**Compass Advisory Team Meeting**
**UW-Stevens Point**
**February 25-26, 2003**

**Members present:** Mike Ostrenga, Jack Yates, Scott Schnacky, John Kinar, Bruce Fredrickson, Alison Lebwohl, and Tom Walther
**Unable to attend:** Jerry Kast, Mike Burns, Brett Wallace, Gary Kennedy, Anne Monks, and Brian Gaber.
**Members stepping down:** Mark Wolfgram and Matt Rauch
**Guests:** Teresa Adams, Tim Nachreiner, and Anne Reis
**Facilitator:** John Nordbo

| Topic | Discussion | Decisions, actions & owners |
|---|---|---|
| Meeting products | ✓ Recommendations & action plan for next year<br>✓ Completed matrix to evaluate and choose alternative game plan<br>✓ Thoughts toward a long-term vision for program<br>✓ Communication plan<br>→ Team continuity plan<br><br>✓ *accomplished*   → *deferred* | |
| The Environment | The group brainstormed strengths, weakness, opportunities and threats of the Compass Program. These ideas were then grouped to identify similar themes, and the team selected and addressed those factors that it believed could break the program if they went unaddressed for the next 12 months. (See table on the last page of the minutes for other themes and details.)  Those factors are described below. | |
| New Leadership | We don't yet know how much information the Secretary's Office would like to get, and at what point. In light of this, it seems wise to:<br>• Defer publicizing the program at that level until we have clarified our vision/timeline. This means deferring both asking the Secretary to be in the new video and placing information in the bulletin or secretary's reports.<br>• Revisit information delivery strategy in the summer before ratings team starts up again<br>IDIA: Lynne Judd and Mark Wolfgram are already in the loop; we need to bring in Kevin Chesnik. | **Alison** will keep IDIA informed.<br><br>The **Advisory Team** will revisit publicizing the program to the Secretary's office in the summer.<br><br>**Alison** will work with **Dave Vieth** to bring Kevin Chesnik into the loop. |
| Limited Program Scope | • Compass has only reported out on Shoulders, Drainage, Roadsides and Selected Traffic Devices, which cover only 27% of the operations budget.<br>• Expanding to winter (30%) and pavement (25%) would cover 82% of the budget.<br>• Cost data is a critical first step in helping people use this information for decision-making. | **Alison** will manage the program to report out on winter, pavement and cost data in next year's reports. (See Game Plan for details.) |

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| Multiple Visions | • Currently, there are several competing visions for Compass. This may be resulting in overly-large and sometimes incorrect expectations.<br>• Some of that confusion may be around the fact that Compass includes both quality assurance and asset management, unlike in other states, where similar programs cover only QA.<br>   o Quality Assurance: what's out there? what condition is it in? what condition should it be in? what does it cost to get there under current practices?<br>   o Asset Management: trade-offs, uncertainties, customer preferences, best practices.<br>• To ensure the future of the program, a staged vision with a timeline needs to be formulated. | **Alison** will work with the **Advisory Team**, the **Ops Managers** and **Dave Vieth** to formulate a staged vision with a timeline. (See The Future for details.) |
| Other Important Themes | • *Limited Data Analysis*<br>   o See discussion under Data Analysis heading<br>• *Constrained Resources*<br>   o This will influence the program in next 12 months<br>• *System Upgrades and Integration*<br>   o This is a part of the asset management stage of Compass, and will be addressed by clarifying the staged vision of Compass<br>• *It takes time to get program up and running*<br>   o BHO staff need to communicate the current status of the program to important players: accomplishments and future intentions. Again, this will be addressed by clarifying the staged vision of Compass. | |
| Auxiliary Themes | Compass has addressed the following themes already, but staff needs to maintain these efforts in perpetuity.<br>• *Intergovernmental cooperation*<br>• *Cooperative Team Effort*<br>• *Credibility*<br>• *Clear Reports*<br>There is a concern that the program manager is the only person with full knowledge of the Compass program. It is important that others could carry on the program if the need arises. Addressing this theme was deferred until next year. | |
| The Game Plan | The group used the Compass decision matrix to frame this conversation. See attached matrix for details. We went through possible expansion options for the next 12 months, determined which were dealbreakers, and focused solely on those. The major dealbreakers were Winter and Pavement. See following topics for details. | |

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| Winter | • Currently, a pilot study to test the feasibility of two winter measures is underway. A Winter Standards Team was convened with members from central office, districts and counties.<br>• The team is investigating travel speeds during and after a storm relative to a "normal" speed using Automatic Traffic Recorders (ATRs) and commercial carriers, and will analyze crash data to look for changes in crash rates during and after a storm.<br>• In the next 12 months, the winter standards team, and Compass and BHO staff will:<br>   o Report on feasibility of crash data and ATR data.<br>   o Continue exploring the feasibility of using commercial carriers to measure mobility recovery time.<br>   o Draft a recommendation of a possible body of measures using existing sources like the storm report<br>   o As allowed by pilot results and staff time, report out on 2004 winter results, using crash data, ATR data and measures from existing sources like the storm reports. *Note: this report will be issued after winter is complete and separately from the general report.*<br>   o Explain/communicate ongoing actions for winter.<br>   o Plan for customer preferences information/survey. | **Winter Standards Team** will report on the feasibility of the two winter measures (crashes and mobility recovery time) in 2003.<br><br>**Alison** and **John** will work with **Mike Sproul** and **Tom Martinelli** to:<br>• Report out on the upcoming 2004 winter as described on left.<br>• Gather more info. about drivers' winter preferences. |
| Pavement | • Pavement data was piloted in 2001 using the field review and the Advisory Team used that pilot to recommend using van data in the future.<br>• In 2002, the Traveled Way Standards Team correlated the Compass measures with the van measures, in order to ensure that we were measuring things maintenance could impact.<br>• The pavement team and BHO staff will work with TRUAX personnel to acquire and process this data in the Spring/Summer of 2003. Staff will report out on pavement features in the 2003 Annual Report. | **Alison, John** and **Tim** will work with the **pavement team** and **Truax** to:<br>• Acquire and process the pavement data.<br>• Report out on pavement features in the next Compass Annual Report. |

# Compass Quality Assurance
*Program Decision Matrix as of February 25, 2002*

| | Elements (Roadway) | | Elements (Roadside) | | | | | | | | | Products | | | | Data | | | Reports | | | Deployment | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pavement | Shoulders | Drainage | Roadsides | Rest areas | Winter | Bridges | Signing | Marking | Operations | Electrical | Priorities | Costs | Targets | Alternatives | Validate measures | QA process | Customized measures | Canned reports | Targeted reports | Customizable reports | Take to legislature | Take to media & public | Use for decision-making | Use for budgeting |
| Accomplished? | | ✔ | ✔ | ✔ | | | | ➤ | ➤ | ➤ | | | | | | | | | ✔ | | ✔ | | | | |
| Data collection (F/I) | I | F | F | F | | ? | | F | F | F | | | | | | | | | | | | | | | |
| Dealbreaker (Y/S/N) | Y | Y | Y | Y | N | Y | N | N | N | N | N | N | Y | N | N | N | S | N | Y | N | N | N | N | N | N |
| Our domain (Y/S/N) | Y | | | | | Y | | | | | | | Y | | | | | | Y | | | | | | |
| Importance of asset (H/M/L) | H | | | | | H | | | | | | | | | | | | | | | | | | | |
| • % of ops budget | 25 | 27 (Sign & Mark) | | | | 30 | | | | | | | | | | | | | | | | | | | |
| • Critical to leg, public or safety | Y | | | | | Y | | | | | | | | | | | | | | | | | | | |
| Importance of tool/info (H/M/L) | H | | | | | H | | | | | | | | | | | | | | | | | | | |
| • Help us with key tasks or decisions | Y | | | | | Y | | | | | | | | | | | | | | | | | | | |
| • Critical to leg., public or safety | Y | | | | | Y | | | | | | | | | | | | | | | | | | | |
| • Other tools not available | N | | | | | S | | | | | | | | | | | | | | | | | | | |
| Resources to launch (H/M/L) | M | | | | | H | | | | | | | M | | | | | | H | | | | | | |
| Ongoing resources (H/M/L) | L | | | | | H | | | | | | | L | | | | | | H | | | | | | |
| Probability of success (H/M/L) | H | | | | | M | | | | | | | H | | | | | | H | | | | | | |
| Builds support (H/M/L) | H | | | | | H | | | | | | | H | | | | | | H | | | | | | |

| | Elements | | | | | | | | | | | Products | | | | Data | | | Reports | | | Deployment | | | |
| | Roadway | | Roadside | | | | | | | | | | | | | | | | | | | | | | |
| | Pavement | Shoulders | Drainage | Roadsides | Rest areas | Winter | Bridges | Signing | Marking | Operations | Electrical | Priorities | Costs | Targets | Alternatives | Validate measures | QA process | Customized measures | Canned reports | Targeted reports | Customizable reports | Take to legislature | Take to media & public | Use for decision-making | Use for budgeting |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| How many yrs. until start | 1 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 2 | | 2 | 1 | 2 | 3 | 1 | 0 | 5 | 0 | 2 | 0 | 3 | 3 | 2 | 2 |
| How many yrs. until acceptable product | 2 | 0 | 0 | 0 | 3/4 | 3 | 3/4 | 2 | 3 | 5 | | 5 | 3 | 5 | 5 | 3 | 3 | 10 | 5 | 5 | 10 | 7 | 7 | 5 | 5 |
| | ✔= complete  ➢= partial / F=field  I=inventory /  Y=yes  S=somewhat  N=no / H= high  M=medium  L=low | | | | | | | | | | | | | | | | | | | | | | | | |

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| Key Messages for Operations Managers | *2003 Plan*<br>Current actions<br>*Use the matrix as part of this conversation*<br>• Field Review<br>• Winter<br>• Pavement<br>• Outsource data analysis<br>Planning actions<br>• Starting dialogue on targets and alternatives<br>• Adding cost data<br>Communication steps & tools<br>• Outline of the major components of the vision<br>• Communication Plan<br><br>*Take Home messages*<br>• Compass is moving forward. (We're moving on pavement and winter.)<br>• We have a picture of the future. (This is what it looks like.)<br>• Compass is rounding out. (It will include cost data, and we're starting the conversation about targets.)<br>• Remember that the cost of the program ($250,000) includes field time and staff time that would have been spent regardless. (73% of raters agreed that this was not new work. Only 5% disagreed.) | |
| Communication | Ratings Teams<br>• In 2002, information sent to the district contact didn't always reach the ratings teams. For example, pilot counties didn't all realize they needed to attend training; videos meant for patrol superintendents to show their patrol workers weren't all distributed.<br>• However, one contact per district continues to make sense. This contact will receive – and be responsible for distributing – information about training dates and locations, as well as the rating sheets and maps.<br>General<br>• Information given to districts may not always reliably reach the counties.<br>• Info. given to county commissioners may not reliably reach the patrol superintendents.<br>• Improvement in the BHO mailing and emailing contacts database would help this. | **SPO Managers** will serve as the district contact for Compass information.<br><br>**Bruce** will inform them of this on March 12th.<br><br>**Alison** will work with **Tim** and **Jay Wells** (per John) to provide information on what is needed in title and organization fields for the contacts database.<br><br>**Jay** will populate these fields in the database. |

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| Segment Selection | Segments too close<br>• There was a concern that many segments were too near each other for conditions to be independent. This is in part a concern about data quality, but not a large one. The larger concern is that this reduces credibility with raters.<br>Segments needed to be eliminated<br>• Segments could fall on a connecting highway or bridge. In Milwaukee, especially, this was a problem.<br>County lines<br>• In some cases, a segment that appeared on one county's map was actually in another county. We think this is a problem with the GIS county layer.<br>Random Selection<br>• There is a concern among raters that the segments selected for rating are not representative of the actual conditions on state roads. Three specific concerns raised by raters were:<br>  o Is the segment selection really random?<br>  o Is random selection really fair?<br>  o Is reselection of previous years' segments fair?<br>Road Class<br>• There are two ways of using road class to capture the driver's point of view when sampling. We could sample each road class separately, which is resource intensive. We could also "weight" segments by road class during the random sampling, so that a road with a higher ADT would be proportionally more likely to be selected. So we would be weighting by driver miles, not by centerline miles.<br>• In order to sample by road class, we would need to layer ADT info. from TRADIS with lane information from STN, something that doesn't yet exist.<br>• Moreover, weighting segments by ADT would make it more difficult to capture maintenance costs for alternate service levels, however.<br>• We are interested in providing critical missing information. Right now, estimates of maintenance costs for alternate service levels are a key piece of info.<br>• Once we have inventory information, we don't have to choose between customer and maintenance points of view. We can have both. | **Alison** will work with BAS personnel on a Page One project to revise the segment selection protocol so segments are >1 mile apart, if this is feasible. This project will also eliminate segments on connecting highways and bridges.<br><br>**Tim** will devise an alternative method to select the segments if BAS cannot revise the protocol.<br><br>**Alison** will inform BAS folks of the potential problem with the county maps.<br><br>**Training Team** will address raters' concerns and educate raters on the importance of random selection.<br><br>Sampling will continue to be by centerline miles, without consideration of ADT. |
| Markers & Maps | Directions<br>The written directions and location placement on the 2002 ratings materials were often confusing. Visible markers could be hard to find. | **Alison** will work with **BAS** on a Page One project to improve map directions. |

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| Training | Training Attendance<br>• A few counties did not attend the 2002 training. In a few cases, county and district personnel rated segments without being trained in 2002.<br>   o WisDOT needs to mandate that all counties be trained and rate their own roads, even under duress.<br>   o SPO Managers play a critical role in county and district attitudes about these trainings and Compass.<br>Training Sessions<br>• In 2003, there will be 5 training sessions: 4 1-day and 1 2-day trainings.<br>• Dates will be determined and communicated by the end of March. Location and hotel information will come 1 month before training.<br>• Communication about these sessions will be critical:<br>   o Counties will be informed that there will only be one 2-day training and it will be emphasized that they must send someone if they haven't been trained in past.<br>   o Counties and front-line district staff should be reminded of the following at patrol sup.'s meetings and at county commissioner training in April. They and their peers believe:<br>      ▪ There is value in doing the ratings.<br>      ▪ This is not additional work.<br>      ▪ They are the people to be rating the roads.<br>   o Area Supervisors should be encouraged by SPO Managers to attend 1-day refresher. However, this will be optional.<br>• [*information added since meeting: Despite severe upcoming staff cuts, OODS will provide advice and expertise on training design, and feedback for the training dry run and the first 1-day training.*]<br>• The Training Team believes that inadequate facilities (space too small and/or uncomfortable; group unable to store materials overnight; hours too limited; AV needs not met on site) last year were their single largest problem. They recommended, and the Advisory Team agreed, that getting the right facilities be a high priority for this year. UW campuses or WisDOT district offices are likely locations. | **BHO** will clarify that it is mandatory for counties to be trained and rate their own roads.<br><br>**Bruce** will remind SPO Managers of their critical role in county and district attitudes about these trainings and Compass.<br><br>**Alison** will work with the **Training Team** to provide 5 trainings as described on left.<br><br>**Alison** will work with **Ops Managers** to communicate about these trainings (including dates and locations), as described on left.<br><br>**OODS personnel** will help with 1-day training preparation<br><br>Finding good training facilities that continue to meet state guidelines for meetings is a high priority for this year. **Anne** will work with the **Training Team** to identify and secure such facilities for this and future years. |

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| Rating | Rating Personnel<br>• Patrol Sup.'s and Area Assistants will continue to rate the roads<br>Rating Dates<br>• Rating will occur two weeks earlier than last year: from August 15, 2003 to October 15, 2003.<br>Revising Ratings Sheet<br>• The format of the rating sheet caused data collection errors and caused BHO staff to discard as many as 280 data points statewide for some features. Reducing these errors should include the following actions:<br>  o The ratings sheet will be revised to be more visually intuitive<br>  o Descriptions of Yes/No and None check boxes will be consistent feature to feature<br>Revising Visible Markers and Maps<br>  o Visible markers will only be in one direction<br>  o Spares will be in different colors<br>Segment Marking<br>On rating sheet and in training, emphasize that raters should mark well the segments they rated | **Anne** will work with **John Nordbo** and **Alison** on developing a more visually intuitive ratings sheet, as described to left.<br><br>**Alison** will work with **BAS** on a Page One project to revise visible markers and maps, as described to left.<br><br>The **Training Team** in training and **Anne** on the rating sheet will emphasize the need to mark the segment being rated using durable paint. |

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| Data Quality | Revising QA Protocol<br>• BHO staff implemented a Quality Assurance program for the field review on a limited basis for 2002. It serves as a check on bias, and allows us to pinpoint potential training flaws.<br>• Doing this in a way that allows us to compare one county to another would be expensive because it would require re-rating 30 segments per county.<br>• Instead, we will do a statewide QA, assuming that all ratings teams constitute one large "field team" and comparing their scores to those of a "central team." The protocol will work as follows:<br>  o Choose ~100 segments statewide, at least one segment from each county.<br>  o QA will occur as close as possible in time to the original rating.<br>  o John Kinar and 1 member of the rating team will re-rate segments. They may contact local maintenance personnel to see if they're interested in joining them.<br>For future consideration…<br>• Identify those counties that have scores that are significantly different than the central team's and sub-sample more in those areas.<br>• Identify low feature scores and check up with quality assurance. Is it truly a condition problem or a rating/training problem?<br>• A more organized system for having District folks and any other people interested ride along on the QA rating | **Alison** will work with **John K** and a member of the **Training Team** to revise the QA process as described to left. |
| Data Analysis | Statistical expertise<br>• BHO has limited resources for analyzing the data in-depth<br>  o Look into outsourcing if it's an option. Can report out basic data if only option for 2003.<br>  o Look into purchasing an appropriate data analysis and/or graphing package for reporting data.<br>[*Note: Since the meeting, this has come up as a likely collaboration with the University through the experimental Traffic Lab. Alison is working with John Corbin on this.*] | **Alison** will talk to **Dave** about outsourcing data analysis and/or graphing for reports. If necessary, we will use the same format next year as this year. |
| Reporting | Feedback<br>• We got extensive feedback on the reports from counties and from district line staff. However, we expect the program reporting to be most useful to managers. We considered soliciting additional feedback from managers, but decided not to.<br>Reporting Format<br>• Okay to keep current format for 2003 Report, if necessary.<br>• May become more complex depending on data analysis. | |

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| Measures | Measures<br>• We need to start thinking about whether these measures tell us what we need to make decisions; about what appropriate targets would be.<br>• Other states' experience tells us it will be a few years until we have targets.<br>• At some point, we may want to consider examining the element scoring as well.<br>Features<br>Some features will be modified, eliminated, discussed in the future or maintained as is.<br>o Discuss in future:<br>  ▪ Include Riprap (rock) flumes as well as other solid flumes for flumes feature.<br>o Modify:<br>  ▪ Mowing: This was very controversial in training. ➤Include check-off for reasons for non-compliance<br>  ▪ Signing: We suspect this was not being rated consistently because standards were subject to interpretation. There is confusion between *regulatory/warning* and *other* signs. ➤Include only *missing* and *not visible at posted speeds* for standards. (Eliminating damaged.) Provide list of *reg/warning* vs. *other* signs at training.<br>  ▪ Marking: We suspect this was not being rated consistently because standards were subject to interpretation. ➤Use linear feet of marking with >20% worn or missing.<br>  ▪ Raised Pavement Markers: We suspect this was not being rated consistently because of safety concerns in rating. ➤Add a check-off box for "could not safely rate" and train raters on how to test for reflectivity.<br>o Eliminate:<br>  ▪ Impact Attenuators<br>  ▪ Landscaping (John Kinar will discuss with Landscape folks about this issues)<br>  o Maintain as is:<br>  ▪ Barriers<br>  ▪ Flumes<br>  ▪ Drains<br>Shoulders<br>Shoulders are currently separated into paved/unpaved. Cost code data is also separated this way. We will continue to maintain this separation in the rating and reporting. | **Bruce** and **Alison** will work with **John** and **Scott** to discuss measures and targets with Ops Managers.<br><br>**Alison** and **Training Team** will discuss including riprap flumes with other solid flumes before summer<br><br>**John** will talk about eliminating the landscaping feature with landscape personnel<br><br>**Anne** will work with **Alison** to revise ratings sheet and manual to reflect changes discussed on left to feature standards or measures<br><br>**Training Team** will revise training and materials accordingly. |

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| The Future | Formulating the vision<br>*The vision still needs to be compiled.  Below are questions and comments to direct the vision.*<br>*Determine:*<br>• What is Compass's role in driving, integrating, developing, incorporating all asset management and maintenance management systems?<br>    o Compass is a facilitator of these processes, but it is not responsible for them.<br>• What are the best guesses on when we will have targets, costs, alternatives?<br>*Now and then*<br>• Where are we currently?<br>    o Maintenance management focus in short term.<br>    o Operations management in long term.<br>• Refocus from maintenance management system to operations management system to asset management system (customer view).<br>    o Maintenance: What are the inputs and outputs?<br>    o Operations: What's it like to drive on the system?<br>    o Asset Mgmt: How do you go from outputs to outcomes?<br>*Value*<br>• Now: highlighting operations' data needs.<br>• Future: Consistency. All maintenance workers understand and follow standards on a statewide basis, especially time sensitive issues (e.g., mowing or winter) | **Alison** will work with the **Advisory Team**, the **Ops Managers** and **Dave Vieth** to develop a vision as discussed above in Multiple Visions to guide the program, communicate about the program – and eventually inform conversations with the Secretary, Legislature and/or others. |
| Communication Plan | How/Who/Where do we distribute the Information?<br>• *DDs* - Report annually (March/April 03)<br>• *SPO managers* - simultaneous with Ops managers(3/03)<br>• *Modal Administrations* - work with Dave to bring in Kevin Chesnik. Keep Lynne and Mark in the loop. (3/03)<br>• *Area Sup.'s* - invite to training before May (1-day). Spring/Fall meetings<br>• *Patrol Sup.'s* - Same as above. Fall conference (9/24)<br>• *Area Assistants* - Same as area sup.'s.<br>• *County Commissioners* - Winter meeting/April Training<br>• *Ops Managers*-see above.<br>• *BHO staff* - Semi-annual: before rating and then report in February/coincide with new brochure before ratings report<br>• *Hill Farms* - new brochure<br>• *County/District Budget Staff* - June 03<br>• *County/District Office Managers* - June 03 | **Alison** and **Bruce** will discuss presentation to Ops Managers on March 12th<br><br>**Alison** will get on schedules and communicate with groups as outlined to left.<br><br>**Scott** will talk to County/District Budget Staff and Office Managers about charging hours to Compass-June 03 |

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| Team Continuity Plan | Questions to develop plan<br>• What we can and can't do with new administration?<br>• When do we need new perspectives?<br>• Do we need new specific skills?<br>• What kind of support do people need?<br>• Should we consider a natural rotation of advisory members?<br>• Who replaces members that are no longer on team?<br>    o Traffic (replaces Matt Rauch)<br>    o DTIM (replace Mark Wolfgram)<br>• Do we need more county input?<br>• Who else to include that would be helpful? | |
| TRB Summary | Where are we relative to other states?<br>Wisconsin Compass Program is a combination of FL and WA programs. Both programs have targets and costs. Montana has been developing their program parallel to ours. All programs use centralized ratings teams.<br>*Florida:*<br>• Program well-supported.<br>• Feature to element roll-up; ignoring problem.<br>• Report by road class.<br>• Used to monitor private contractors.<br>*Washington:*<br>• Happy with their program.<br>• Measuring winter on experimental basis (time to bare pavement).<br>• Use activities instead of features as measures.<br>• Costs are somewhat arbitrary.<br>*Montana:*<br>• Program hit a large road-block when it lost support of ops managers and lost its program manager soon after.<br>• Same as WA program<br>*Other states with interesting performance measures and similar prorams: Ohio, New Mexico, Vermont*<br>Other interesting things from TRB<br>• Alison and Teresa presented a poster on Compass.<br>• Heard ideas about alternative sampling methods.<br>• Discovered some innovative research on eliciting customer preferences.<br>• Gained support from Montana DOT, Washington DOT, FHWA staff and MRUTC for a national peer-exchange on programs like this one. Currently working on developing that and getting FHWA funding. | |
| | *Schedule Future Meetings for Wednesday, Thursday, and Fridays starting at 9:30 on the first day if a two-day meeting.* | |

| SWOT Analysis Original Brainstorming Ideas | | | |
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| **Strengths** | **Weaknesses** | **Opportunities** | **Threats** |
| • Good trainers/committed training team<br>• Good raters/many people have been trained<br>• Smart diverse advisory team<br>• Program Manager<br>• Communication districts/county/central office<br>• Data on demand<br>• Heavy involvement of frontline staff<br>• Good startup of program<br>• Database startup good/meaningful information<br>• Communication<br>• Standards being clarified, better understood/ Flushes out deficient procedures policies/process improvement<br>• Kept promises and on timeline (credible program) | • Rating sheet confusing<br>• Need for more statistical expertise<br>• No element data<br>• Database not complete to give solid conclusions-We're only at step one/ Reports do not help decision-making<br>• No cost data/can't be used for decision making<br>• Buy in-what's in it for me?<br>• Too much county comparisons<br>• Vague program goals/objectives<br>• Limited resources (people and budget)<br>• Need better graphing tools<br>• Who carries the torch if key staff leave/Program Manager only knows ins and outs<br>• Too resource intensive<br>• Only covers small amount of program/budget-27%<br>• Add key elements<br>• Can't be used for daily work planning<br>• Time constraints/Time to get program up and running<br>• Lack of understanding of definitions/element/ feature<br>• Concern with random selection<br>• Link compass with inventory systems<br>• Should differentiate between classes? | • Improve existing systems/need for inventory system<br>• Budget crisis-help set priorities<br>• Expand program/to other areas<br>• Reporting/call for performance measures/usable information<br>• Identify customer expectations<br>• Integrate with other systems<br>• Learn from other states<br>• Tie measures to budget expenditures/Apply system to top maintenance mgt decisions/ Asset mgt. tool<br>• Communicate what we do | • Public perception of value/ Misuse or misinterpretation of data/results<br>• Human Resources Limitation<br>• District vs. Central Office resource limitation<br>• Budget, financial resources cut/limited<br>• Time to get program up and running/generate future buy-in<br>• New administration<br>• Low profile of Program<br>• Vague program goals/unclear direction for future |