Data Driven Decisions Driving Lasting Solutions

Investment Corridor Analysis Planning System (ICAPS)

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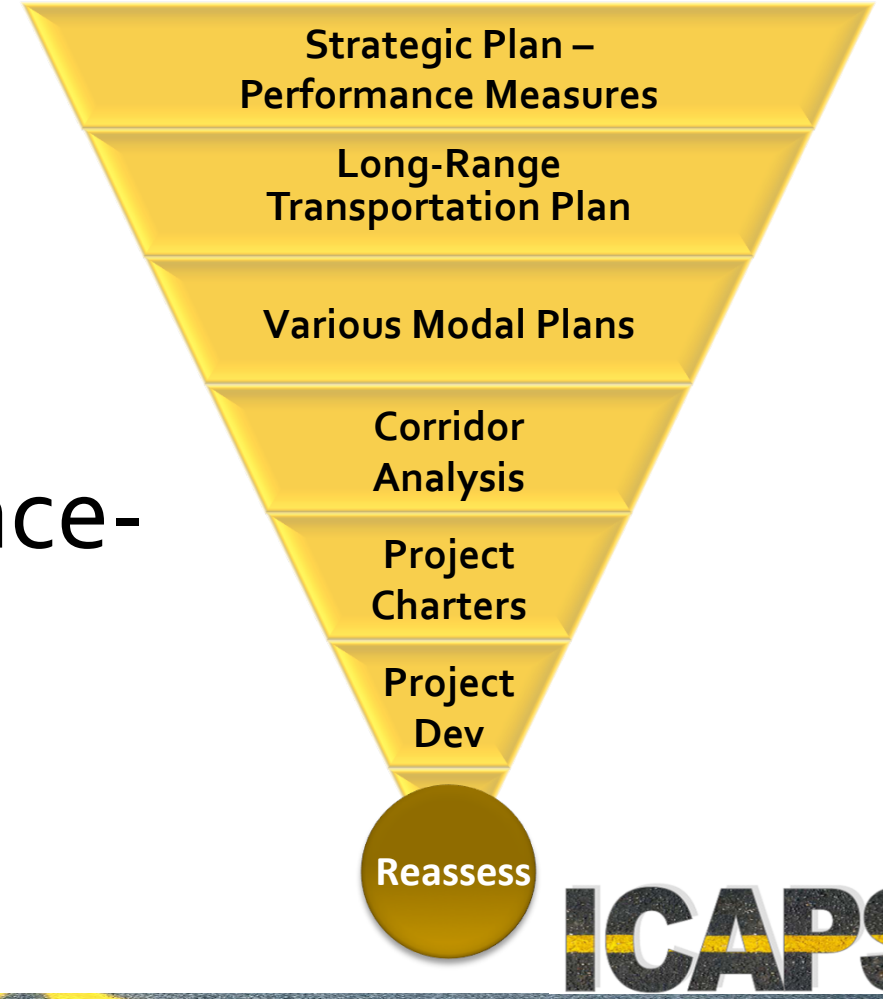
What is ICAPS?

- ICAPS is a framework for Performance-Based Planning and investment analysis that is:
  - corridor-based;
  - user-focused;
  - economically driven;
  - strategically-tied; and
  - better communicates ITD's performance and accomplishments.

ICAPS

Planning

- Traditional Planning
- ICAPS Performance-Based Planning



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Paradigm Shift

Road Centric		User Centric
Highway Needs	→	User/Consumer Needs
Arbitrary Engineering Standards	→	Service Engineering Requirements
Infrastructure Asset	→	Economic Asset
Connectivity Focus	→	Mobility Focus
Performance Outputs	→	Performance Outcomes
Funding Allocations	→	Funding Flexibility

Questions to ask

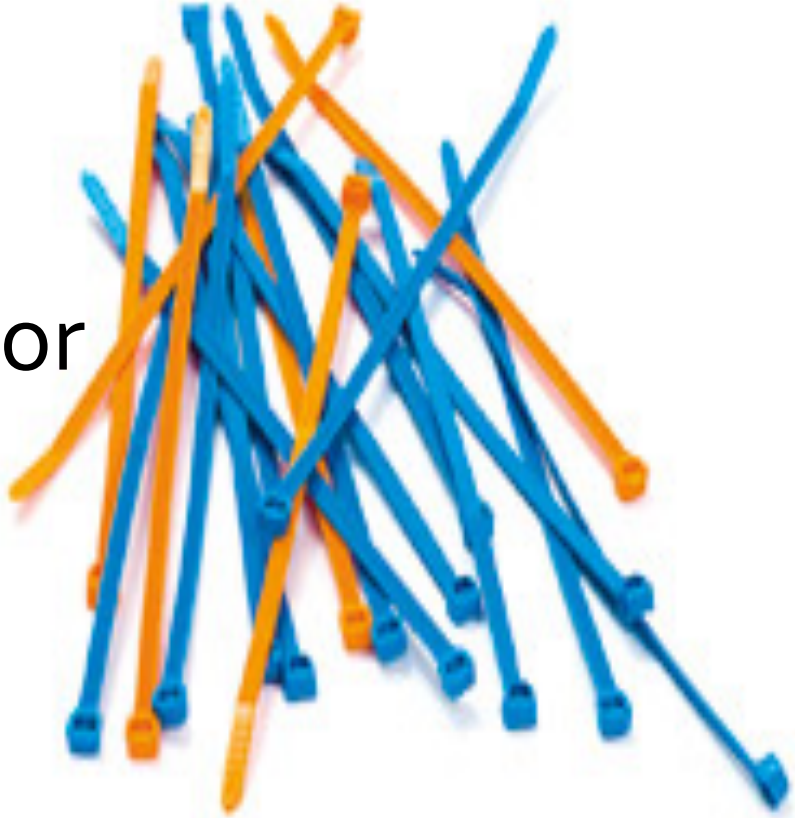
- ***Who*** is using the roadway? (user centric)
- ***What*** is the roadway being used for? (services)
- ***When*** is the roadway being used? (time of day, seasonal, etc.)
- ***Where*** is the roadway? (urban vs. rural, etc.)
- ***How*** is the roadway currently or in the future being used? (assignment)
- ***Why*** is the roadway there? (connectivity)

ICAPS Typologies

- Interstate Corridors
- Statewide Corridors
- Regional Corridors
- District Corridors

Tying it all together . . .

- Corridor Map
- Typology Definitions
- Long-Range and Corridor Planning
- Winter Maintenance
- Access Management
- Functional Classification



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Typology Matrix

ICAPS TYPOLOGY MASTER SHEET

Category	Interstate	Statewide	Regional	District
Typology Definition	Interstate corridors provide the highest level of mobility and speeds over long uninterrupted distances and connect major centers of statewide and national economic importance. Roads in this classification usually include interstates or roads of significant economic benefit to the state.	Statewide corridors provide a high level of mobility and speeds over long distances. This typology connects metropolitan planning areas and other centers of state economic importance. Roads in this classification usually are limited-access roadways that serve travel in a similar way.	Regional corridors accommodate trips of moderate length with a lower level of travel mobility and moderate access to communities. These routes provide mobility for people and freight through and between communities and major activity centers of the region and are used for longer urban trips. Regional roads carry a high proportion of the total area traffic on less mileage than District routes and connect areas of regional economic importance.	District corridors accommodate trips of limited mobility and high access to communities. These routes distribute trips to geographic areas and serves major commercial and industrial districts. These facilities may carry local bus routes and provide inter-community continuity, but should not provide direct access to residential lots. District routes support statewide and regional routes (feeder system) and delivers commodities to local communities.
Corridor Planning	Headquarters (2PM) responsibility with assistance from District staff as needed.	Headquarters (2PM) responsibility with assistance from District staff as needed.	District responsibility with assistance from Headquarters staff as needed.	District responsibility with assistance from Headquarters staff as needed.
Functional Classification	Interstate	Other Principal Arterials Freeways and Expressways	Major and Minor Arterials	Major and Minor Collectors
Winter Maintenance	DURING THE STORM EVENT: Remove snow and ice continually to keep primary lanes open to traffic; providing a reasonable surface on which to operate. Deploy maintenance forces in an effort to achieve a Storm Index target of 0.25 AFTER THE STORM EVENT: Remaining lanes and shoulders will be cleared during regularly scheduled work shifts.	DURING THE STORM EVENT: Remove snow and ice continually to keep primary lanes open to traffic; providing a reasonable surface on which to operate. Deploy maintenance forces in an effort to achieve a Storm Index target of 0.25 AFTER THE STORM EVENT: Remaining lanes and shoulders will be cleared during regularly scheduled work shifts.	DURING THE STORM EVENT: Remove snow and ice during regularly scheduled work shifts to keep roads open to traffic. The primary goal will be to treat snow or ice covered areas on steep grades, sharp curves, bridge decks, intersections, known high accident locations, etc. Deploy maintenance forces in an effort to achieve a Storm Index target of 0.45. AFTER THE STORM EVENT: Snowpack need not be removed until thawing conditions exist or the pack becomes so thick as to constitute a traffic hazard. Remove the pack and clear the road surface during regularly scheduled work hours.	DURING THE STORM EVENT: The primary goal will be to provide a passable roadway. Otherwise resources should be directed to Interstate, Statewide and Regional corridors. AFTER THE STORM EVENT: When resources are not committed to Statewide and Regional Corridors, remove excess snow and ice from the road surface during regular working hours. These routes may be posted to indicate limited maintenance and they may be closed for extended periods of time.

Access Management

Area Type	All	Rural	Transitional	Urban >35mph	Urban <35mph	Rural	Transitional	Urban >35mph	Urban <35mph	Rural	Transitional	Urban >35mph	Urban <35mph
Signalized Road Spacing	Accessible only by interchanges (ramps) and requires approval by the Idaho Transportation Board and the Federal Highway Administration.	5,280 ft	5,280 ft	2,640 ft	2,640 ft	5,280 ft	2,640 ft	2,640 ft	2,640 ft	2,640 ft	2,640 ft	1,320 ft	1,320 ft
Signalized Road Spacing Public Road Spacing (A) Driveway		5,280 ft	2,640 ft	1,320 ft	1,320 ft	2,640 ft	1,320 ft	660 ft	660 ft	1,320 ft	660 ft	660 ft	660 ft
Distance Upstream From Public Road Intersection (B) Driveway		1,000 ft	760 ft	790 ft	790 ft	1,000 ft	690 ft	660 ft	660 ft	760 ft	660 ft	660 ft	660 ft
Distance Downstream From Unsignalized Public Road Intersection (C)		650 ft	500 ft	500 ft	250 ft**	650 ft	360 ft**	360 ft**	360 ft**	500 ft	360 ft**	360 ft**	250 ft**
Distance Between Unsignalized Accesses Other Than Public Roads (D)		650 ft	500 ft	500 ft	250 ft**	650 ft	360 ft**	360 ft**	250 ft**	500 ft	360 ft**	360 ft**	250 ft**

Notes:
*Distances in table are minimums based on optimal operational and safety conditions such as adequate sight distance and level grade. Definitions of spacing designated by (A), (B), (C), and (D).
** Where the public road intersection or private access intersection is signalized, the distances in the table are for driveways restricted to right-in/right-out movements only. For unrestricted driveways the minimum distance shall be 500 feet from a signalized intersection.

ICAPS Formalized

ICAPS formalizes and makes these connections visible

Strategic goals lead to performance measures

Performance measures guide infrastructure improvement selection

Therefore, strategic goals lead to informed infrastructure improvements

ICAPS

Performance Measures

Output	Outcomes
Number of miles of highways with Good or Fair Condition	Percent of freight volume unencumbered by roadway restrictions
Percent of roads with V/C less that 0.8.	Travel time reliability along selected routes
Percent of deficient pavement and bridges less than 15%	Percent of pavements and bridges where the service life is 50% or greater than their total expected life
Increase Idaho's Gross State Product to $6B	Change in employment due to transportation-based improvements in business attraction, retention, and expansion

Any Questions?