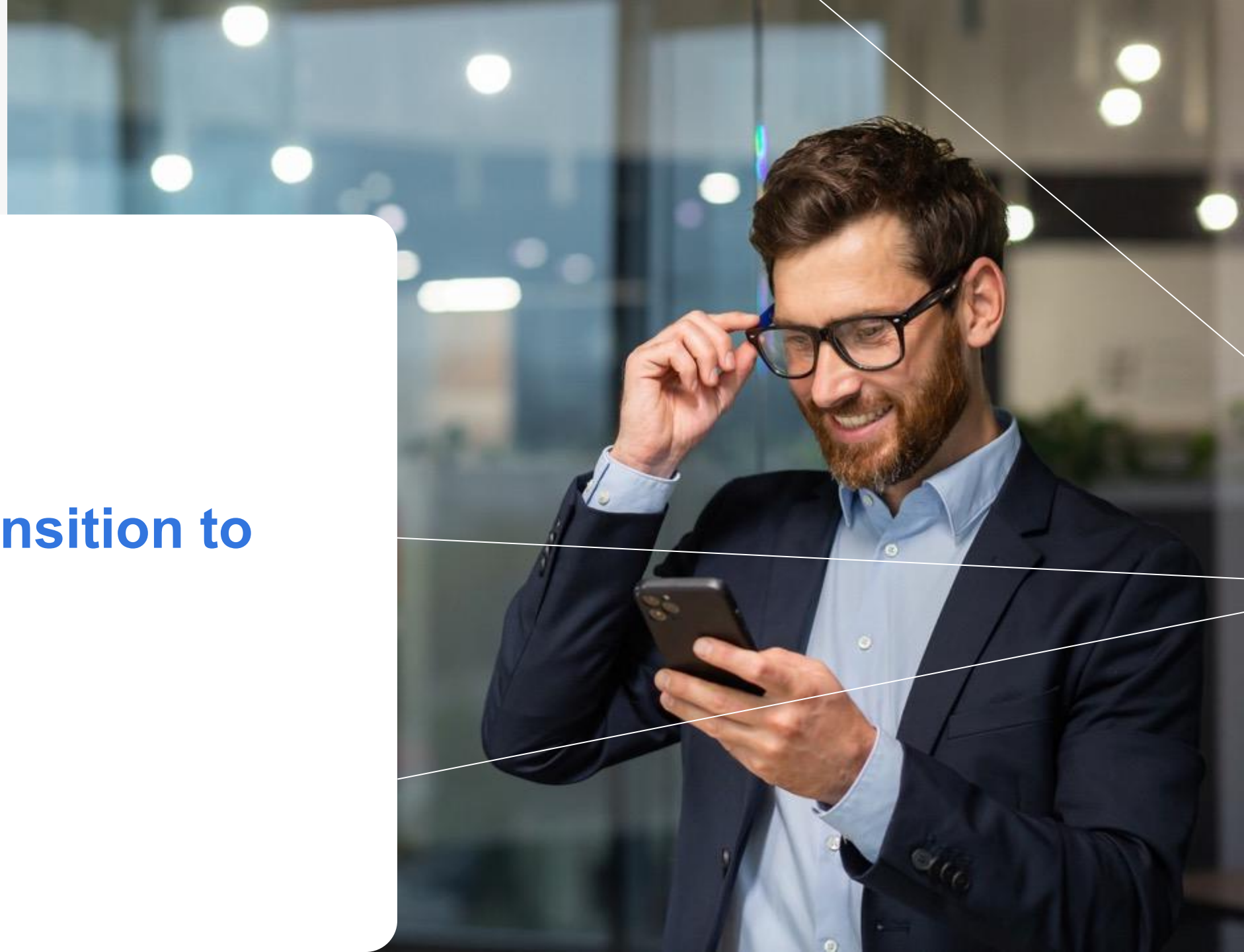
© 2026 TNS Inc. – All rights reserved

# ARDs and RouteSelect Support the Transition

- Publish multiple routing paths (TDM + IP)
- Add alternate + failover routing strategies
- Improve network resiliency during transition
- Flexible routing strategies based on industry practices



© 2026 TNS Inc. – All rights reserved



# Confident Transition to IP Routing

© 2026 TNS Inc. – All rights reserved

# Conclusion: Enabling the Transition to Accurate, Resilient IP Routing

- **Accurate routing starts with authoritative data**
  - Centralized, standardized IP routing data is critical to ensuring precision and interoperability across networks
- **Resiliency and flexibility are essential in hybrid environments**
  - Supporting multiple routing paths and failover capabilities strengthens performance during TDM-to-IP transition
- **Simplification drives operational efficiency**
  - Trusted data sources and streamlined interconnection management reduce complexity and risk
- **A clear path forward to full IP adoption**
  - Improved visibility and routing intelligence enable faster decisions and scalable evolution to IP networks

© 2026 TNS Inc. – All rights reserved



# Q&A

© 2026 TNS Inc. – All rights reserved