



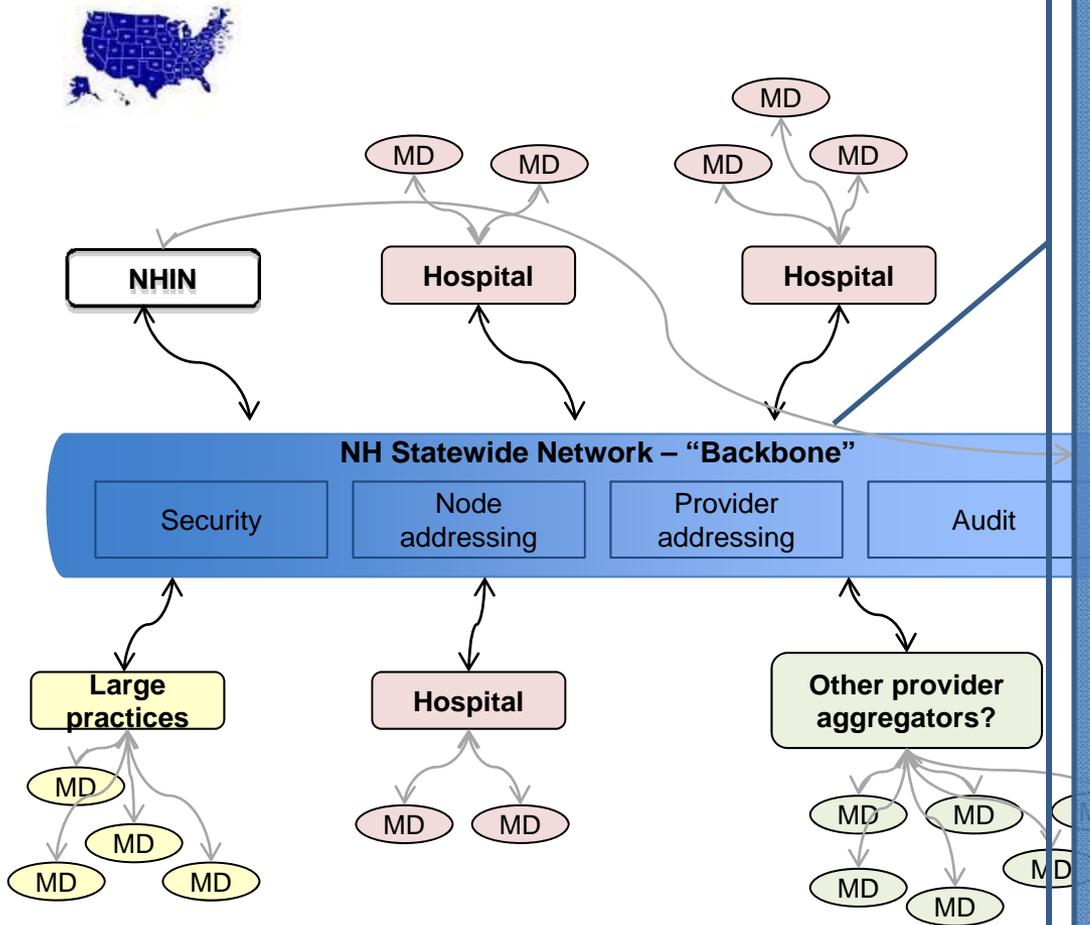
State of New Hampshire

Health Information Exchange Planning and Implementation Project

Discussion document for Technical Infrastructure Workgroup

July 28, 2010

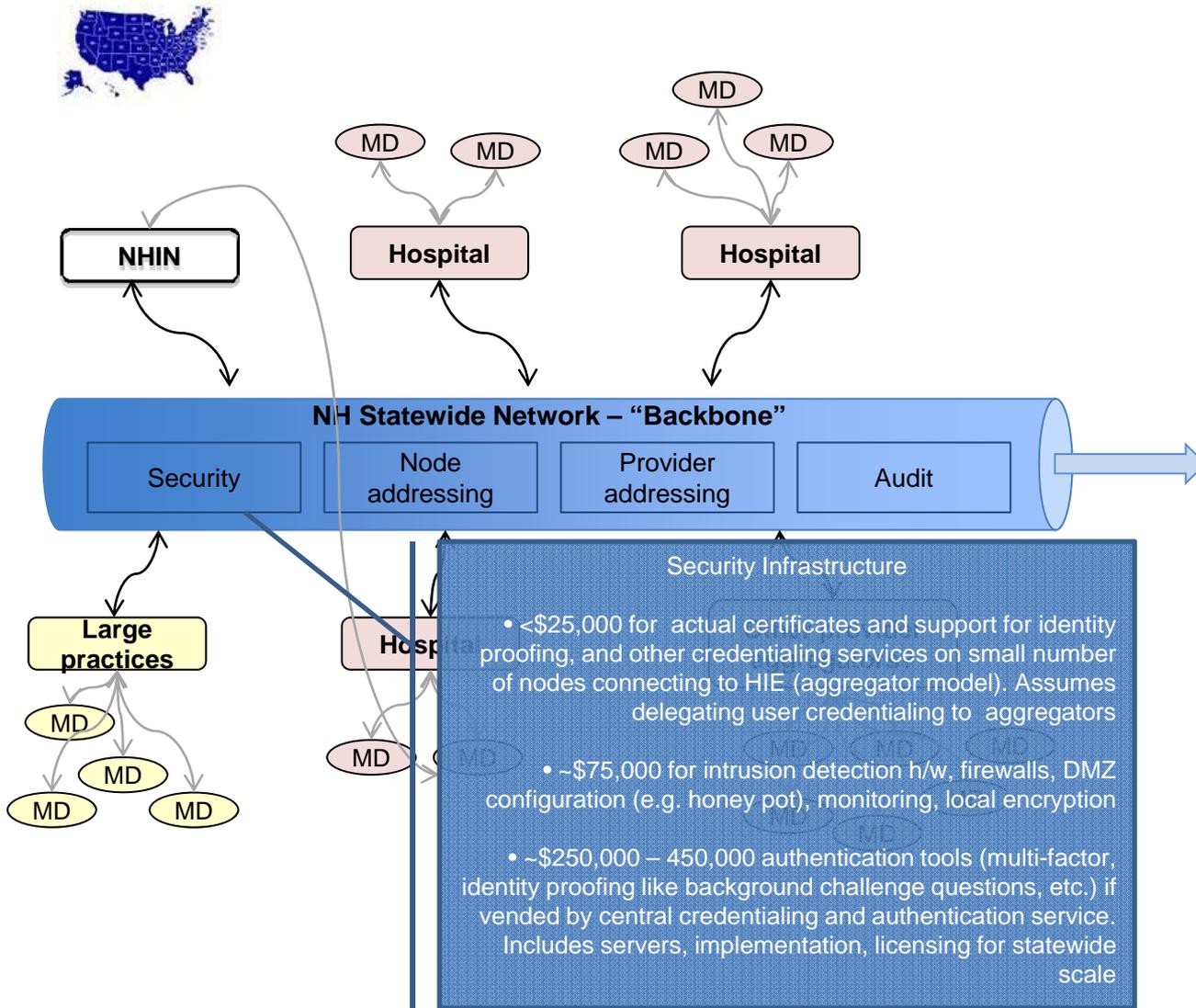
Backbone Infrastructure



Backbone Infrastructure

- Buy: ~\$300,000 – 2,500,000 for commercial healthcare community platform software, which could have more elements than are required for phase 1 (e.g. – portals, vendor integration libraries, MPI, etc.).
- Assemble/Integrate: ~\$125,000 - \$500,000 for basic technology platform (e.g. commercial ESB, integration engine, etc.); ~\$100,000 for development / enhancement of basic administrative tools for HIE operation and reporting. ~\$75,000 development of baseline architecture (e.g. - SOA, UDDI, etc.);
- Build: ~\$750,000 - \$4,000,000 for custom development of entire infrastructure to support operational requirements, administrative requirements, technical/functional requirements, etc., including, development, documentation, testing,, deployment. This may save in out years on maintenance costs if HIE is thought to be limited in its evolution, or if infrastructure can be vended to other states, or to local provider aggregators to defray costs
- Addition to Any Above: ~\$150,000 integration work to adapt to local environment of state (other vendor products, architectural nuances, privacy management rules, etc.); ~\$40,000 - \$100,000 per service for development of specialized transaction types including development, testing, documentation, etc. (e.g. – registry connections, requests for information with person-in-the-loop workflow management, etc.), of which there will probably be 2-4 required in the end. ~\$300,000 – 750,000 for hosting setup, initial hardware procurement (limit costs through virtual servers), redundancy, hot mirror hosting site, professional management of data center over a year; ~\$250,000 - \$1,000,000 for helpdesk, incident management, DR/BC, and other support concerns.

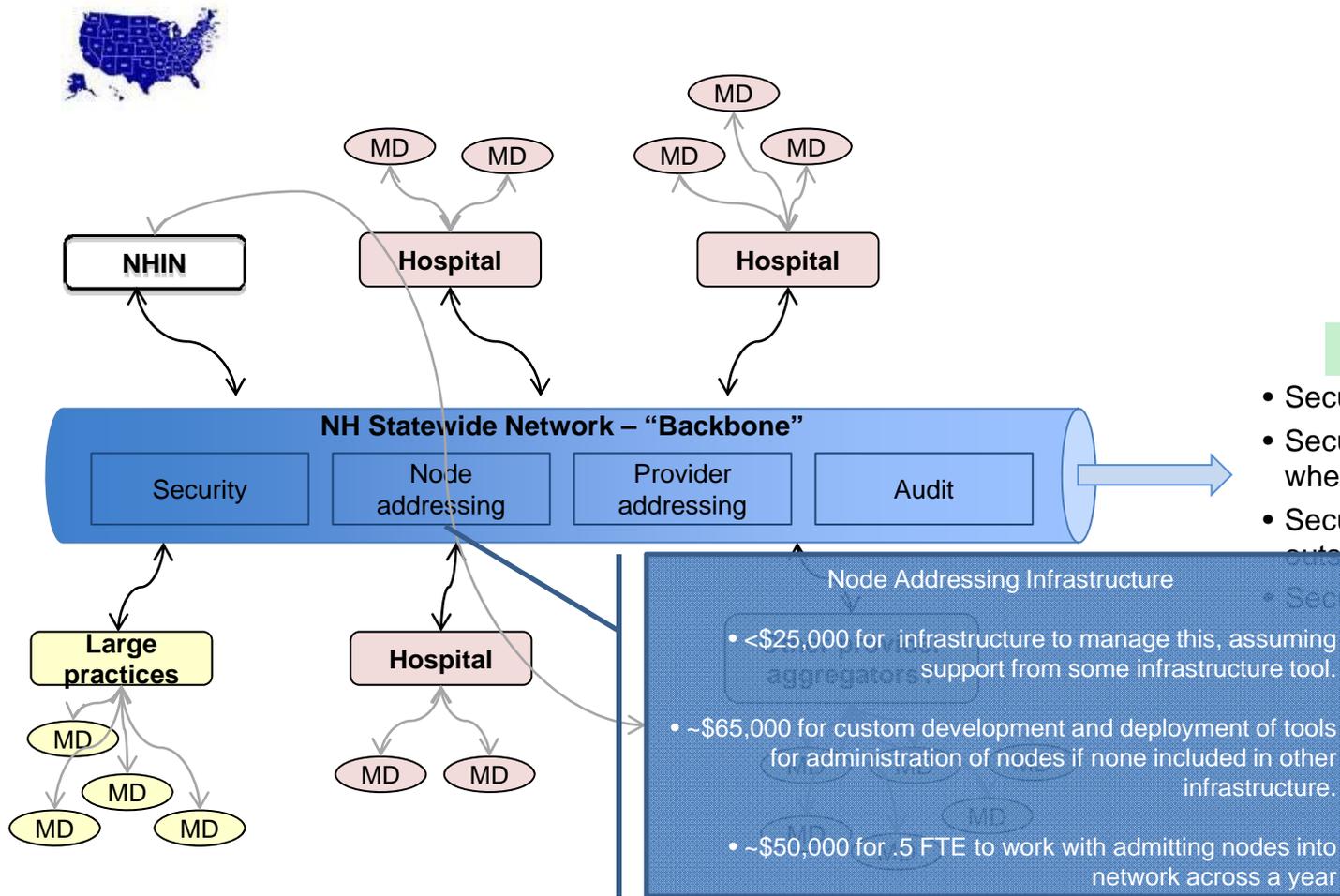
Security Infrastructure



Phase 1

- Secure routing across hubs
- Secure routing within hubs where not currently available
- Secure routing with entities outside of hospital hubs
- Secure routing with NHIN

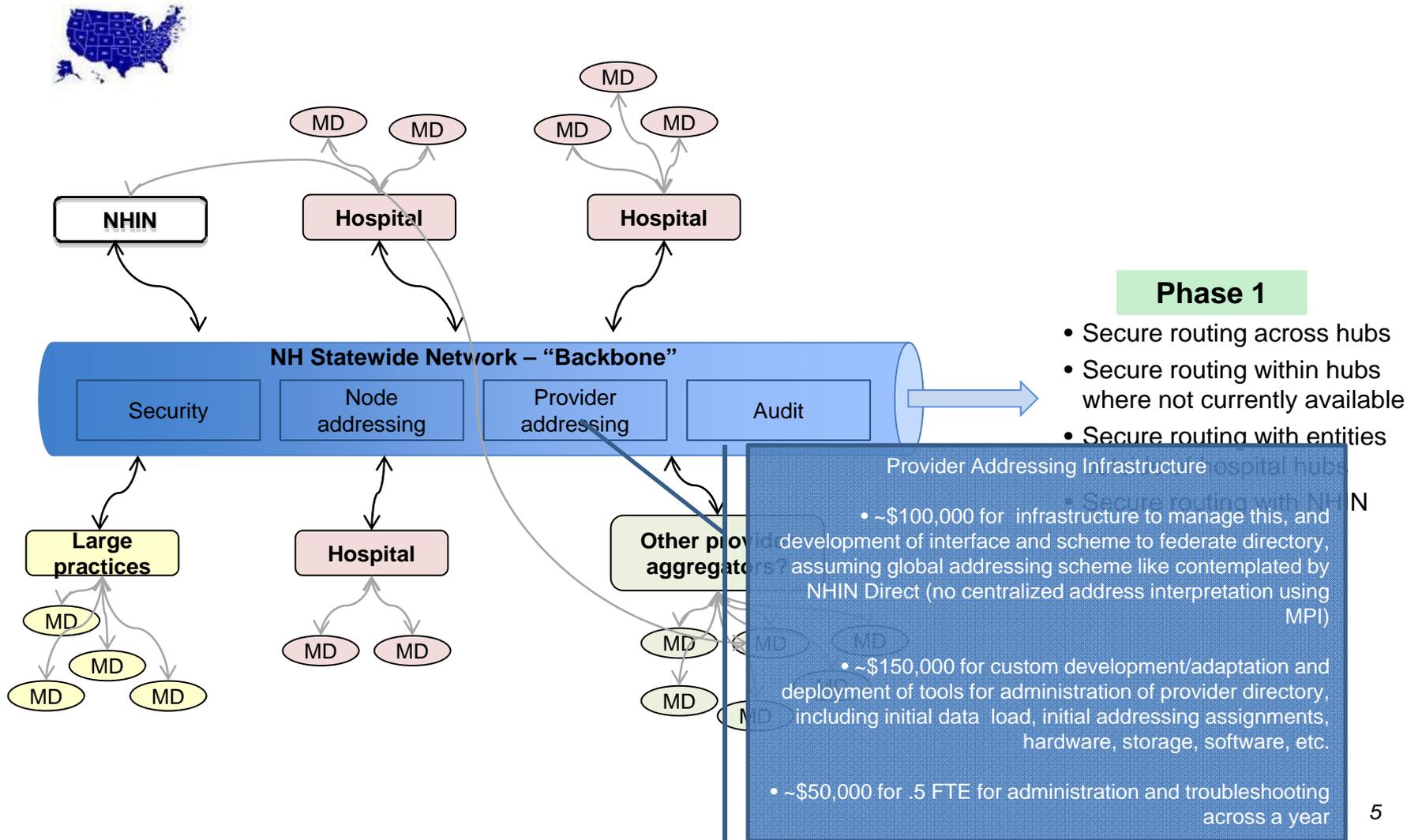
Node Addressing Infrastructure



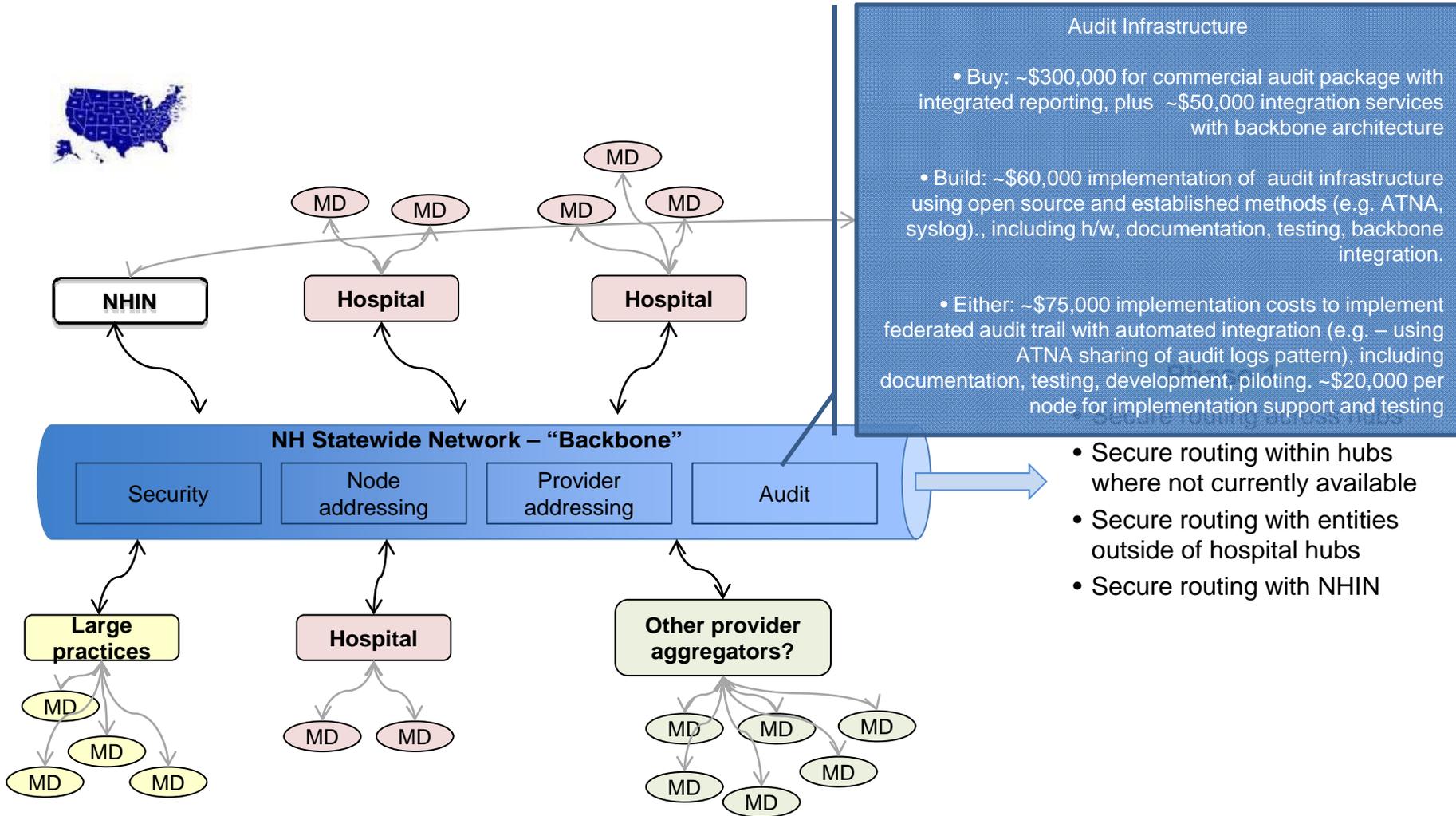
Phase 1

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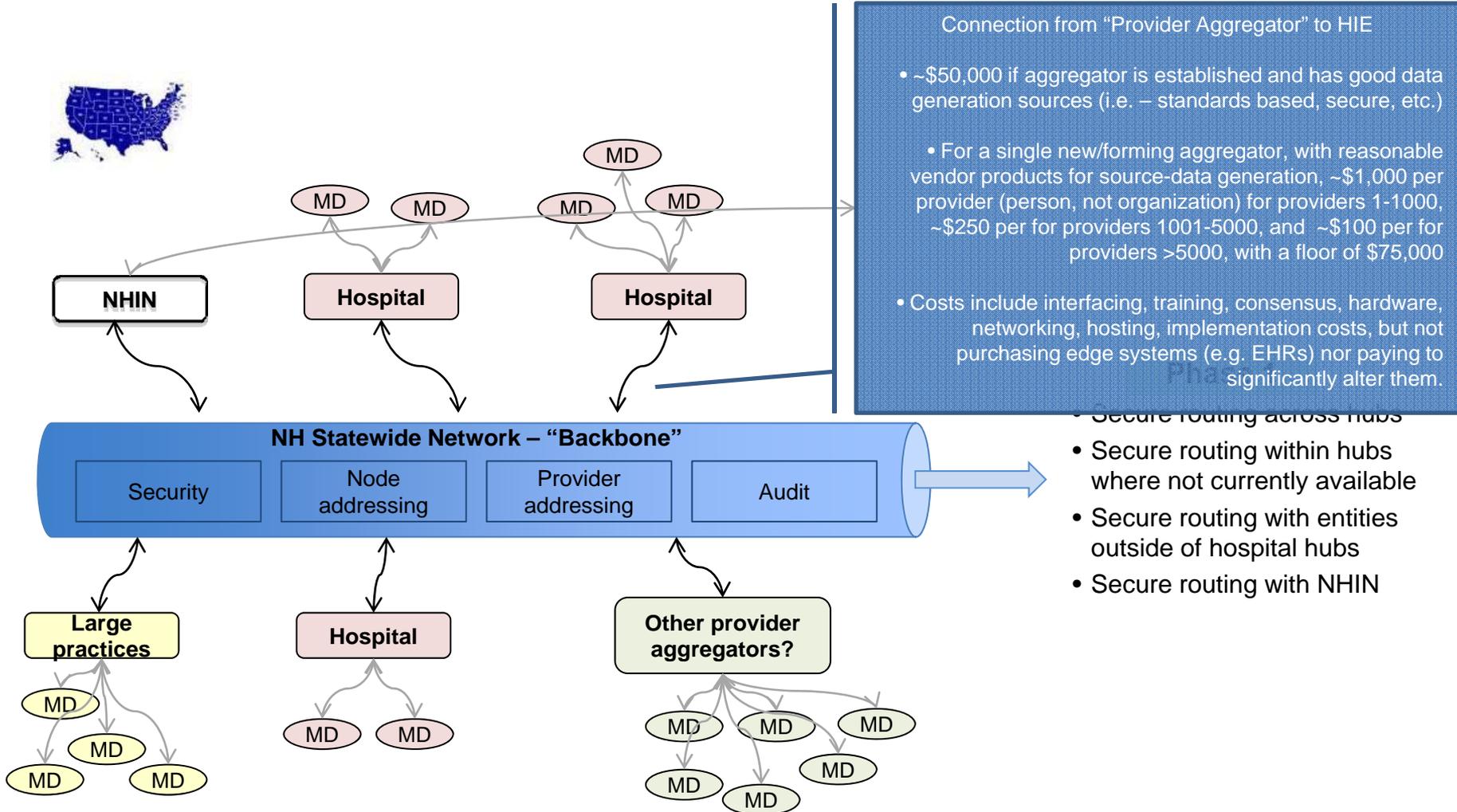
Provider Addressing Infrastructure



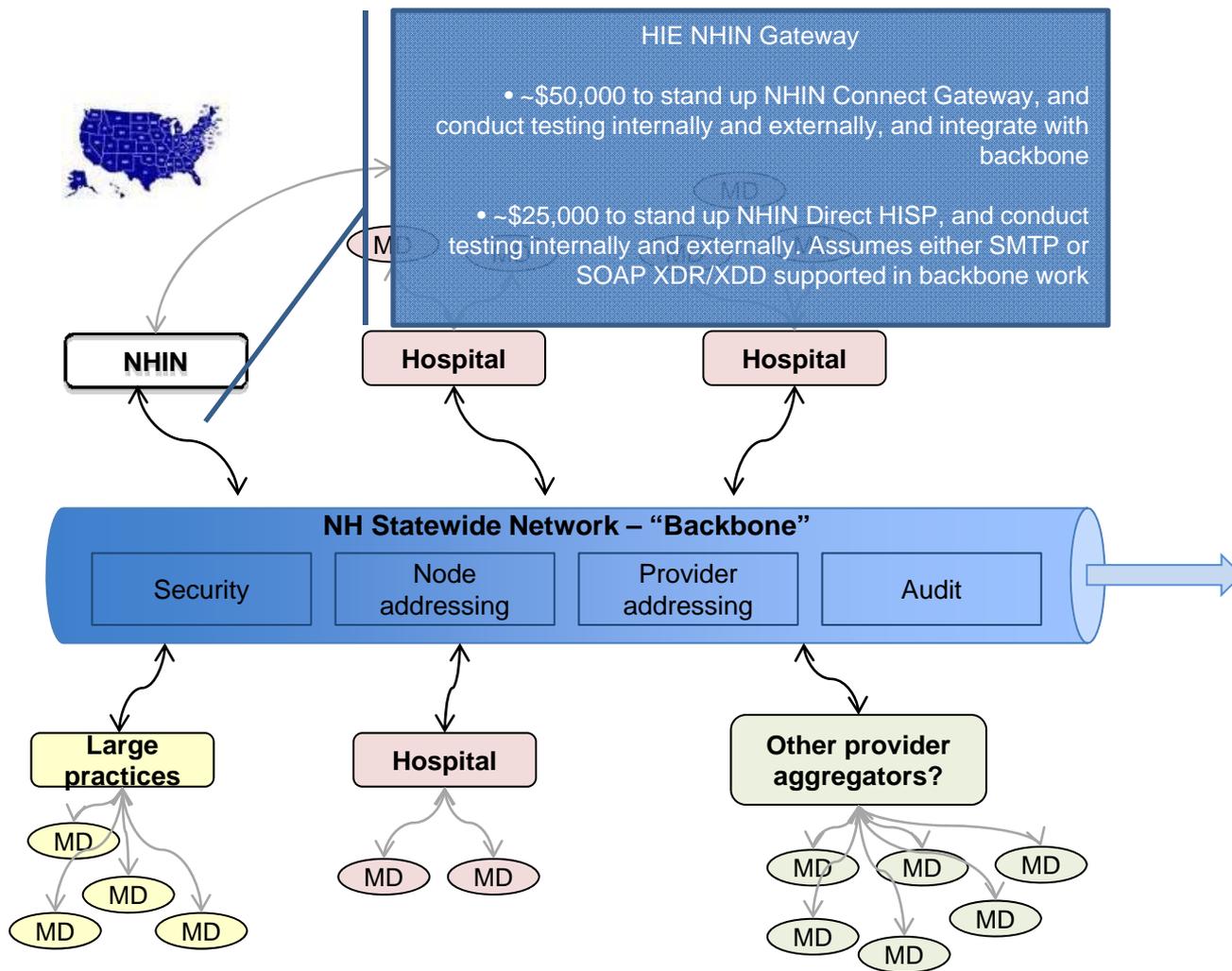
Audit Infrastructure



Connection from “Provider Aggregator” to HIE



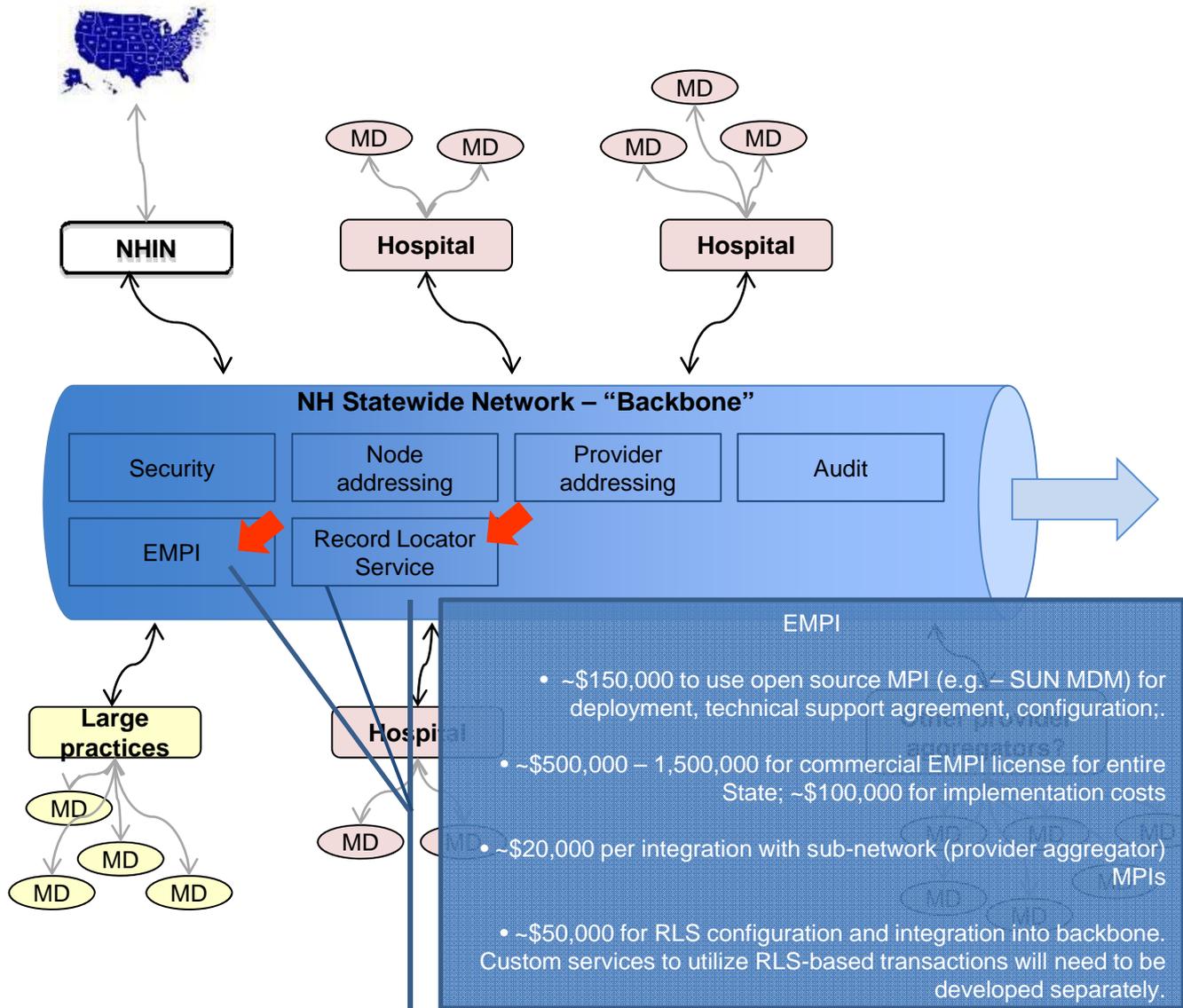
HIE NHIN Gateway



Phase 1

- Secure routing across hubs
- Secure routing within hubs where not currently available
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- Secure routing with NHIN

Addition of MPI & RLS



Phase 1

- Secure routing across hubs
- Secure routing within hubs where not currently available
- Secure routing with entities outside of hospital hubs
- Secure routing with NHIN

Workgroup is responsible for 2 sections of the plan – Environmental Scan to be handled by UNH

Deliverable	Governance WG	Finance WG	Technical Infrastructure WG	Bus and Tech Ops WG	Legal Policy WG	Core Team
Strategic Plan						
Executive Summary	C	C	C	C	C	AR
SP-1 Environmental Scan	I	I	R	C	I	A
SP-2 HIE Development and Adoption Summary	C	C	C	R	C	A
SP-3 HIT Adoption Summary	C	C	C	R	I	A
SP-4 Medicaid Coordination Summary	R	C	C	C	C	A
SP-5.1 Coordination of Medicare and Federally Funded, State Based Programs Summary	R	I	I	I	I	A
SP-5.2 Participation with Federal Care Delivery Organizations Summary	R	I	I	I	I	A
SP-6 Coordination of Other ARRA Programs	R	I	C	I	I	A
SP-7 Coordination with Public Health Programs	C	I	C	R	C	A
SP-8.1 HIE Governance Summary	R	I	I	I	I	A
SP-8.2 HIE Finance Summary	I	R	I	I	I	A
SP-8.3 HIE Technical Infrastructure Summary	I	I	R	I	I	A
SP-8.4 HIE Business and Technical Operations	I	I	I	R	I	A
SP-8.5 HIE Legal/policy Summary	I	I	I	I	R	A
SP-9 HIE Strategic Plan	C	C	C	C	C	AR
Operational Plan						
OP-1 Coordinate with ARRA Programs Summary	R	I	I	I	I	A
OP-2 Coordinate with Other States Summary	R	I	C	C	C	A
OP-3.1 HIE Governance Summary	R	I	I	I	I	A
OP-3.2 HIE Finance Summary	I	R	I	I	I	A
OP-3.3 HIE Technical Infrastructure Summary	I	I	R	I	I	A
OP-3.4 HIE Business and Technical Operations Summary	I	I	I	R	I	A
OP-3.5 HIE Legal & Policy Summary	I	I	I	I	R	A
OP-4 HIE Operational Plan	C	C	C	C	C	AR
Accountable (Approval Authority)	A					
Responsible for Content	R					
Consulted	C					
Informed	I					

SP-8.3 HIE Technical Infrastructure

Topic Guidance from ONC

- ❑ **Interoperability** - The plan must indicate whether the ***HIE services will include participation in the NHIN***. The plan shall include ***the appropriate HHS adopted standards and certifications for health information exchange***, especially planning and accounting for ***meaningful use criteria*** to be established by the Secretary through the rulemaking process.
- ❑ **Technical Architecture/Approach** (*encouraged but not required*)– Because the state or SDE may or may not implement HIE, ***the Strategic Plan may include an outline of the data and technical architectures and describe the approach to be used***, including the HIE services to be offered as appropriate for the state's HIE capacity development.

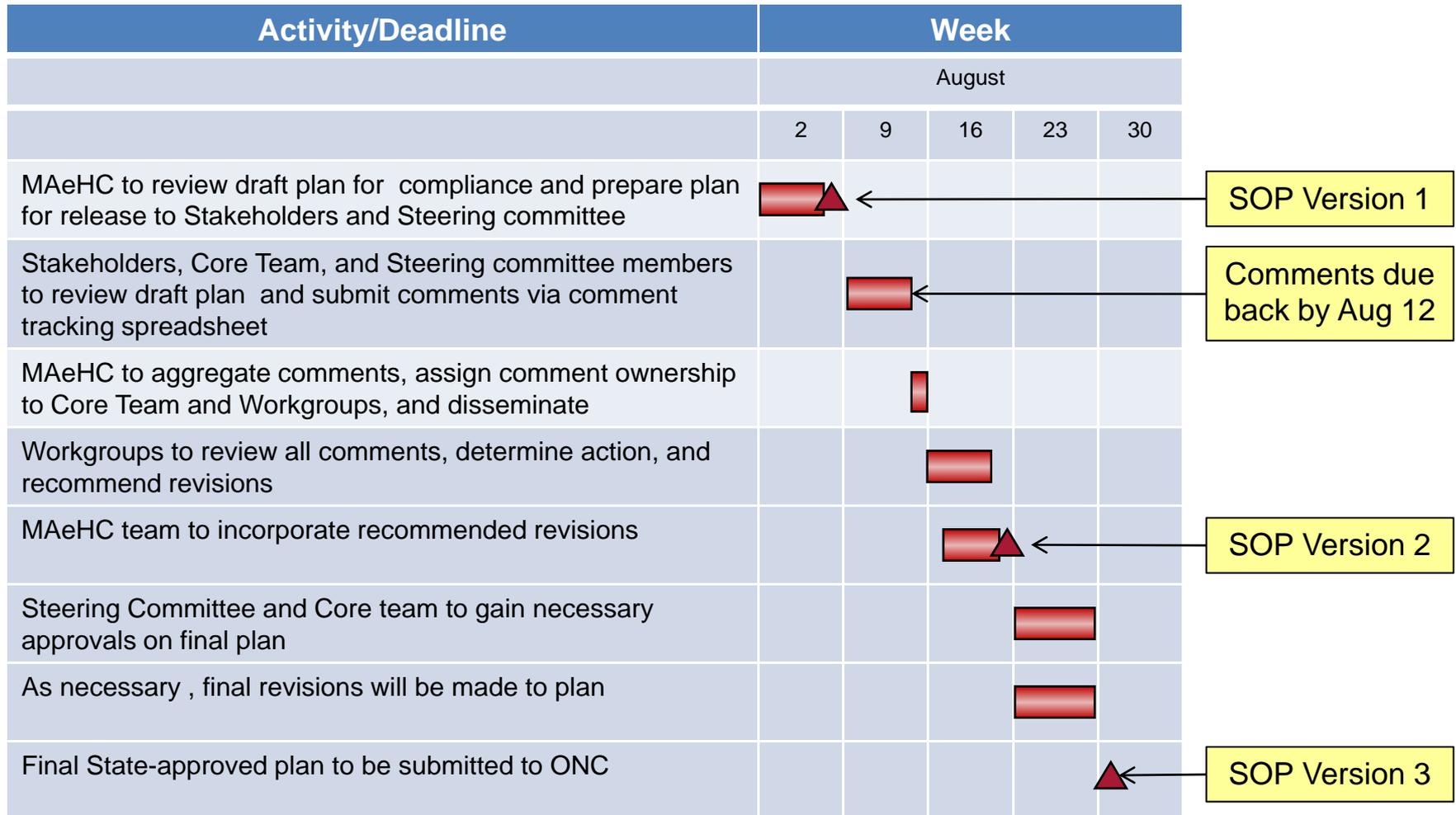
OP-3.3 HIE Technical Infrastructure Summary

Topic Guidance from ONC

- ❑ **Standards and Certifications** –The Operational Plan shall ***describe efforts to become consistent with HHS adopted interoperability standards and any certification requirements, for projects that are just starting; demonstrated compliance, or plans toward becoming consistent with HHS adopted interoperability standards and certifications*** if applicable, for those projects that are already implemented or under implementation.
- ❑ **Technical Architecture** – The Operational Plan ***must describe how the technical architecture will accommodate the requirements to ensure statewide availability of HIE among healthcare providers, public health and those offering service for patient engagement and data access.*** The technical architecture ***must include plans for the protection of health data.*** This needs to reflect the business and clinical requirements determined via the multi-stakeholder planning process. ***If a state plans to exchange information with federal health care providers including but not limited to VA, DoD, IHS, their plans must specify how the architecture will align with NHIN core services and specifications.***
- ❑ **Technology Deployment** – The Operational Plan ***must describe the technical solutions that will be used to develop HIE capacity within the state and particularly the solutions that will enable meaningful use criteria*** established by the Secretary for 2011, and indicate ***efforts for nationwide health information exchange. If a state plans to participate in the Nationwide Health Information Network (NHIN), their plans must specify how they will be complaint with HHS adopted standards and implementation specifications.*** (For up-to-date publicly available information on meaningful use, see: <http://healthit.hhs.gov/meaningfuluse>).

Looking ahead to the review and finalization of the plan

Segment 1 Timeline: June 1 – October 31



Wrap up and next steps

- ❑ Next Summit: Tuesday, August 03, 2010 8:00 - 12:00
- ❑ Feedback review session to be scheduled for between Aug 16 and 18
- ❑ Meeting summary to be distributed to all workgroups