The RPA actually got its start as early as 1896, when something called aerodromes at the time, were used to test the capabilities of new flying devices and to test if it was even possible for a heavier-than-air craft to achieve sustained flight. In May 1896, Dr. Samuel Langley proved that mechanical flight was possible with his Aerodrome No. 5.

From that point on, the shape, design and technology structure of the unmanned aircraft evolved over the years, improving each time.

In 1918, the U.S. Army became interested in unmanned flight and ordered 25 Liberty Eagle aircraft. The intent was for the aircraft to be used as an aerial torpedo.

Just over two decades later in 1941, the OQ-2 Radioplane became the first mass-produced unmanned aerial vehicle. By 1945, only a few years later, radioplane factories had produced around 15,000 aircraft for use as target drones.

Since achieving the first sustained controlled flight, the idea of unmanned flight has grown to be one of the most useful aircraft technology systems in modern history. Today, RPAs have transformed from a basic tool into high-tech machines, providing assistance during both humanitarian and war time situations.

1990s - 2000:

In January 1994, more than half a century after the advent of the first mass-produced UAV, the Air Force’s modern-day remotely piloted aircraft program was born.

General Atomics Aeronautical Systems, Inc. received an advanced concept technology demonstration contract to produce a medium altitude endurance “unmanned” aerial vehicle. This new system would be called the RQ-1 Predator and would be based off its precursor the GNAT 750, which initially debuted in 1989 and was used for long-endurance tactical surveillance.

A mere six months after the contract was established, the new aircraft achieved its first flight in July 1994. While the flight was a success, the Air Force then had to bring in military pilots, navigator-trained rated officers and non-rated officers to learn to use the new technology.

“I was the first person to receive a permanent change of station and the ninth person to actually enter into the program,” said Lt. Col. Eric, 432nd Wing Director of Staff. “I came in short notice in November of 1995 from Cannon Air Force Base, N.M. In May 1996 I went to ground school in San Diego at the General Atomics headquarters. Afterward, I went to flight training at Fort Huachuca, Ariz., where the Army had the only system in the states at the time.”

John Box, a retired Air Force pilot, trained to become an RPA pilot in June 1996. He said because the system wasn’t produced by the Air Force, the new equipment did not come with technical orders, making the task of learning how to use the system rather challenging.

"Much of what we learned was by word of mouth from our instructors and not delivered in a military format," he said. "That took an adjustment and I found it frustrating and challenging but very exciting. I often had to deal with emergency situations that no one had ever before encountered. Every time I flew the system, I learned something new. We were developing books and adding new information to them daily. I wasn't trained for this type of work. Others may have got us started off on a better foot, but I believed in the concept and was committed to making it happen as best I could. It was a ‘cowboy’ atmosphere and I really enjoyed it."

By 1995 it was decided that the Predator’s capabilities were needed to aid U.N. and NATO efforts in Europe. The Predator and Air Force personnel were deployed to Taszar, Hungary, to provide support from 1995 until August 1998.

Eric deployed to Hungary in August 1996 after completing training. It was during this deployment that he felt the continued challenges of integrating a new form of air power into the Air Force’s inventory.

"There were two Air Force pilots and a General Atomics instructor pilot with us … only the three of us to accomplish the mission," he said. "There were no publications, technical orders, regulations or guidance that we hadn’t created ourselves. We had to rewrite the very first technical orders that we were given and put them into Air Force terminology."

Eric said maintainers were also dealing with some of the same issues as the pilots - learning by observation.

"The General Atomics technician was there saying ‘here’s how we do the 50-hour engine inspection,’ and our guys were watching him do it,” he said. "But there were no publications or technical orders to break down the process of actually doing it. It took almost three years before we actually started getting valid technical orders on the systems, and it was the same the guidance and everything else. Today we are used to having regulations outlining how people do their jobs and laying down boundaries—we didn't have those."

In October 1996 Eric found himself testing new waters for the Predator while facing the challenges of learning new technology and not having Air Force publications or technical orders to break down the processes.

"On Oct. 1, 1996, during my deployment, I got the dubious distinction of being the first person in the military to be investigated for a safety investigation board for crashing a remotely piloted airplane," he said "At the time I was doing everything I could to save the airplane. That was my first and foremost concern, but because we didn't have any resources to help us, we kind of made it up as we went. We actually had a General Atomics engineer in the ground control station with us. We said, 'what if we try this?' and he would reply, 'well I don't know we've never tested that before.' We just didn't have any other choices so we were doing it the best that we could."

In the end it was determined the crash occurred because the engine had been incorrectly rebuilt. Although the incident resulted in the loss of an aircraft, Eric said it was a learning experience.

"We didn't have any publications to follow and we lost an airplane because of it," he said. "But, we learned a lot from it … we were pioneers on the leading edge of this system making Air Force leaders understand what kind of capabilities this thing had, what we could do with it, and how to move forward with it."
It was during this time when Eric and John were learning to fly the Predator that James Clark, at the time an Air Force colonel assigned to the Pentagon, was chosen by Gen. Ronald Fogleman, Chief of Staff, U.S. Air Force, to examine Predator operations. Clark, who is known as “Snake” by many, was chosen because he had no experience with RPAs. Fogleman wanted someone with an outsider’s perspective.

"What I found [during my study] was remarkable,” he said. "This little drone could fly hundreds of miles away and provide color television and infrared video surveillance of enemy activity, without risking the life of a pilot. In a control van, which was a converted NASCAR transporter trailer, I watched pilots and sensor operations sitting in front of computer screens actually flying this thing - simply remarkable."

While Snake was studying Predator operations in D.C., and pilots, mechanics and other RPA community members were providing assistance in deployed locations, Creech Air Force Base, Nev., was continuing to be built up in order to become home to the Air Force’s premier RPA wing.

The 11th Reconnaissance Squadron was the first squadron to stand up at Creech AFB. This milestone also marked the point when the Air Force RPA program’s dynamic objectives took on a new strategic focus. After the squadron stood up the 11th RS deployed members to support Detachment 3, which was under Defense Advanced Research Projects Agency.

"While deployed we were Detachment 3 under DARPA," Eric said. "When the Air Force took over we became the 11th Reconnaissance Squadron deployed; then once the Air Force turned to the expeditionary concept, [the squadron] became the 11th Expeditionary Reconnaissance Squadron. I was actually the first formal commander of the 11th ERS when it stood up.

While the 11th ERS was deployed and redefining itself as a combat asset, Indian Springs Air Force Auxiliary Field was continuing to grow back home in preparation to become the home of additional RPA squadrons.

"Indian Springs was a pretty bare base then," John said. "Most of the existing infrastructure was dilapidated, early Cold War era construction. They converted the small Base Exchange into our Intel vault and they renovated a small building across the street for our squadron operations facility. We ate at a small chow hall that originally supported up-range and transient aircraft operations. There was a recreation center/gym converted from several other old buildings 'kluged' together."

Mardi Wilcox, who was the squadron maintenance officer in 1995, took her new task head on despite having few resources available at the time.

"I was super excited to be selected as the first maintenance officer in the Air Force to be assigned to a UAV unit," she said. "It was cutting edge technology and the UAVs we had at the time were special in that way. No one else had them, and a lot of people had never heard of them. We were excited because there was no limit to what they could do ... we could only dream about what was to come. We had one double-wide trailer and one small hangar. Shelters for the UAVs were canvas structures across the ramp. It was 10 tons of stuff in a 1 ton bag."

During the late 1990s the program was still in its beginning phases. For some this was exciting but to others it seemed less than promising. However, Wilcox said she had a much different outlook on the subject.

“There were a lot of naysayers [at the time],” she said. “Many thought it was just another ‘thing’ that would just go away ... but our major command leadership made it work. I think for the most part my people loved it. It was new, it was on the leading edge and for the majority of my folks, we wanted it to work. We set the foundation for what the program is today.”

2000 - Present:

After Operation Allied Force wrapped up in mid-1999, the Air Force was left to figure out what to do with this still relatively new technology. By early 2000 the RQ-1 Predator, which had just proved its capabilities overseas, was armed and became known as the MQ-1 Predator.

"As part of the ‘lessons learned’ from Operation Allied Force, it was determined that if the Predator had a weapon on it, we could cut the time between identifying a target and then destroying it," Snake said. "On Feb. 16, 2000, Predator 3034 took its first successful Hellfire shot from the air, and to all of our surprise, it worked."

This new capability arrived just in time, as events on the morning of Sept. 11, 2001, changed many lives and the helped define the future of the Predator.

"We watched the attack on the World Trade Center, until we were shocked by flight 77 as it crashed into the Pentagon," Snake said. "Late on the evening of Sept. 12, a lone C-17 took off from an airfield on the west coast with its cargo of Predators and Hellfire missiles. Days later, one of America’s first responses to the terrorist attacks on 9/11 was in place and ready for combat."

After 9/11 the MQ-1 Predator proved itself resilient and capable during operations Enduring Freedom and Iraqi Freedom. The success of RPAs during these operations resulted in an increased desire for RPA capabilities in future operations.

Lt. Col. Russell, who was the RPA assignments officer at Air Force Personnel Center in 2005, remembers trained RPA pilots were a constant need for the Air Force. At the time, there were general officers everywhere who wanted every training spot filled in order to support U.S. and partner nation troops overseas.

Pilots, maintainers and intelligence Airmen were pulled from several different platforms from across the Air Force to meet the demand RPA community’s growing demands.

In 2007, the 432nd Wing was activated at Creech AFB as the Air Force's first wing comprised entirely of RPAs, which was a sign of the program's rapid growth.

A year later the demand for RPAs had grown so significantly that the wing expanded and became dual-hatted as the 432nd Wing/432nd Air Expeditionary Wing, capable of offering full-spectrum support to overseas operations while still supporting the 432nd Wing's operate, train and equip efforts.

"In 2011, I came out to Creech and was qualified as a MQ-9 pilot," Russell said. "Having been a part of the assignment process in the past, it’s good to see how the tribe has grown. The Air Force is very tribal; I used to be an F-15 pilot, so I used to be part of that ‘tribe’. Now it’s neat to see the growth of an RPA tribe, made up of people from all different backgrounds."

As Russell arrived at Creech in 2011, the MQ-1 and its successor, the MQ-9 Reaper reached 1 million total flight hours - just 16 years after the program initially began.
Just over two years later, on Oct. 22, 2013, the Air Force’s MQ-1 and MQ-9 RPAs doubled that by achieving 2 million cumulative flight hours.

Today, the MQ-1 and MQ-9 continue to be flown from 8,000 miles away in Afghanistan in support of Operation Enduring Freedom, patrolling the skies and providing critical support and protection to U.S. and coalition forces on the ground.

It is because of the dedication and diligence of the men and women past and present that the RPA community has gotten where it is today. As a testament to the vital role of the RPA community during the past 18 years, Predator 3034, the first RPA to test the Hellfire, and the first to shoot in combat on Oct. 7, 2001, is now displayed at the Smithsonian National Air and Space Museum in Washington, D.C.