

FHWA National Bridge Inventory of the Future

**National Bridge Management, Inspection and
Preservation Conference (NBMIPC)**

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U.S. Department of Transportation
Federal Highway Administration



Presentation Outline

- NBI of the Future: Vision
- NBI Coding Guide: Goals, Status, Tasks, Team and Plan
- NBI of the Future: Transition, NBEs, BMEs
- Why collect Element Level Data



NBI of the Future: Vision

“A NBI that accurately reflects the condition and performance of our nation’s highway bridges”

From: The National Bridge Inventory of the Future, Vision, Goals, Stakeholders, Primary Actions Needed Paper



U.S. Department of Transportation
Federal Highway Administration



NBI Coding Guide: Goals

- Advance the NBI
 - 1) Through, quality data...
 - 2) Incorporates data that provides for: a)
support of the data driven, risk based
NBIP oversight process;
b) develop and use of effective
performance measures;
c) support for National level analysis
 - 3) Improved timeliness ...



NBI Coding Guide: Status

- Initiative to update the NBI Coding Guide is underway
- Forming a FHWA Team and developing a work plan
- To review the 2,007 comments and the material from previous team
- Produce the NBI specification one section at a time, request T-18 support to review these sections



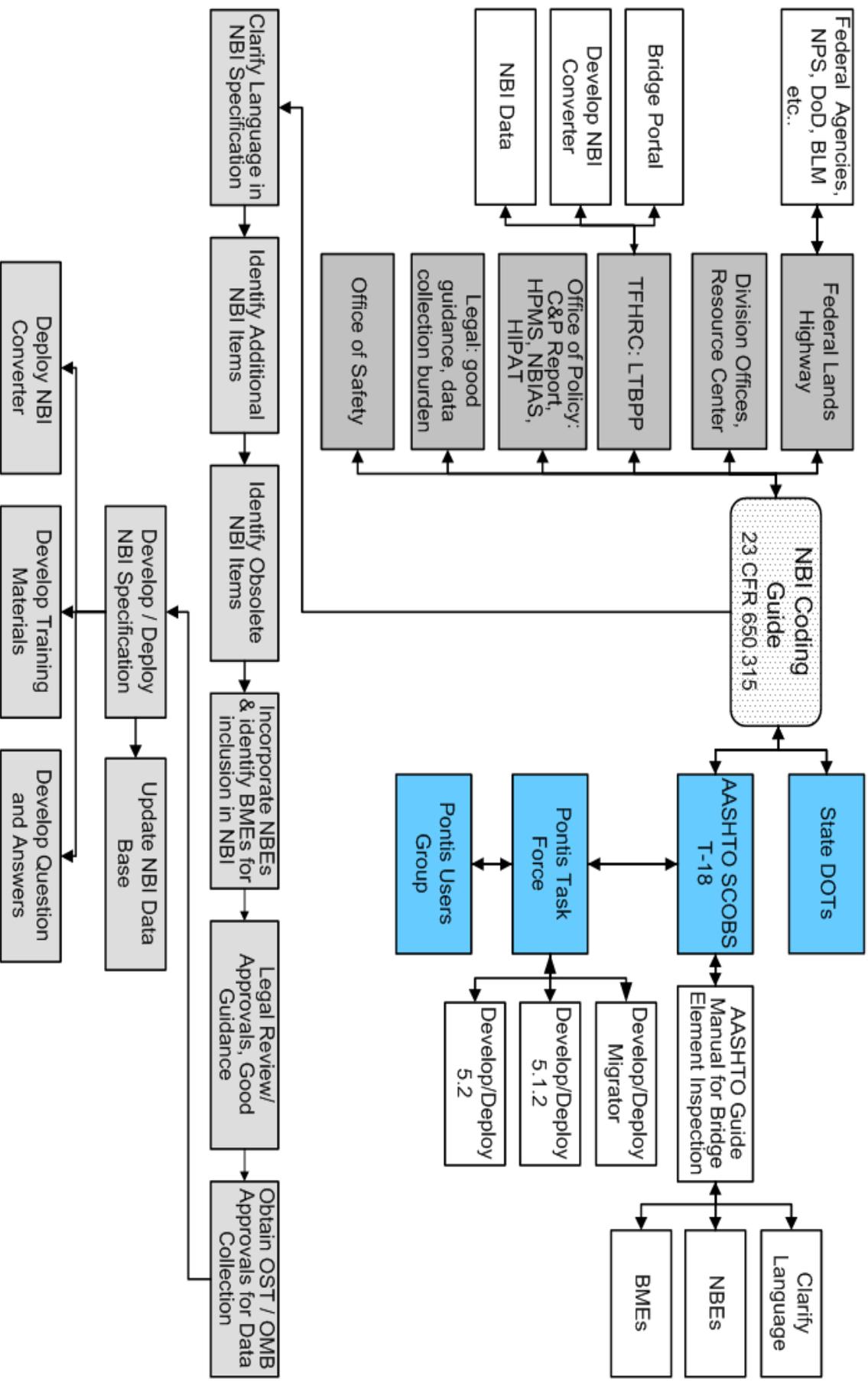
NBI Coding Guide: Tasks

- Update the NBI addressing previously mentioned goals
- Identify and incorporate bridge element data into the NBI
- Seek assistance from T-18 in reviewing the draft document(s)
- Publish revised spec in Federal register (TBD)
- Provide training and rollout new spec



NBI Spec Development: Plan

<-Internal Stakeholders [Federal] / External Stakeholders [State]->



NBI Coding Guide: FHWA Team

- Wade F. Casey, HQ (Team Lead)
- Gary Moss, HQ
- Larry O'Donnell, Resource Center
- Ann Shemaka, HQ
- Dennis O'Shea, DelMar Division Office
- Derek Soden, Florida Division Office

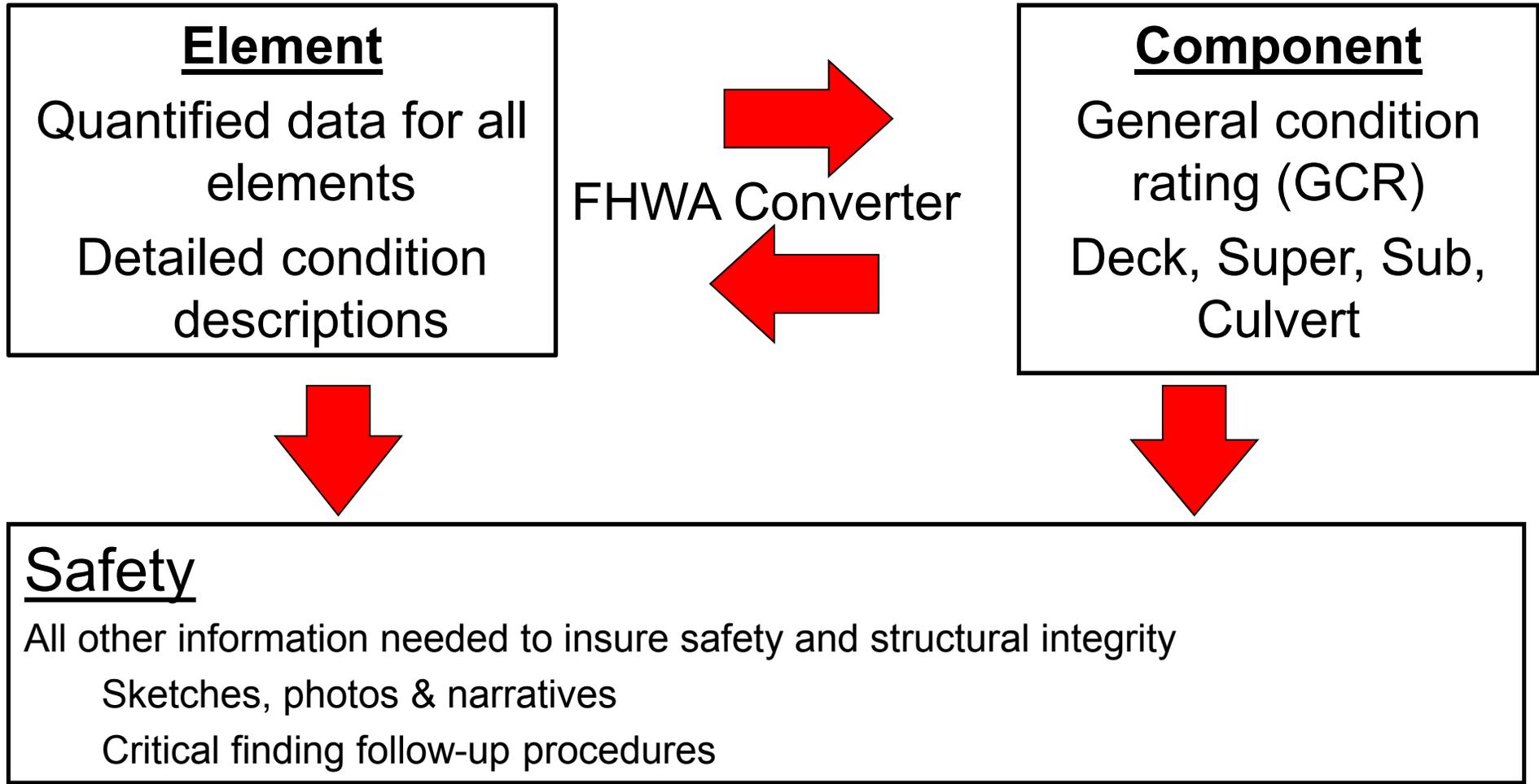


NBI of the Future: Transition

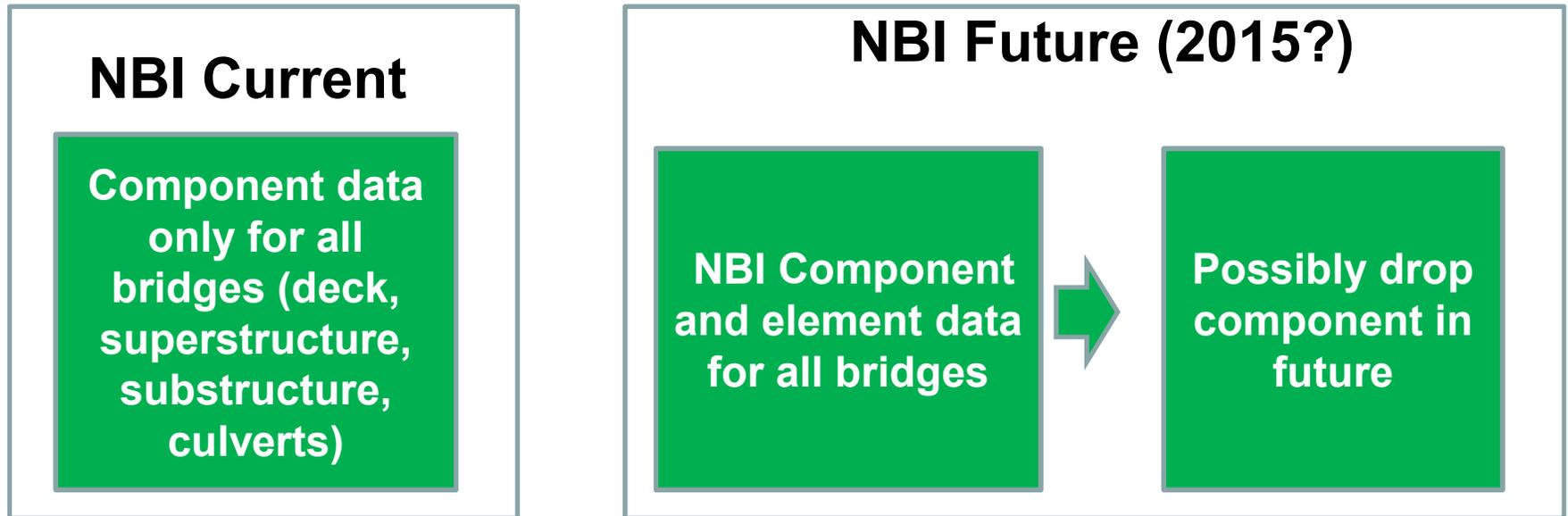
- Transition bridge condition reporting requirements from the current general component condition rating system to the element level condition state rating system
- Initially – element data for NHS bridges



Element vs. Component vs. Safety Inspections

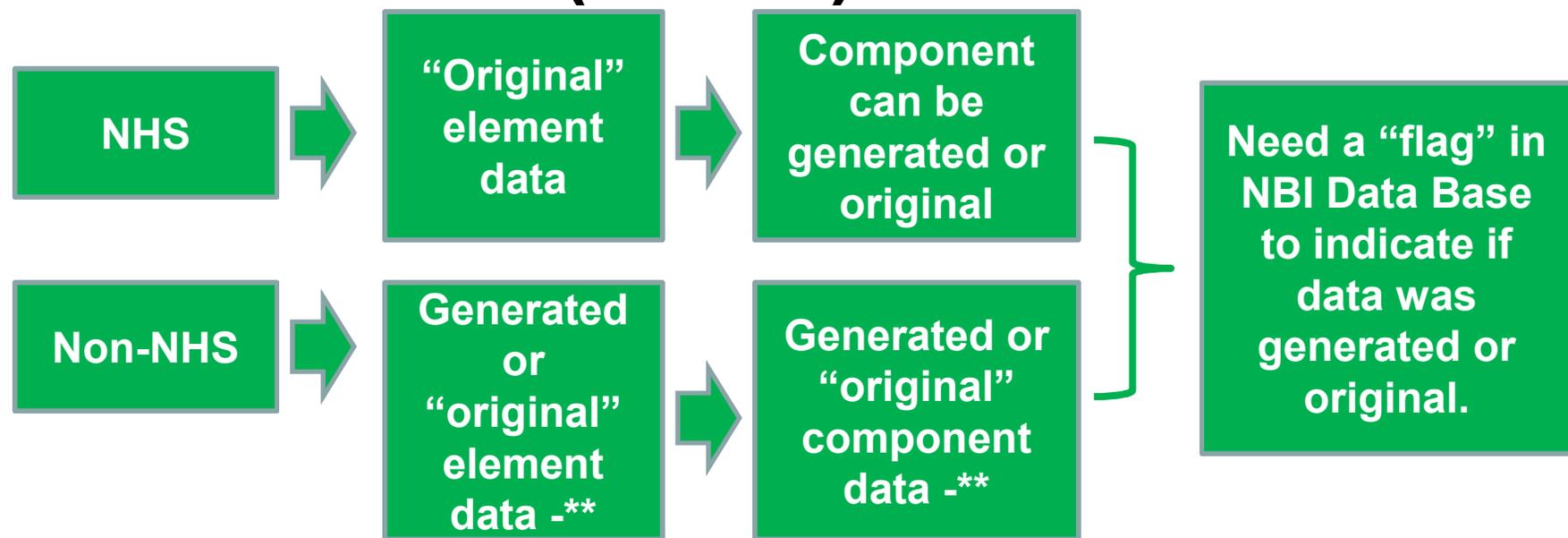


NBI of the Future: NBEs



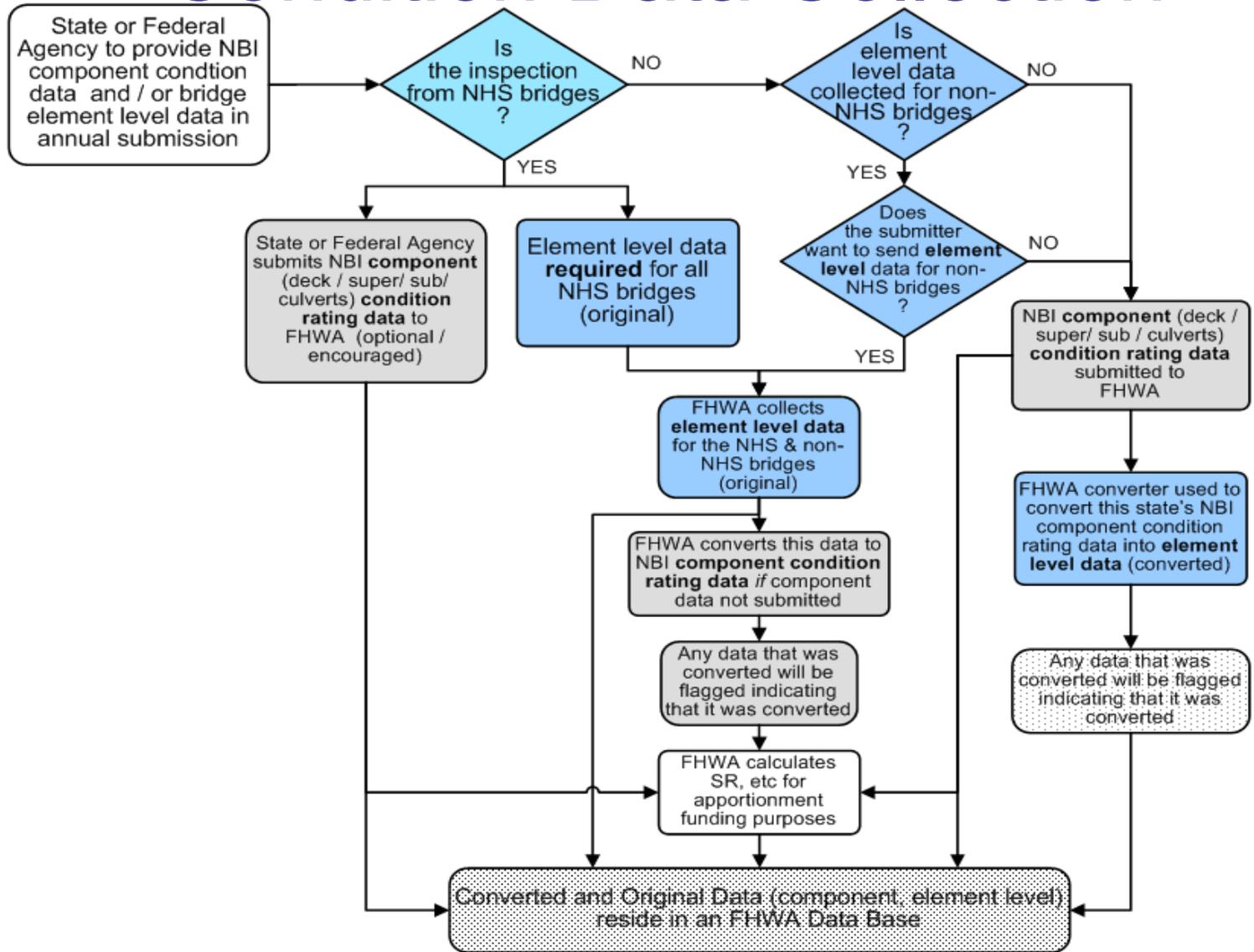
NBI of the Future: NHS, non-NHS, Component, Element

NBI of the Future (2015?)



** - At least one type of data must be "original"

NBI Component Condition & Element Condition Data Collection



NBI of the Future: AASHTO Guide Manual, classes of data

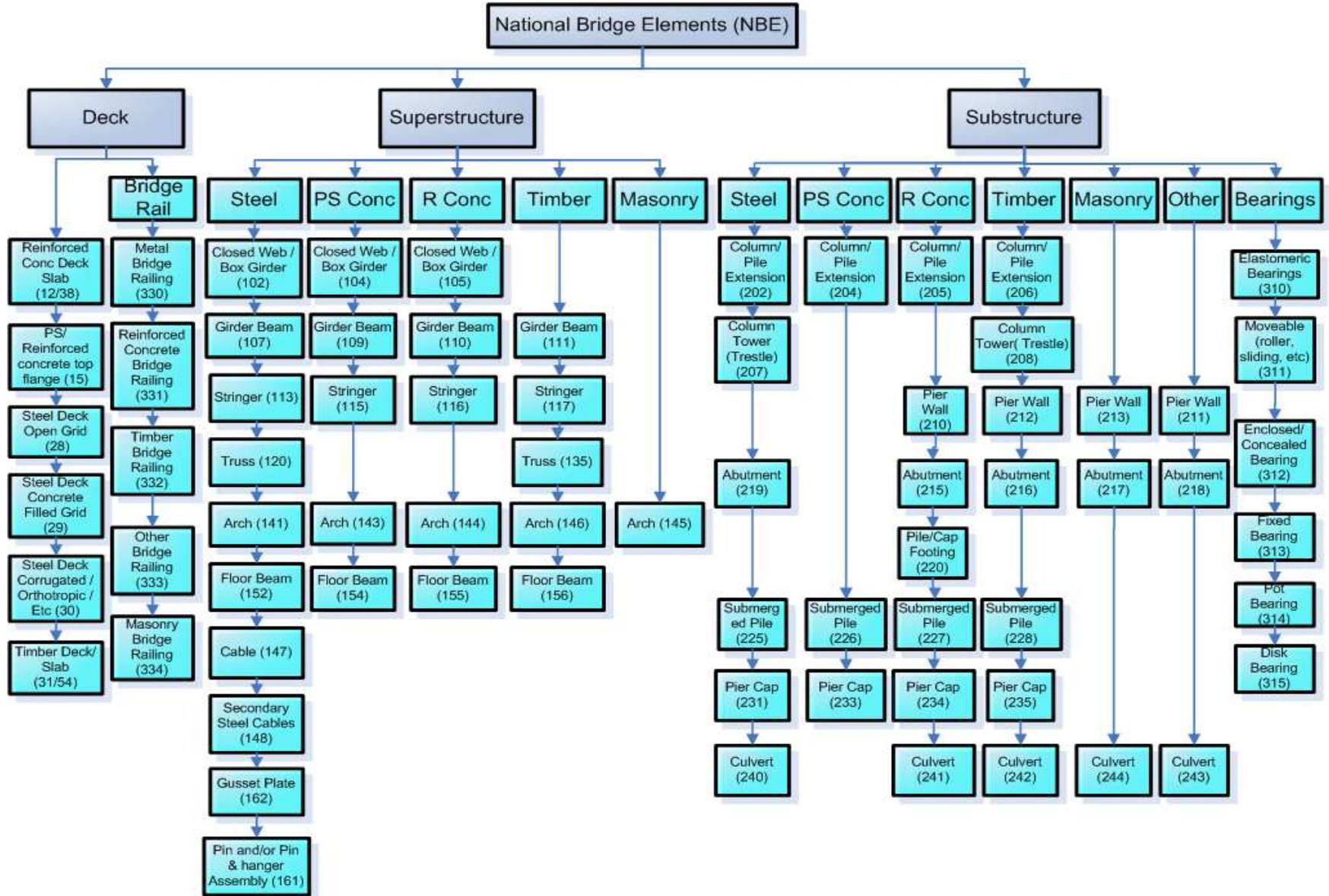
AASHTO Guide Manual for Bridge Element Inspection classifies bridge elements under the following three element types:

- 1) National Bridge Elements (NBEs);
- 2) Bridge Management Elements (BMEs); and
- 3) Agency Developed Elements.

We're finding that we desire more than NBEs i.e. BMEs.



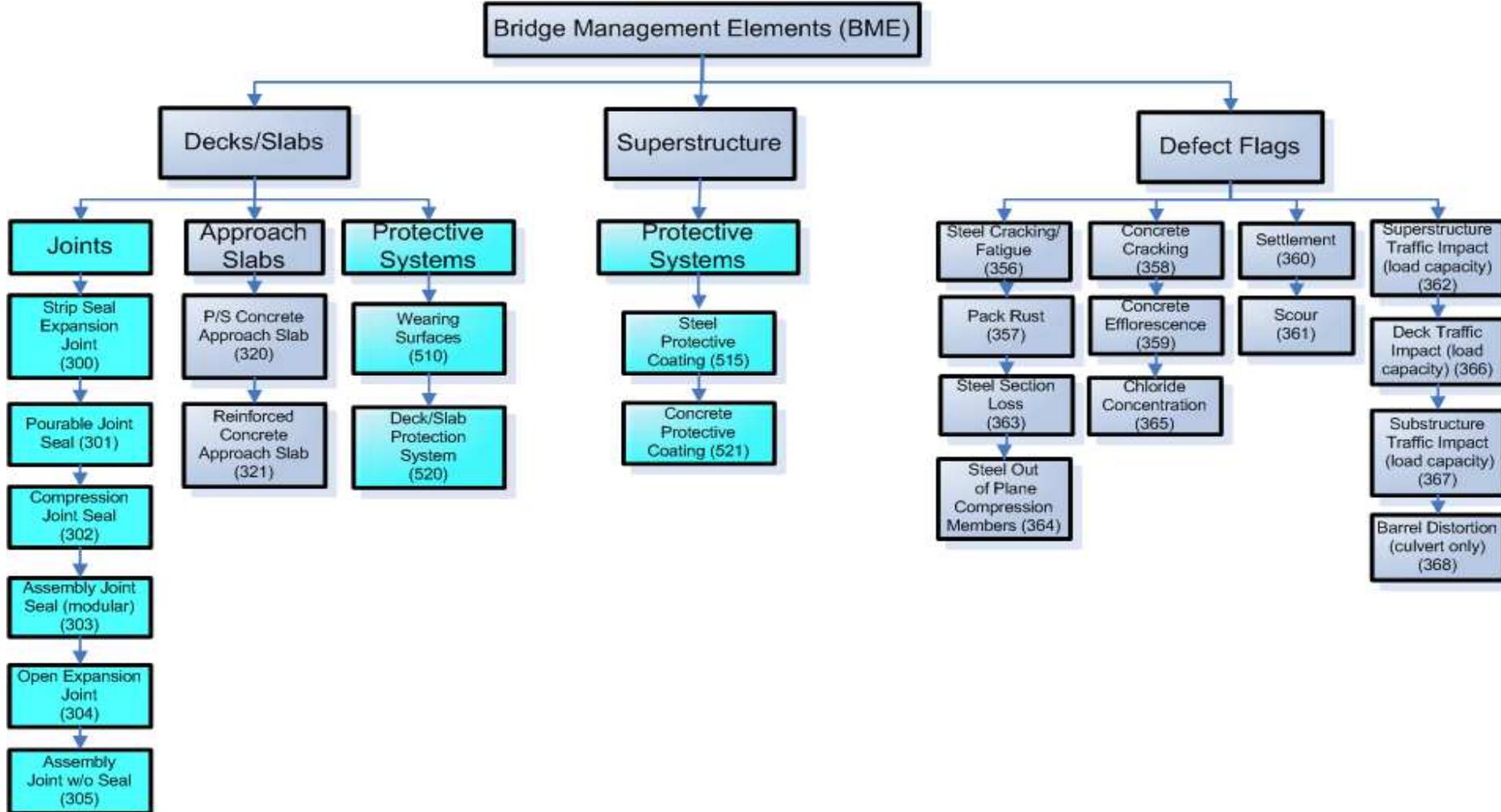
NBI of the Future: NBEs



 - FHWA Plans to collect highlighted NBEs

NBI of the Future: BMEs

The BMEs comprise the following general categories and these specific elements:



 - FHWA Plans to collect highlighted BMEs

NBI of the Future: BMEs -Joints

Proposed additional elements to be collected in the NBI – Joints:

Element Number	Element Name
300	Strip Seal Expansion Joint
301	Pourable Joint Seal
302	Compression Joint Seal
303	Assembly Joint Seal
304	Open Expansion Joint
305	Assembly Joint Seal w/o Seal
306	Other (This is a new element which covers any other type that is not already included)



NBI of the Future: BMEs - PS

Proposed additional elements to be collected in NBI, BMEs – Protective System:

Element Number	Element Name
510	Wearing Surfaces
515	Steel Protective Coating
520	Deck/Slab Protection Systems
521	Concrete Protective Coating

Why collect element Level Data?

1. Granularity part 1. More quantitative condition assessment
2. Granularity part II. Enhance and facilitate needs assessments, and performance measurement
3. Simplify the general condition rating scale from nine to four condition state (CS) ratings
4. Superior to the NBI...



Why collect element Level Data?

5. Easily understood rating measurements by the public (Good/Fair/Poor/Severe)
6. Field collected data preferred by NBIAS which goes into the C&P report to Congress that identifies national needs which translates into funding
7. OIG recommendations: a) Greater use of BMS (Bridge Management Systems); b) Update CoRe elements and require data be submitted to FHWA



Why collect element Level Data?

9. GAO recommendations: a) Identify best tools and practices for bridge management systems; b) Review and evaluate HBP funding mechanism to align with performance
10. Congressional Interest
11. It doesn't take much more time to collect and it makes my boss look good



Questions?

