

EMBRACING TECHNOLOGY

Today's workforce is all about the new tech; everyone wants to have the new gadget. It's crazy to think that there is already an iPhone 12 when the iPhone 11 was released one year ago, and the original iPhone was in 2007. Apple has released a new model almost every year which is how quickly technology is moving when it comes to electronics.

This is the environment our workforce is accustomed to in their personal lives, but for those who have been in the public sector for a period of time understand that it takes years to implement new technologies, especially for the smaller organizations. So, how can we continue to make the day to day grind of our jobs more exciting like the rest of the technology out there?

After attending a North American Snow Conference (NASC) in 2011 and seeing all of the cool and new tech that was out there for the Snow Operations Industry, I got to work looking at how I could bring some back to our shop. When there are no distractions, take the time, collect your thoughts, and write them down; I drafted two lists, "wants" and "needs". I took a break and went back to both lists about 2 weeks later and developed a plan as to how our agency could acquire some of this tech. At that time, being new to the public sector, I stuck with what my supervisors were comfortable with. Every year, we need to prepare a 5 year look ahead for capital projects, so I developed a 5 year look ahead for Snow Operations. The list was comprised of new technology which included equipment and operational procedure enhancements. As we know, the municipal engine works at its own pace, we are just implementing the last of the original 5 year look ahead program; so, it took just about 10 years! Pictured right is a 2019 Hook loader Lexington built with the idea in mind of minimizing front blade use to enhance mobility. An Underbelly scraper windrow feeds into a 9' rear mount wing.



All New Technology is awesome, and the really cool stuff, for snow, is usually unveiled at the NASC. It's unfortunate that it can't be attended by all staff, and it's imperative that efforts are made to send at least one person, regularly. Regional conferences with an equipment display are always good, too. Encourage staff to go and see what's out there, give them some "skin in the game" and the implementation will be more fluid.

Research the tech, reach out to the vendors, and get educated on it. For example, we are currently running seven different types of plow edges on our plow blades, but two of them are R & D edges from a manufacturer. We are running several different types



because one size doesn't fit all. Roadway surfaces are dynamic, they are always changing for better and worse. Pictured left is the underbelly composite edges Lexington is using to minimize the damage done to the various pavement preservation techniques we use. Try to find out which edge would work best for the

operators that is always having a challenges, maybe a new composite edge will eliminate a problem that's been going on for multiple seasons. Pictured right is the composite plow edges Lexington is using on smaller plows that are working in neighborhoods with lots of uneven frames and covers. Keep a good working relationship with the vendors and manufacturers in a way that there is healthy, open dialogue as to what works and what doesn't work. Offer your agency to try out new items that aren't on the marketplace. We have been performing R & D work for years with multiple equipment companies and the agency has reaped the benefits of seeing what's about to be released into the marketplace or what needs to go back to the drawing board. And, some of the best ideas in today's marketplace have come from the operators using the products. It's a true benefit for the operator to speak with the designers and vice versa, everyone benefits since all parties involved want the product to succeed.



The Town of Lexington will be performing field trials of a new brine system for the 2020-2021 season. During the 2013-2014 season, Lexington work with a vendor to retrofit the existing brine system to blend organics. The conversation started at the 2013 NASC event that lead to manufacturer designing a solution that now is offered to any agency that has a unit like Lexington. We asked a question and the manufacturer rose to the occasion, the picture to the right shows how the Town can blend in one tank and pull product from the other. The timing was perfect since the Town was in need of a new system. The opportunity was a direct result of maintaining communication with vendors. The manufacturer is confident about the gear performance, but they still feel its absolutly necessary to work the machine for a whole season to make sure it's good for the marketplace. The Town benefits from using new technology and, has the ability to critique the equipment for the designer.



While researching tech, understand the “pros” and “cons” of anything that you are looking at. What may work in West Des Moines, Iowa, may not work in Lexington, MA. While attending NASC, I heard about all kinds of great tech being used around the country. But each geographical area in the country has its own unique baseline when it comes to climate, construction materials, etc. There also may be a logistic challenge that could make a product cost prohibitive for use in certain parts of the country. Stay local, or regional, if you can, but ultimately, keep your program sustainable. Bret Hodne from West Des Moines, Iowa said something in a presentation around 2013 and it’s stuck with me ever since, “do you need a sledge hammer or a ping hammer?” At the time, he was discussing enhanced chloride products and how the weather climate will help you decide what you need to get the job done. But you can use this to reflect on just about anything, it may help you ground your decision as to what’s really needed. And how does this play into technology? Massachusetts experiences much milder weather than Fargo, North Dakota, so when I’m looking at what they are doing for Anti-Icing, I need to be cognizant that the products used in Fargo are not what we may need in Lexington since they can have cold spells that last weeks, not days. But the thought process behind the tech implementation in Fargo may be spot on with something that could be introduced in Lexington.

And that leads us to the next conduit of tech in Snow Operations. Maintain communications with communities in and around your area through other local organizations, lunches or even phone calls. Pre-COVID, we had a group that met once a quarter to discuss challenges, tech, and everything else. It has been a great resource for what other tech is out there. Take some time, research, and seek out who’s the pioneer in Snow Operations in your area. Call them up, schedule a visit and see what they have and what they are doing. One benefit from our group was that we wanted to get some new organics, for winter liquids, into our region. We developed a consortium and bid it out.

There may be other organizations in your region that may be thinking the same thing you are but can’t find a way to make it work. There are two agencies that share a mobile brine system, so they didn’t have to bear the whole burden of the capital expense.

The common denominator in all of these topics is communication. Make sure the channels remain open with your manufacturers, vendors, neighbors, supervisors, and operators. New Technology is always fun to talk about and gets everyone excited, until you see the price tag. Be patient and plan it out, over years. You need to walk before you run and remember you can’t eat the elephant in one bite.

Marc F. Valenti

Manager of Operations

Town of Lexington, MA

Department of Public Works

mvalenti@lexingtonma.gov