

Distributed Innovation and Data-driven Policymaking

Douglas Sicker

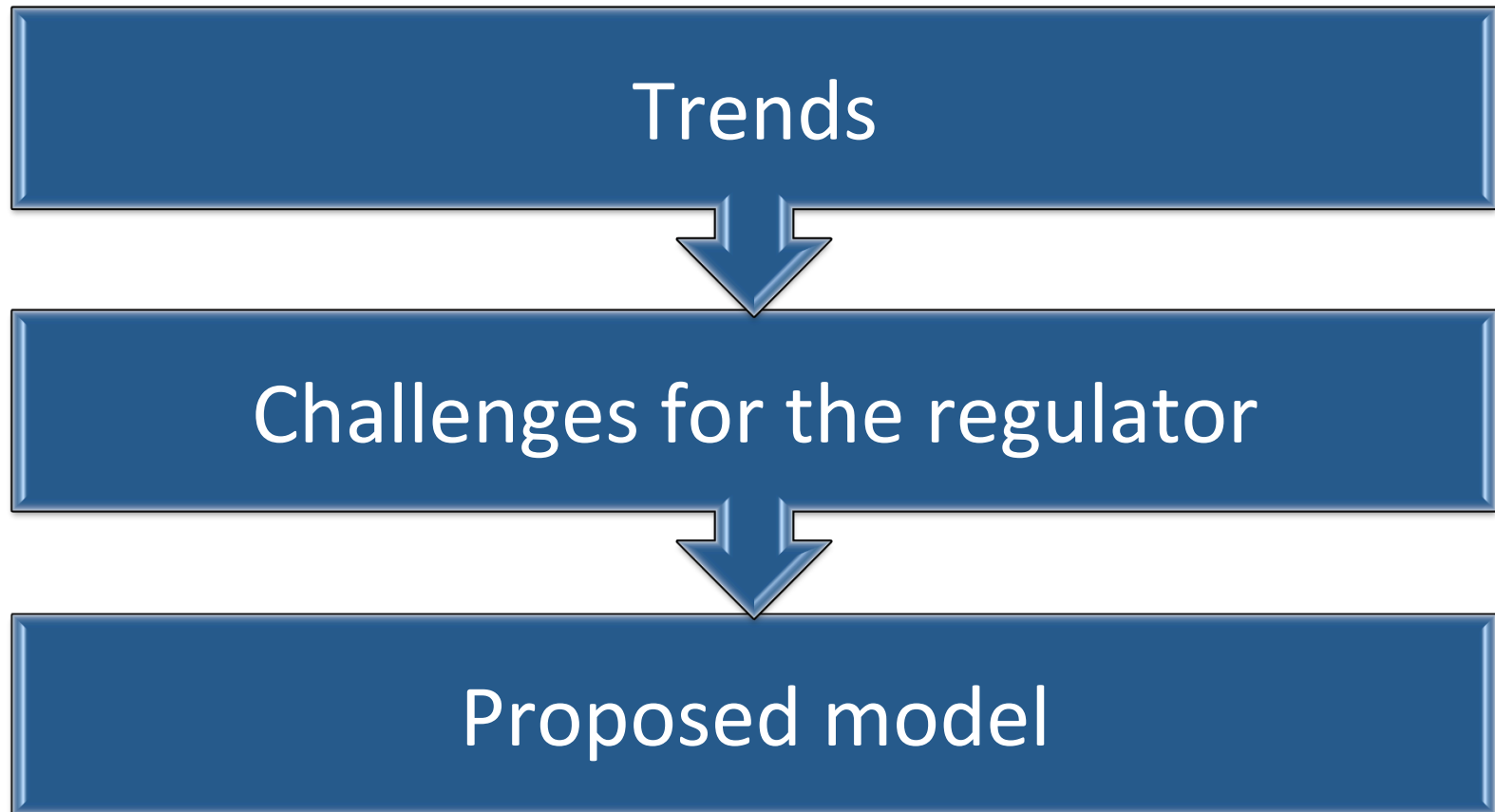
DBC Endowed Professor, Computer Science

Director, Interdisciplinary Telecommunications Program (ITP)

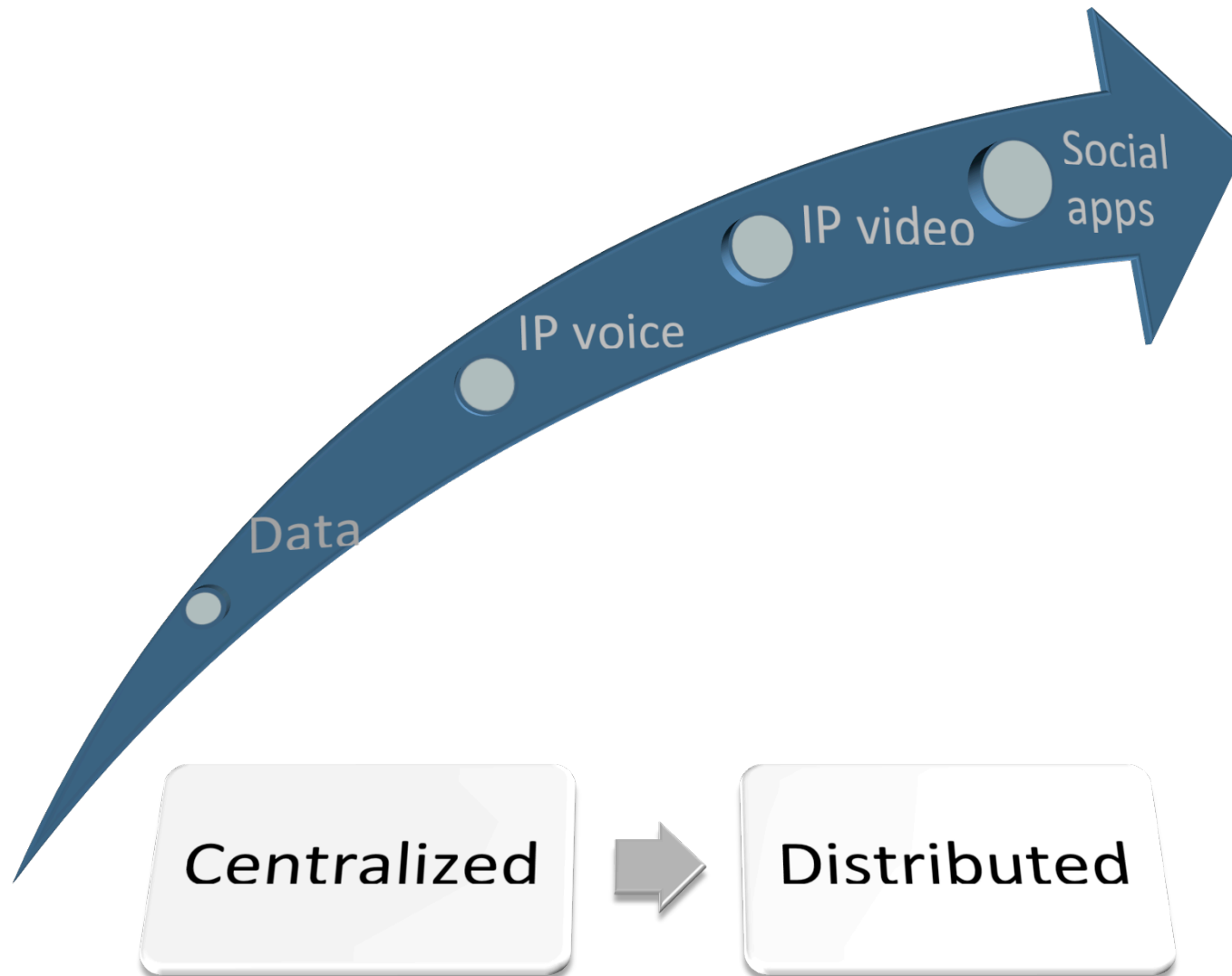
February 10, 2013

Work with Scott Savage (ITP and ECON) & Gabor Molnar (ITP)

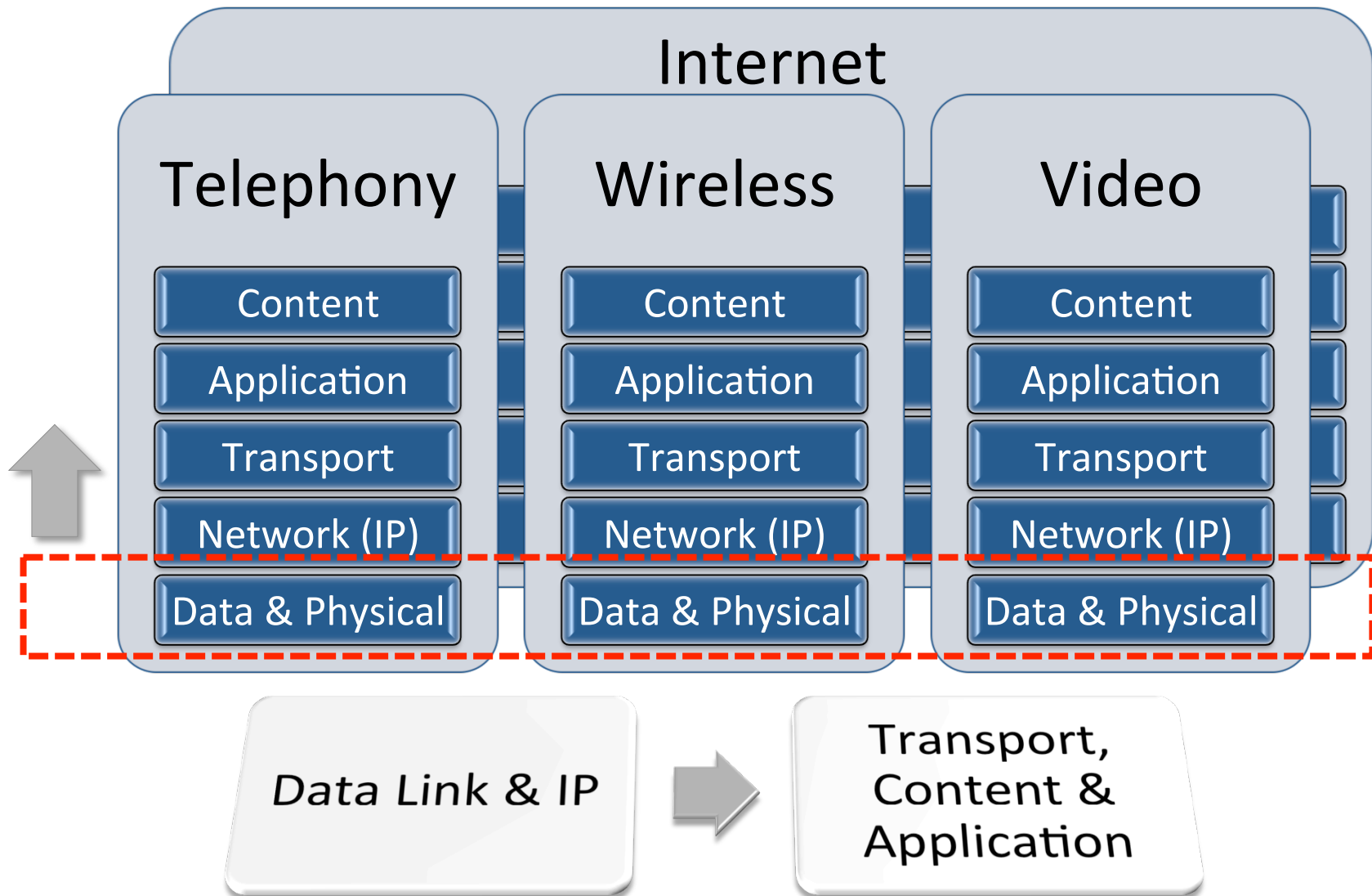
Overview: Moving away from the traditional regulated data collection while assuring data remains available and accurate



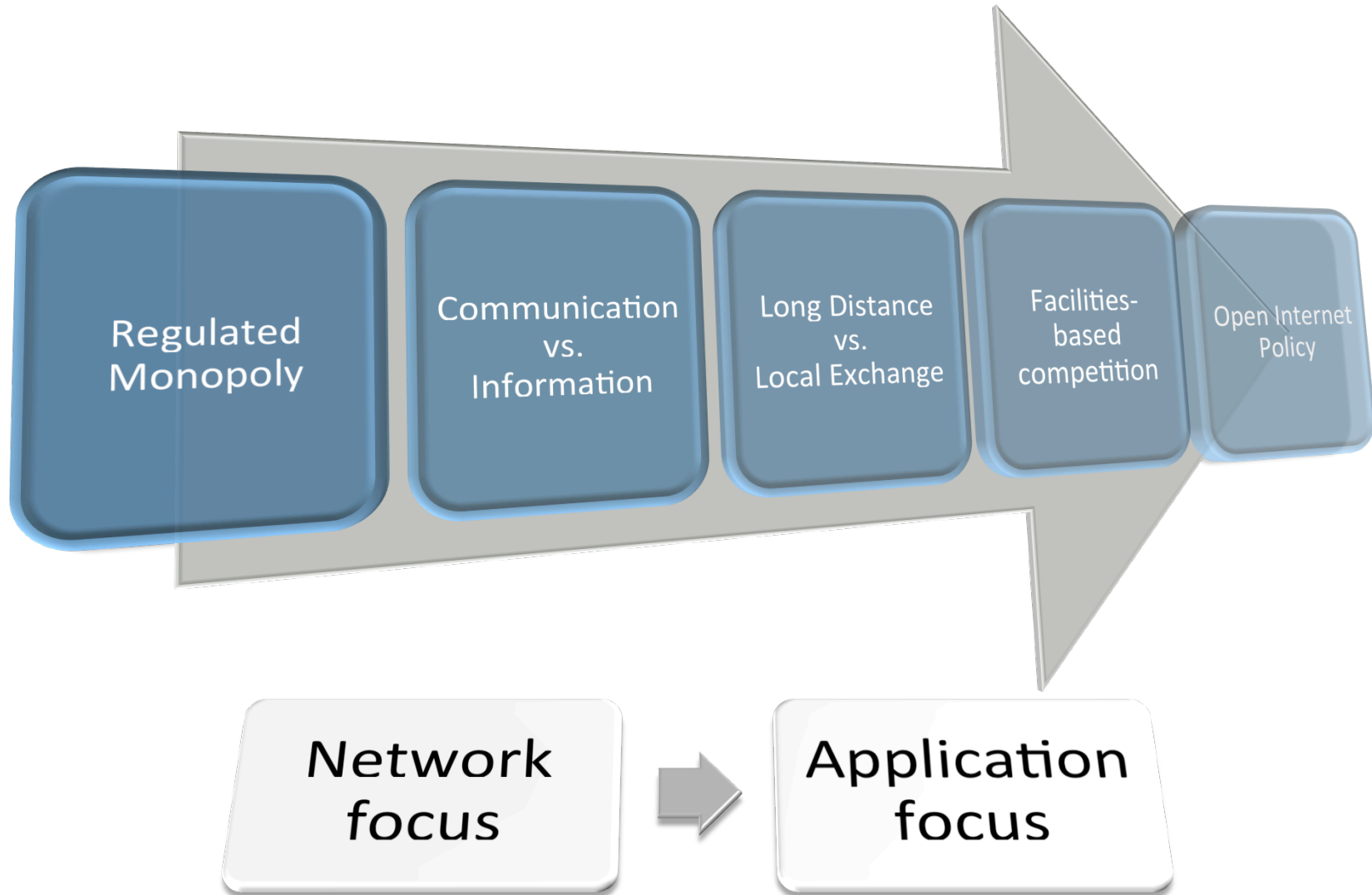
Trend #1: Innovation forces are more distributed than ever



Trend #2: market power & control may move up to higher layers




Impact: market & technology trends challenge policymakers




Consequence: policymakers lack data on basic aspects of broadband services

We do not have basic pricing data for broadband Internet service;
Factual data & transparency will improve data-driven policy making.



FCC's efforts have not delivered the required transparency (yet);
Measuring Broadband America program only collects technical data;
ISPs SEC reports lack relevant information.



Need a different approach to collect & publish pricing data.

Problem Statement

There is no data in the public domain that could be used to construct a quality adjusted broadband price index and/or to monitor broadband service price development over time.



Today, we do not know:

what is the weighted average price of Internet services in the US, in any of the States, or in the regions.

how does the quality adjusted prices of Internet service change over time.

The creation of a Broadband Price Index

The broadband price index (BPI), if well constructed, measures Internet service price changes, purchased by customers in a given region

- The broadband price index shows how Internet service prices change between time periods
- A broadband price index of 104 would mean that the weighted average price for Internet service increased by 4% between two selected time periods (e.g., month, quarter, year)

A statewide broadband price index, for example, is the weighted average of broadband prices that customers pay for their broadband service to their Internet Service Providers in a given state, over time

Internet Services CPI

The official US Internet services CPI is not adequate to track broadband service prices across the nation

- The Internet CPI is not adjusted for service quality changes
- The Internet CPI is defined for urban areas only, it does not provide relevant information for rural America

Year	All-Item CPI*	Internet CPI*	Ave. d/s rates**	Broadband subs (thousands)
2007	100	100	2.05 Mbps	69,556
2008	104	101	2.07 Mbps	88,414
2009	103	104	3.95 Mbps	97,337
2010	105	105	3.82 Mbps	133,250
2011	108	104	3.85 Mbps	184,856
2012	111	104	Not yet avail.	Not yet avail.

* Based on BLS data, 2007=100

** Based on Form 477 data

Data Sources

Data Sources	Availability	Data Content
FCC Form 477 Data Program *	Semi-public	Subscriber numbers (per speed tier), no pricing info
NTIA/FCC National Broadband Map	Public	Service coverage, max. advertised rates at the CB level, no pricing info
Company SEC filings	Public	Subscriber numbers & revenues (quarterly, no regional breakdown)
Commercial Information Providers & Business Consulting Firms	Private, for fee	Varies
Proprietary Databases (CableLabs, NAB, Company internal data)	Confidential	Varies

* Form 477 Data Program is under review

The Creation of a Trusted Repository

Roles of the Trusted Repository

- Create a ***Broadband America Pricing Trends study*** to track broadband service price changes over time
- Regularly publish national and regional ***broadband price indices***

Pricing trend monitoring

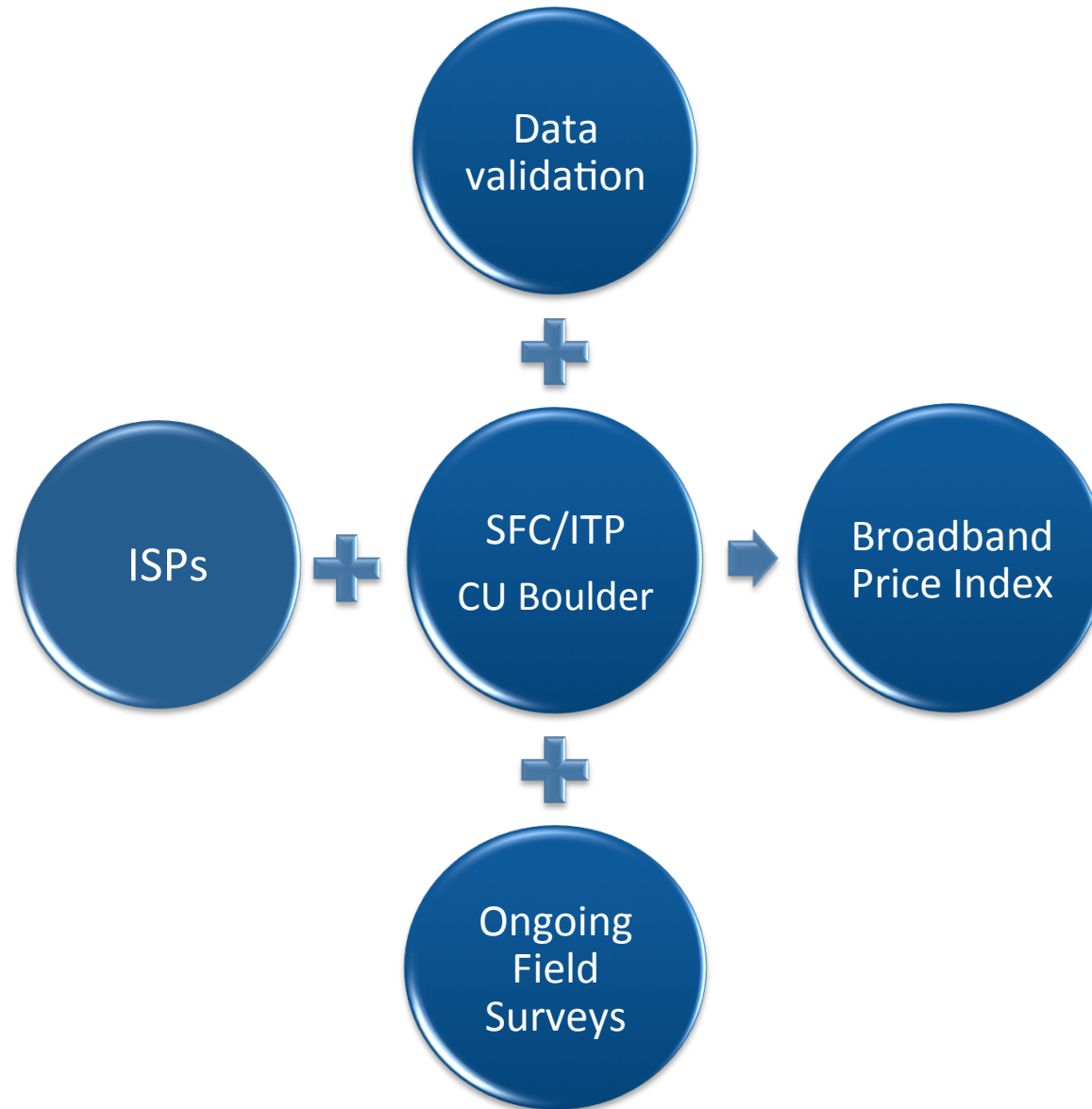
- ***Semi-annual data collection*** directly from end users, using statistical/econometric methods
- Program to ***compliment the Measuring Broadband America*** efforts while leveraging the results of ongoing performance studies
- ***Internet Service Providers may voluntarily participate*** to ensure that the program brings accurate results

General Public

ISP's who provide data:
Non-ISP specific summary data (limited access)

Core database & ISP specific data:
Trusted Repository only

Broadband Pricing Trends Study



To review: why have a BPI?

Quality data drives quality decision making



Factual and public data improves transparency



What path to take to acquire and share such data?



THANK YOU!

Questions?



University of Colorado **Boulder**