

Forecasting: Driven by Data

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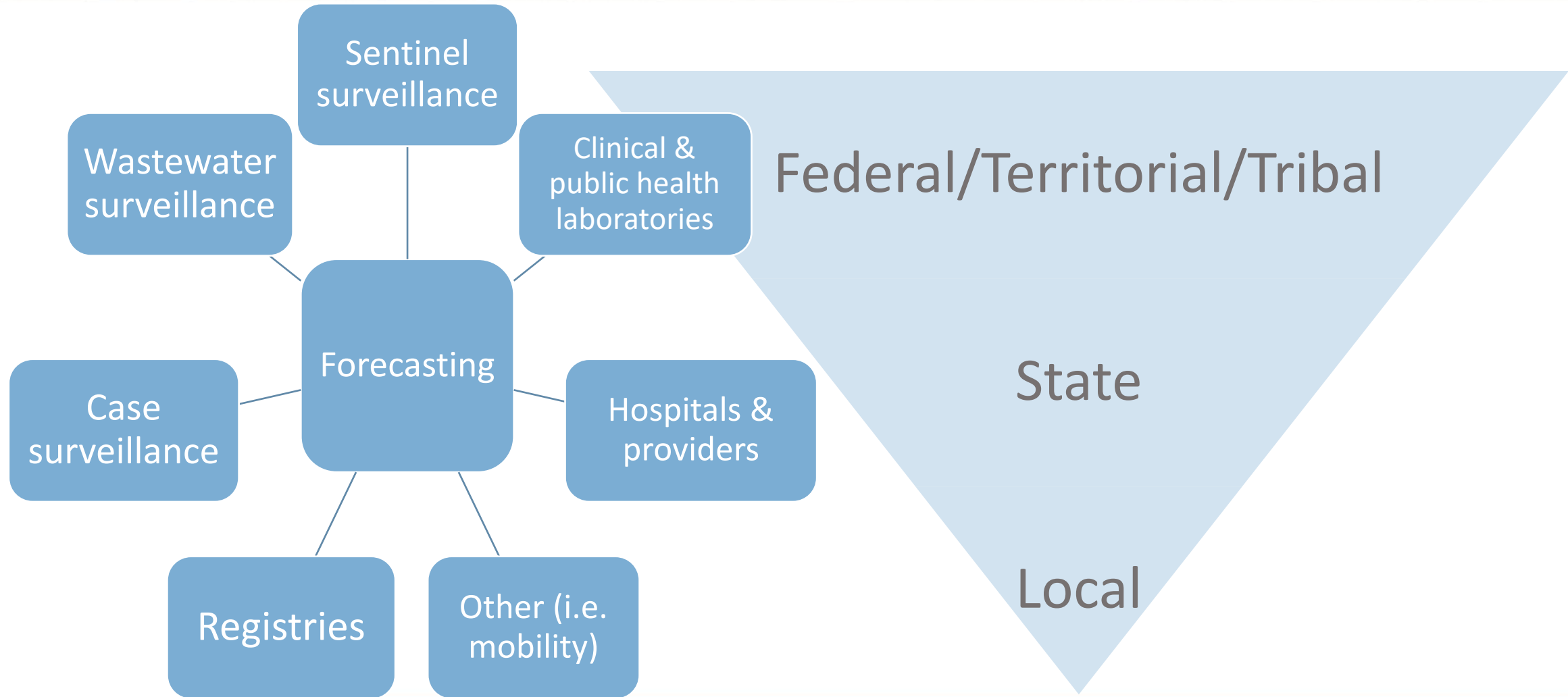
Today's Topics:

- Quality
- Sources
- Governance & Accessibility
- Constraints & Opportunities

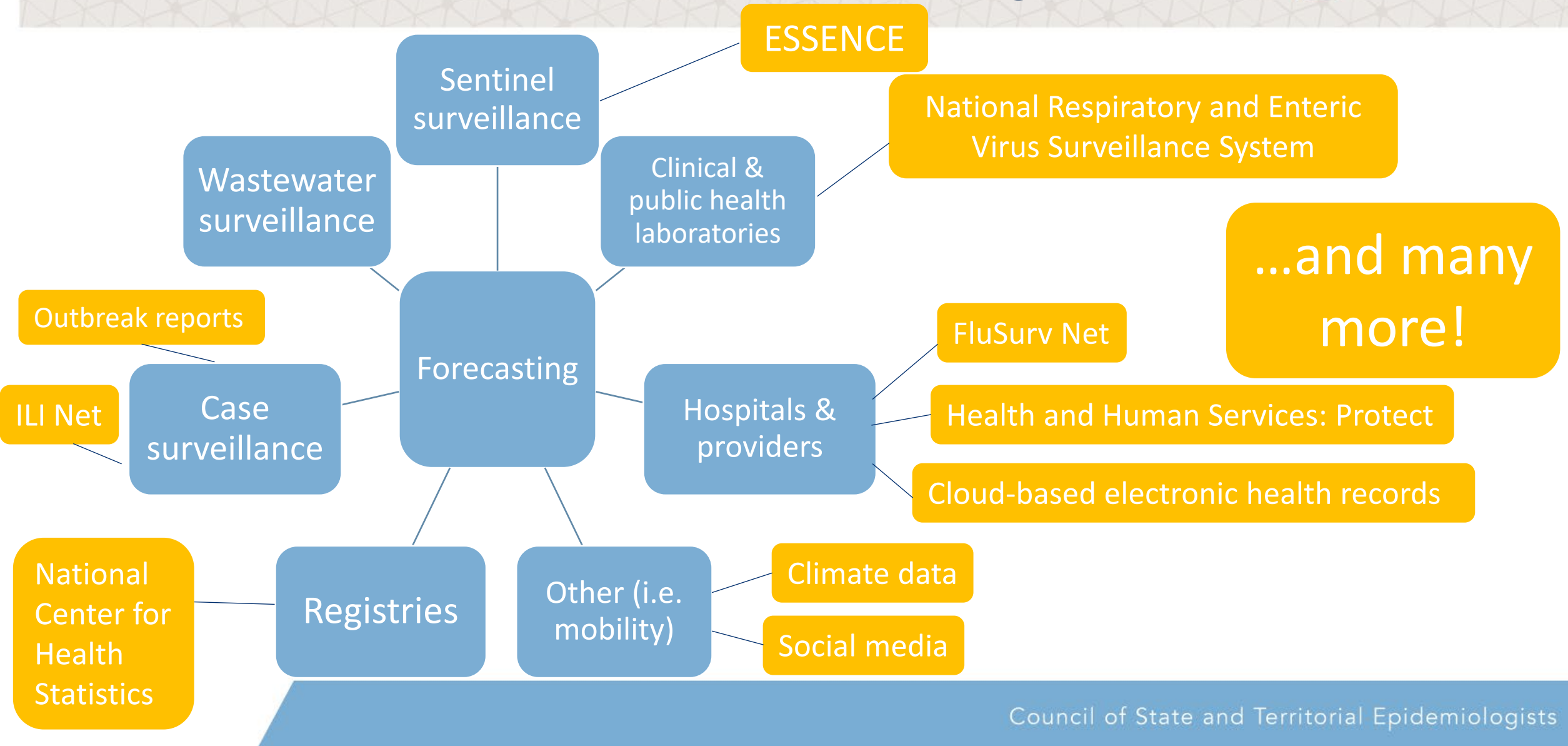
- Granularity
- Timeliness
- Representativeness
- Longevity
- Accessibility

A forecast or model is only as good as the data that go into it

Data Sources



Data Sources: Flu Forecasting

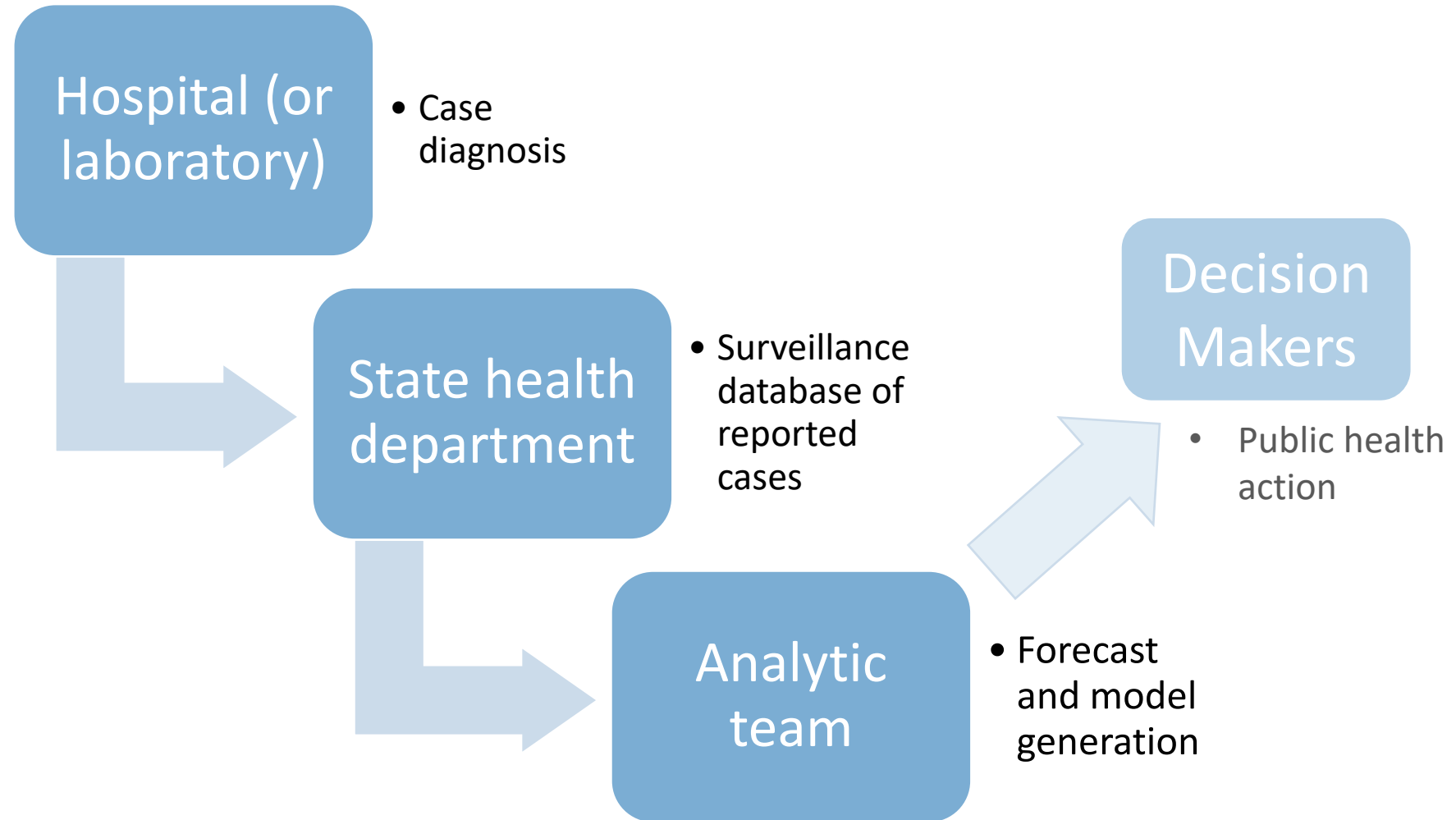


Data Sources: Requirements



- Any pathogen reported in any jurisdiction requires:

1. Human resources
2. IT infrastructure
3. Legal authority for collection & sharing of data



Example: Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases (ELC)

- Federal funding dedicated to state, large local, and US territory and affiliate health departments
- Foundational to national ability to tackle emerging infectious disease threats
- Enhances collaboration between state epidemiology and laboratory, as well as local health departments

- ELC:
 - Provides flexibility to respond to emerging disease threats
 - Provides opportunity for granular, representative, timely, and accessible data
 - Supports the human resources, IT infrastructure, and legal authority to collect data for public health action

- Quality data + well-supported data systems = quality forecasts

Managing Data vs. Managing Risk

- Granular data are essential for targeting public health response
- Collection and use of data is expressly granted by law
- Modernizing data exchange capabilities is a priority
- Balance between public health utility and data security



Example: Data Authority & Forecasting/Modeling:

Conduct of Special Studies by Oregon Health Authority (*Rule 333-019-0005*)

- Designates legal authority to “...conduct special studies concerning the causes and prevention of diseases...”
- Includes the collection of health status and risk information from individuals and groups outside of routine data collection
- Allows collaboration with “local public health authorities, other institutions, or other individuals in the conduct of these studies.”

Data Constraints & Opportunities



Data System Requirements

Constraints

Impacts

Human Resources

- Inadequate funding

IT Infrastructure

- Outdated/incompatible IT infrastructure

Legal Authority

- Lack of guidance/authority for data collection & sharing

Data Quality

- Granularity
- Timeliness
- Representativeness
- Longevity
- Accessibility

Data Constraints & Opportunities



Why do constraints on data quality or data systems matter?

Pandemics happen locally.

Public health uses data to protect people, accelerate prevention and control, stop outbreaks, and save lives.



Our public health systems need to have the *right information* in the *right place* at the *right time* to inform public health action.

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