New Bear series explores unique alumni careers

Erik Kabela discovers the world of meteorology

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From a very young age, Erik Kabela knew what he was passionate about and what he intended to do for a career. The 2000 WBHS grad grew up with a deep interest in the weather and the impacts that it had on agriculture, wanting to eventually become a meteorologist.

"Growing up on the farm, weather has a big impact on the plants being grown and the animals being raised," reflected Kabela. He added, "I think my interest in meteorology and agriculture came from spending so much time at my grandparents' house, eating dinner, and watching the midday news. The two most important parts of the newscast were always the weather report and the ag report."

After his high school graduation, Kabela went on to major in Meteorology at Valparaiso University, a private university in Valparaiso, Indiana. During his time there, he participated in storm chases, which are the pursuit of storms for research purposes.

Kabela reminisced about these events, saying, "One of the most fun things I got to do while at Valparaiso was to go on several storm chases. If severe weather was going to be close to the school (within about a 4 hour drive) we would go 'day chasing.' We also had a 10-day summer chase where we would travel throughout the country to intercept severe weather."

From there, he went on to Iowa State University to get his master's degree and study agricultural meteorology, a subject in which his advisor, Dr. Brian Hornbuckle of the Department of Agronomy, specialized in.

"This couldn't have been a more perfect fit," said Kabela of his advisor, "as I was able to couple my passion for meteorology with my upbringing on the farm."

Hornbuckle helped Kabela secure his first meteorology job at the University of Kentucky, where he worked for 7 months creating weather forecasts, making sure weather data coming in was current, updating their website, and providing data and informational support to farmers and Kentucky residents before being invited to interview for a position at the Department of Energy's Savannah River National Laboratory (SRNL) in Aiken, South Carolina.

"While at SRNL my primary job duties were to ensure that our weather center was receiving the latest data from the National Weather Service, conducting daily weather forecasts, and ensuring our emergency response models were up-to-date," explained Kabela. "SRNL is where I learned about transport and dispersion modeling, which utilizes weather information to predict where a plume of some material (e.g., smoke) will travel and what the consequences may be to the population in the plume's path. I also became involved in field work wherein I would deploy meteorological instruments to measure the weather and use that information to validate meteorological models."

While he worked at SRNL, Kabela also attended graduate school at the University of South Carolina, earning his Ph.D. in Geography with a concentration in Applied Climatology.

"After about 5 years at SRNL, I moved to Oak Ridge National Laboratory (ORNL) where I focused primarily on conducting weather measurements and using the information to validate both meteorological and transport and dispersion model results," continued Kabela. "I made the move to ORNL to pursue my passion of researching meteorology rather than having a career focused on operational meteorology (i.e., weather forecasting)."

Kabela has worked at ORNL, based in Oak Ridge, Tennessee, for 11 years now and currently lives in Knoxville, Tennessee with his family, which consists of his wife of 16 years, Megan, and their four children. He is currently the Group Leader, Collection Science and Engineering and Senior Meteorologist in the Nuclear Nonproliferation Division.

Kabela explained what his title means, saying, "I utilize my meteorological background to help solve current issues or problems in the nuclear nonproliferation arena. I also lead a team of researchers who are focused on utilizing their area of expertise to help solve questions or issues in the nuclear nonproliferation arena."

On a day-to-day basis, he begins his day by working through emails before moving on to viewing weather models if there's going to be interesting weather coming through. The rest of his day is usually spent in project meetings or analyzing data.

Kabela has several published works, most of which, he explained, are from when he collected dew from corn and soybean plants at Iowa State. His works also include his master's thesis and doctoral dissertation.

Kabela, in collaboration with colleagues Andrew Harter and Brad Stinson, also has a patent for a global communications system. He described the patent, saying, "We developed a system wherein we could communicate with an air sampling station and couple it with software to perform atmospheric dispersion modeling."

Currently, Kabela is excited about his latest project, explaining, "One of the more interesting projects I'm working on looks at utilizing National Weather Service radar data and using it to study how we can detect and track plumes for something like emergency response purposes."

Kabela demonstrates the wind cube, a piece of technology that uses light to read weather data. *Photos compliments of Erik Kabela.*

"Plumes from such things as building fires, prescribed forest fire burns, chemical plant fires, etc. may be detected by weather radar," he continued. "We want to find a way to track just the plume from the event while taking away the "weather" portion of the radar return, and providing that information to decision makers."

Overall, his biggest career goal is "to develop a team where customers recognize us as the primary subject matter experts in our fields within the DOE national laboratory complex."

Kabela couldn't imagine himself on any other career path and continues to find fascination in the continuously changing nature of weather.

"The fun thing about weather is it is always changing," said Kabela. "From a science perspective, I find it fascinating to observe and try to understand why the atmosphere behaves like it does. I also take pride in knowing that my research in the meteorological field is allowing me to serve my country."

What he enjoys most about his job is getting to work with researchers who share the same pride to solve difficult problems. However, Kabela has found that his role in the research being done has changed as the years go on.

"One of the hard things with my career is as I continue to progress is that I perform less of the detailed research I once conducted and have a broader influence over the direction of the research," he explained. Looking on the bright side, he said, "The positive side is this allows me to mentor early career scientists and develop/enhance their research skills and expertise."

Experience at WBHS

Kabela looks back at his time at WBHS with fondness, remembering the classes that helped shape his future as a meteorologist.

"The math and science courses at WBHS certainly were a big factor in preparing me for my career path," he reflected. "English class with Janeen Miller and Government class with Don Taylor were also big influences as those classes helped develop writing skills which are crucial in scientific publications."

However, Kabela points out one specific person that he thinks was especially impactful: Jo Knapp, a former WBHS guidance counselor.

"She was always a source for positive encouragement," said Kabela, "and could always see the path I needed to get directed toward, even if I couldn't see it myself."

He also remembers participating in multiple sports for the Bears and their impact on him, saying, "In terms of extracurriculars, each of the coaches I had in all four sports I played (football, basketball, golf, and baseball) all shaped my leadership skills."

Reflecting further on sports, Kabela's fondest memory of WBHS comes from his senior season of baseball, saying, "I'll never forget the 2000 baseball team and our journey to a state runner-up finish. We had a lot of fun, worked hard, and became the first WBHS baseball team to make it to the state tournament."

Advice

For students and graduates who have an interest in the meteorology field, Kabela has plenty of advice.

"First, there are a wide range of career paths available in the meteorological field," begins Kabela. "Find out as much as you can about each field as you can to find the route that works best for you."

He continued, "Second (and this would be for current students), don't give up on pursuing a career in meteorology if the math and science gets to be too hard. Don't be afraid to ask for help as you work through the harder courses. Continue to follow your passion."

Kabela also advises students to put themselves out there, saying, "Lastly, do a lot of networking. Use LinkedIn. Get involved in professional societies such as the American Meteorological Society and the National Weather Association. Job shadow and/or intern at a local TV station or the National Weather Service office in Davenport."

For Kabela, the biggest challenge while pursuing his career path was the heavy coursework.

"Meteorology is very science and math heavy," he said. "Some of the concepts and courses were relatively easy to grasp while others took a lot of extra work to understand. I had great professors and colleagues that were willing to help and that made all the difference."

"Although the math and science portion of STEM may be difficult as you're going through it, keep going," he encourages students interested in STEM careers. "The reward is worth the effort. And find people along your journey that you look up to as a mentor. Soak in as much knowledge as you can from those that came before you.

To high school students as a whole, he implores, "Don't stress about what others think you should be doing. Follow your passion, work hard for it, and everything will work out in the end."

Jamie Harms professionally flies Hondajet as corporate pilot

Ashlynne Nash
Co-Photo Editor

PAST

Studies conducted in 2020 by the Iowa DOT report that there are around 5,400 active and licensed aircraft pilots in Iowa. Jamison 'Jamie' Harms, a 2004 graduate of WBHS, is one of them. Like many people, Harms left high school with some sense of career direction. His mind brought him to Kirkwood Community College in Cedar Rapids, where he studied music. Harms played the trombone and piano. Towards the end of two years being there, he realized his future was not in music.

"Looking back I think I decided to go with music because I didn't know what else to do. I enjoyed music but was not passionate about it," Harms recollected. He quit majoring in music, and took about a year off. During this break, he worked full-time at a furniture store, and began pondering his options.

At the time of Jamie's birthday, he received flight lessons from his parents. Harms headed to the Iowa City Municipal Airport and gave them a chance. Doing so may have been the best career decision he could've ever made. Harms fell in love with flying, and he knew right away that he wanted to become a professional pilot. However, becoming a pilot is not a straightforward path. Harms first enrolled at Kirkwood in Iowa City to get his Associates degree. Once finished there, he began schooling at the University of Dubuque in 2008, where he would go on to get his Bachelors in Flight Operations. He also finished with a minor in Airport Management.

After completion of college, Harms moved back to West Branch and began working as an aircraft lineman at the Iowa City airport. Aircraft linemen are responsible for welcoming and fueling planes, tidying planes, and preparing planes for their upcoming flights. Harms held this position for three years.

Harms reflected, "It was an entry level position but it enabled me to get my foot in the door at a company that had a charter jet service in the hopes of eventually being a pilot for them."

Harms was promoted to a Second in Command pilot. In this position Harms was able to help fly twin piston airplanes, twin turboprop airplanes, and light jets. Two years later, Harms was able to advance to a captain for an on-demand charter company.

Harms expressed, "It was a unique and fun experience. I got to fly business executives, professional athletes, politicians, comedians, medical patients, organ donor teams consisting of doctors and nurses to go harvest bodies, and organs to their new recipients."

CURRENT

In 2016, Harms started working for a different company. Here, Harms is the main pilot for a company that has its own business jet. The aircraft is a Hondajet, and requires only one pilot to fly it. Besides flying the jet, Harms has many other obligations. His duties include tracking all expenses related to his flight department, calculating and keeping track of the operating expenses of the aircraft, scheduling and tracking his jet's maintenance, keeping his aircraft and hangar neat, and planning his annual pilot training.

The company Harms works for has business in ten states in the U.S. Because most of their business locations are not at primary airline hubs, it would take many of the executives who fly with Harms most of the day to get to their destinations. With Harms and the Hondajet, it takes an hour or two to arrive. Many executives can get their business done and return home within the same day.

Because of this, Harms concluded, "The business jet is a very important business asset and enables our company to be as efficient as possible."

DAY TO DAY

When you average out a typical year for Harms, he is in flight about seven days a month. Summers tend to be busier than winters, with some summer months giving him ten days in flight and some winters only giving one day. When Harms is not in the air, his other work duties around the hangar take about two to three more days a month.

"In total, I work on average about half a month," Harms stated.

"On the day I fly the work starts well before I step foot in the airplane," Harms explained. Harms is not only in charge of flying the plane, and getting people where they need to be safely, but he also has a lot of planning to do. Before getting to his worksite, Harms watches weather pertaining to the flight. This means looking at current weather, the weather patterns during the duration of the flight, and paying attention to weather conditions that may be happening nearby to make sure they don't pass through.

After this bit of research, he then plans and files a flight plan for each leg of the flight.

"In the flight plan I include the date and time for departure, the departure and arrival airports, the route to fly, altitude to fly at, the amount of fuel onboard, number of people on board, speed of our aircraft, and an alternate airport if weather dictates we need one," Harms elaborated.

A lot of extra thinking, preparing, and calculating goes into being a corporate pilot. Aside from planning for the plane, Harms also occasionally has to plan ground transportation for his executive passengers. This means a car service, rental car, or other transportation. He also books his own hotels, cars, and other necessary plans according to how long he will be on ground. Usually it wouldn't be more than one night on the ground for Harms, but any extra time is up for grabs. Harms is able to use free time for sightseeing.

Returning back to his aircraft, Harms pulls the plane out from its hangar and calls for fuel. Next on the checklist is preflighting the airplane.

"I preflight the airplane, meaning I walk around and check out the entire airplane to make sure it's in an airworthy condition and that there is nothing visibly damaged or broken," Harms explained.

From here, he takes the passengers back from their business trip.

ADVICE

Harms very much enjoys his career and is satisfied with his choice of becoming a pilot. He encourages anyone who is interested in aviation to check out their local airport and nearby flight schools. He also recommends speaking with any professional pilot.

"I am more than happy to talk further with any students that are interested in pursuing a career as a Pilot," Harms exclaimed.

Benefits of being a pilot include: traveling a lot and to many different areas depending on the company you work for, mixing up your everyday routine, and financial stability. Some downsides of being a pilot are time away from home, expenses protruding from education and gaining experience.

It was around $40,000 for just my flight experience back in 2010. Today those numbers will be higher," Harms remarked.

Harms suggests getting a college degree, but most airports no longer require this. It would be beneficial to acquire a degree, but not necessary for the job itself. Becoming a knowledgeable pilot comes with time and experience. The more hours in the air, the better.

Harms poses next to his Hondajet.

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