Best Management Practices

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This breakout session focused on management practices that support sustainability in use of materials, and other resources. It will also explored training and other programs that are used in support of preparing operations and administrators for winter maintenance operations..

Best Management Practices Major Topic Areas

- Materials - Sustainability
- Equipment
- Human Element
- Operations
- Institutional
- Technology

Best Management Practices Innovative Approaches

- App based snow plans
  - Comprehensive measurement process for plans
  - Having ability to simulate winter to evaluate cost of change and plan response

Best Management Practices Innovative Approaches

- Identification of salt vulnerable areas
- Contractor's approach to training

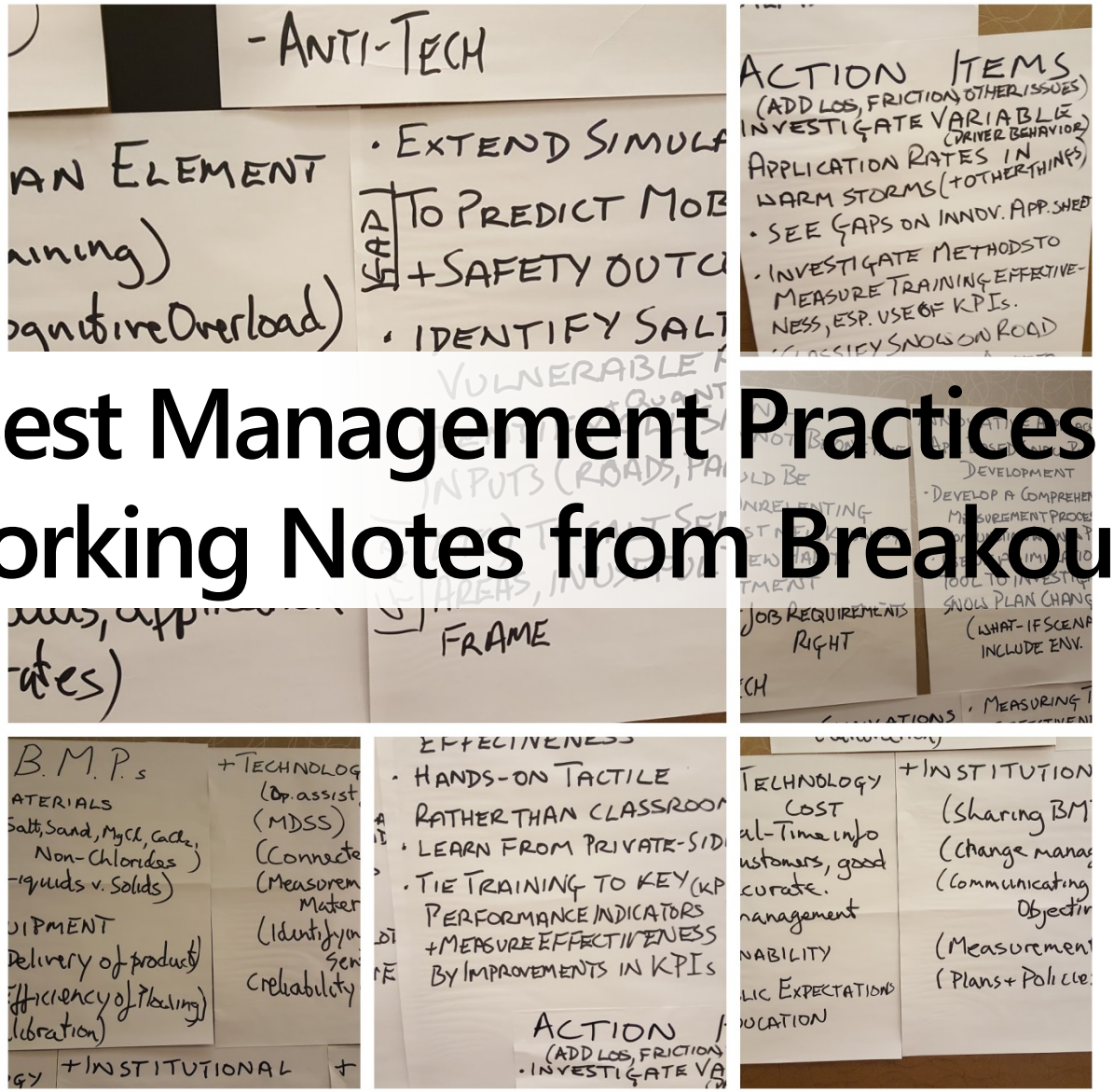
Best Management Practices Action Items

- Extend simulations to predict mobility and safety options
- Account for other salt sources into salt vulnerable areas
- Tools to look for grit vulnerable areas
- Methods to measure training effectiveness, especially with KPI's

Best Management Practices Action Items

- Investigate variable application rates for warmer storms
- Methods to measure training effectiveness, use of KPI's
- Classify snow on roads, how well it plows & responds to salt

Best Management Practices Working Notes from Breakout



B.M.P.s

+ MATERIALS
(Salt, Sand, $MgCl$, $CaCl_2$, Non-Chlorides)
(Liquids v. Solids)

+ EQUIPMENT
(Delivery of product)
(Efficiency of Placing)
(Calibration)

+ TECHNOLOGY
(Op. assist for equip.)
(MDSS)
(Connected Vehicles)
(Measurement of Materials)
(Identifying Salt Sensitive areas)
(reliability issues + maint.)

+ TOTAL TECHNOLOGY COST
BUT Real-Time info to customers, good if accurate.
✓ risk management

+ SUSTAINABILITY
- PUBLIC EXPECTATIONS
- EDUCATION

+ INSTITUTIONAL
(Sharing BMPs)
(Change management)
(Communicating the Objectives)
(Measurement)
(Plans + Policies)

+ HUMAN ELEMENT
(Training)
(Cognitive Overload)
(Role issues)

+ OPERATIONS
(Timing, Information needs, application rates)

GAP
- EXTEND SIMULATIONS TO PREDICT MOBILITY + SAFETY OUTCOMES
- IDENTIFY SALT + (GA SAND) VULNERABLE AREAS
- IDENTIFY + QUANTIFY ALL SALT INPUTS (ROADS, PARKING LOTS ETC.) TO SALT SENSITIVE AREAS, IN USEFUL TIME FRAME

- MEASURING TRAINING EFFECTIVENESS
- HANDS-ON TACTILE RATHER THAN CLASSROO
- LEARN FROM PRIVATE-SI
- TIE TRAINING TO KEY (K PERFORMANCE INDICATORS + MEASURE EFFECTIVENESS BY IMPROVEMENTS IN KPIs

TRAINING
- CANNOT BE ONE TIME
- SHOULD BE UNRELENTING
- NOT JUST NEW KNOWLEDGE BUT NEW HABITS
- RECRUITMENT
  - GET JOB REQUIREMENTS RIGHT
- ANTI-TECH

INNOVATIVE APPROACHES
- APP. BASED SNOW PLAN DEVELOPMENT
- DEVELOP A COMPREHENSIVE MEASUREMENT PROCESS IN CONJUNCTION W/ SNOW PLAN
- USE OF A SIMULATION TOOL TO INVESTIGATE SNOW PLAN CHANGES (WHAT-IF SCENARIOS INCLUDE ENV. COSTS)

MEASURING TRAINI

ACTION ITEMS

(ADD LOS, FRICTION, OTHER ISSUES)

INVESTIGATE VARIABLE (DRIVER BEHAVIOR)

APPLICATION RATES IN WARM STORMS (+OTHER THINGS)

- SEE GAPS ON INNOV. APP. SHEET
- INVESTIGATE METHODS TO MEASURE TRAINING EFFECTIVENESS, ESP. USE OF KPIs.
- CLASSIFY SNOW ON ROAD FROM VIEWPOINT OF WINTER OPS.