Thank You
To all the UDOT employees who have made innovation a part of the way we do business. We share your stories to inspire others to implement these time-saving, safety-improving, budget-stretching ideas.

Utah Department of Transportation
Research & Innovation
Innovative Idea Development Initiative

This issue of "The Innovator" publication is brought to you by Patrick Cowley, Ryan Bailey, and Rachel Morris
IN THIS ISSUE

Bright Ideas!
Have you heard about the new ideas?
Browse on over to the UDOT U Learning Portal at https://utah-udotu.sabacloud.com to vote for, comment on, or share these and many other wonderful ideas.

Innovations in the Works
Have you heard about these ideas in development?
Championed by a UDOT employee these pioneering ideas are going through prototyping design and piloting.

Implementation Spotlight
Have you heard about these implemented innovations?
Many Ideas are shared and improved upon. Check out photos of the creative solutions UDOT employees have adopted throughout the various regions in the State.
By the Numbers

STATS

215 Ideas

63 In Development

152 Implemented

Region 4: Implemented 60, Submitted 80
Region 2: Implemented 40, Submitted 40
Region 3: Implemented 20, Submitted 20
Region 1: Implemented 10, Submitted 10
Complex: Implemented 0, Submitted 0

Bright Ideas!
BRIGHT IDEAS
New Ideas for you to cheer for!

We have many new ideas in the learning portal! Big shout out to all of the Stations who showed off their neat innovations this summer. We gathered and recorded nearly 150 new ideas from Maintenance alone!

Have you heard about the Ideas, Innovations & Efficiencies Group in the Learning Portal? Browse on over to UDOT University and the Learning Portal at https://utah-udotu.sabacloud.com to vote for, comment on, or share ideas. You can browse by tags and find topics that interest you. With over 200 ideas there is bound to be something you can cheer for, offer support for, or champion.
TOP TEN
Current score board by employee vote

17 votes  UDOT 05-71 Policy Change - Comp Time
8 votes  Driveway Reconstruction Permits
7 votes  Mower Wing Spring
7 votes  UDOT Directory Mobile App
6 votes  Non-Roadway Project Management
5 votes  File Management Training for Going Paperless
5 votes  Short Do-It-Yourself Walk Through Videos
4 votes  ASANA for Teams & Delegation
4 votes  Barrier Straightener for SR-92
4 votes  Micro-Highway Lighting

Vote for your favorites!
go to  https://utah-udotu.sabacloud.com
THINK ABOUT IT!

Meditation & Stress-Relieving Training

**Problem** - Let’s face it, life and work get stressful. We are all familiar with stress in one way or another.

**Proposed Solution** - Wouldn’t it be nice if there was a simple and proven way to de-stress at home and in the workplace? Craig Ide reminded us that there is! It’s called meditation, and the health benefits associated with this age-old practice are tremendous. Research suggests meditation can help control the symptoms of anxiety, headaches, depression, and many other conditions. Are you interested in some trainings on meditation and mindfulness?

- Craig Ide - Aeronautics

UDOT Directory App

**Problem** - Ever on the go and need to find a fellow UDOT employee’s contact information?

**Proposed Solution** - Create a mobile UDOT directory app. The app would allow you to seamlessly find the contact information of all UDOT employees from your mobile device. It would allow you to sort by individual names, building locations, and organizations. On top of that, the app would enable you to create lists of people that you could email or text simultaneously.

- David Alger, Region 1
THE FUTURE AWAITS

Solar Roads & Transportation Electrification

**Problem** - Roads enable our economy to prosper, they connect us, and they take us to new and exciting places, but who’s to say they can’t do more? What if the roads of the future could power our cars and cities?

**Proposed Solution** - Smart solar-powered road panels. The solar panels will not only be strong enough to drive and walk on, they will also be able to display pavement messages and “paint” lines using LED lights. While an Idaho company is only in the development stages, we are interested in the efforts to transform our transportation systems including advances in electric vehicles, how we tax road usage, inductive charging, and smarter lighting and intersection warning systems and much more.

- Blaine Leonard, Traffic Management Division

Sky Corridors - Urban Air Mobility

**Problem** - The future of air travel is well “up in the air” while cities, governments, and private companies figure out how we will travel safely and efficiently through the air as the demand on airspace grows.

**Proposed Solution** - Create infrastructure and communication systems to help guide manned and unmanned air traffic. This may include planned separation and a set of rules to follow to ensure ease of mobility and safety in the skies.

- Paul Wheeler, Project Development
PROTOTYPING

Micro Highway Lighting

**Problem** - How do you provide proper lighting and delineation on winding rural roads on those dark nights when it’s not desirable to have your brights on blinding opposing traffic.

**Proposed Solution** - Microlights on delineator posts on Rural two lane highways. The idea I have is to bolt solar powered lights on delineator posts and aim them down at the roadway. The lights could act like micro highway lighting in the more poorly lit areas of our State. Because of the fairly inexpensive cost of solar powered lights, this could potentially yield a large Benefit/Cost ratio.

**What’s Happening** - Region 4 is planning to test out the lights on SR-20 in a particularly troublesome curve.

- Sam Grimshaw, Region 4

Back-Up Cameras for Trucks & Plows

**Problem** - Our plow trucks currently have no back-up sensors or cameras enabling drivers to see what they might be about to hit! Region 4 had the idea of installing back-up cameras to make maneuvering in tight spaces safer and easier. Now in design phase, they’re looking for the right camera and the best place to mount it on trucks.

**Proposed Solution** - Equip plow trucks with a camera to help drivers back up more safely.

**What’s Happening** - Region 4 is testing cameras and mounting locations.

- Dan Allred, Region 4
PILOTING

Vactor Truck Manhole Grate Lift Arm

**Problem** - Contrary to all dieting wisdom, grates and manholes have been gaining pounds over the past four years to handle wider roads and more traffic. Region 2 has had issues with grates sticking and with crews getting hurt trying to lift them.

**Proposed Solution** - The region submitted an idea to create a hydraulic lift strong enough to hoist and swing grates off their stands. The lift would be mounted on the front of the Vactor (vacuum truck).

**What’s Happening** - Now in the design phase, drawings have been created by the BYU Capstone group. They will create the lift, test it, and fabricate the final product for UDOT to use in the field.

- Mark Prows, Region 2

Green Bike Lanes

**Problem** - UDOT has tried a variety of ways to incorporate bike intersections in roadways. The challenge has been making these intersections user-friendly for cyclists.

**Proposed Solution** - Region 3 met this challenge by creating a new intersection with new bike lanes. Bike entrance and exit points are marked in green paint to help them stand out. This will help cyclists more easily cross the intersection and will enhance road safety.

**What’s Happening** - The intersection is still in construction but will be finished by the end of this summer.

- Heidi Goedhart, Region 3
SPOTLIGHT
Implemented Maintenance Innovations

PDF tip! Throughout the issue some of the photos are hyper-linked to the idea submission in the learning portal
Cone Holder for Vactor Truck

**Problem** - To set up cones around the maintenance operations with the Vactor Truck, you either need to store the cones in the cab of the truck or have a support vehicle.

**Solution** - Station 227 made a bar that bolts onto the back of the vactor truck to conveniently hold cones. This makes it easier to grab them when they stop on the side of the road to clean drainage boxes, etc. The cones are handy to set out and are stored again when they travel to the next stop.

- Mark Prows, Station 227, Draper UT

Hitch Mount Concrete Mixer

**Problem** - How do you mix concrete on the go? Moving maintenance operations are bogged down by loading and unloading equipment, not to mention the risk of injury.

**Solution** - This crew made a mount that slides into the hitch of the vehicle which keeps their concrete mixer handy so they are able to roll up to the next location ready to continue work.

- Brian Nielsen, Station 460, Colton UT

Implementation Spotlight
Barrier Straightener

**Problem** - Straightening barriers can be a difficult task. Previously, this was done using a loader to move the entire stick of barrier and reset it. This often requires closing lanes of traffic.

**Solution** - Following Region 2’s example Region 3 has created another tool for straightening Barrier, which attach to a grader that can operate on the opposite side of the barrier on steep slopes, eliminating the need for lane closure. See video’s of each: [Region 2, Region 3] - Lehi, UT

Mack Hood Brackets

**Problem** - Mechanics working on big Mack trucks needed just a little more room to work.

**Solution** - The Purgatory shed designed brackets to extend the opening of the hood. These are good for looking over the motor (pretrip), working on the motor and, most of all, safety. They made two different brackets for the older and newer trucks. Made out of stainless steel, each bracket costs $79.00, which is cheap for the benefits UDOT will get out of them. - Purgatory, UT
Wing Blade Racks

**Problem** - Where do you safely store the wing blades for snow plows when not in use? On the ground or leaning up against each other causes damage.

**Solution** - Several sheds throughout the state have created their own solutions by fabricating various racks and hanging systems.

- Multiple Locations

Sign Holder Stands

**Problem** - Maintenance stations store a wide variety of signs, which can make it difficult to find the sign you need and keep them from getting damaged in a pile.

**Solution** - Several sheds created a sign holder stand to easily store the signs. They leave enough space between signs to see what each says which helps you quickly find the right one.

- Multiple Locations
WING BLADE RACK INNOVATIONS