

Sol Noctis (Gates Intermediate School)

Narrative

In Greenland, off the Denmark Strait, there lies the splendid ice city of Sol Noctis, the Sun of the Night. As Greenland's most recognizable natural feature – its ice sheet – continued to melt during the first part of the 21st century, an opportunity arose for the founding of a strategically located settlement nestled into the newly uncovered mountains of an interior not seen for thousands of years. Just above the Arctic Circle at 35° W, 70° N, this gleaming metropolis of 120,000 is the first city founded on the “cradle-to-cradle” design principles that had just begun to take off around the turn of the century. Today, in the year 2050, our population is almost entirely comprised of the indigenous Inuits, yet we are attracting a growing number of environmentalists from around the globe. Sol Noctis is on a mission to create the first net-positive, environmentally enriching community.

Transportation is an integral component of our infrastructure and helps define Sol Noctis globally. Local transport within the city is facilitated by GREENCorp's patented AirCars, personal vehicles that run continuously on engines powered by compressed air. As the chief export of Sol Noctis, these cars have allowed the whole world to “Ride on Air!” To supplement personal transportation, our monorail system, powered entirely by municipal wind farms, provides free and convenient mass transit throughout the city as well as to neighboring towns. For domestic and international travel, we utilize the InterContinental Express (ICE) – a high capacity, high speed transit system – to capitalize on our central location between Europe and North America, transporting goods and people quickly and efficiently. With over 50 countries contributing to the development of this system, ICEports have arisen around the globe, and Sol Noctis now stands as an international hub. In addition to ICE, a seaport was constructed in Sol Noctis, taking advantage of the discovery of channels connecting Greenland's interior with the opening of the Northwest Passage, further enhancing trade and travel.

The city generates power using solar, wind, and hydroelectric technologies. Because of the darkness from the Autumnal to Vernal Equinoxes, Sol Noctis requires power generation systems besides solar, which itself is generated at a municipal array utilizing direct sunlight and capitalizing on the ice sheet's reflective properties. The solutions to that problem are the wind and water turbines on the mountains and in the Kitaafjord. Water for our citizens comes from the melting ice sheet, the largest and purest source of freshwater in the world.

The Agricultural Biodomes are large spheres located throughout our city. They serve a mainly agricultural purpose, growing native crops during the long polar nights stretching through the fall and winter.

The Innovative Green Living Units (IGLUs) found in lower-density areas of the city are “green” and affordable housing solutions that generate power for the city and contribute to its eco-friendly lifestyle. By employing SmartWrap, an innovative material using LEDs and small photovoltaics, these homes can create the illusion of different traditional Greenlandic residences.

Throughout the city and within commercial and residential buildings, SmartWalls (full LED wall screens developed with SmartWrap technology) provide citizens with a unified system of communication in Sol Noctis (known as UniCom). This allows you to access your information and contact others from anywhere in the city using the technology of cloud computing which provides a wireless broadband connection of 100 megabits per second, four times faster than traditional fiber optics.

Sol Noctis provides many city services, including a state of the art education system, a high-tech healthcare program, excellent public safety services, sporting events, and tremendous research projects. Education is based on the concept of learning-by-play, and so we replace traditional methods with full-immersion systems to promote gaining knowledge through experience. Through virtual classrooms our students have the opportunity to instantly “travel” to far away places and immerse themselves in other cultures.

Healthcare in Sol Noctis has been improved by the advent of the new UniCom system. Advanced health systems integration is facilitated by tediagnostic technologies that allow elderly and disabled citizens to receive medical attention and care in the comfort of their own home. These advances, coupled with public healthcare policies designed to promote healthy lifestyles, enhance our citizens’ quality of life. Public safety services operate under similar principles.

Citizens can safely enjoy the native beauty of their environment at many public commons, outdoor work spaces, and at the nearby Northeastern Greenland National Park, the largest in the world. The arctic climate also provides opportunities for a wide variety of unique sporting events, such as the Ice Sheet Challenge, a winter triathlon that brings together athletes and spectators from around the globe.

Research also draws many to this city of white, because of the secrets hidden within the melting ice. The Greenland Archeology Project (GAP) along with the International Association of Space and Aeronautics (INASA) has set up bases to examine the past and plan for the future. Deep in the ice sheet, we can observe temperature fluctuations and artifacts left behind by previous civilizations. For instance, methanogens found in the ice are capable of sustaining themselves without oxygen and could be the first organisms to survive in an environment such as Mars, thus being crucial to INASA’s research. Ice Cube II – a telescope embedded in the ice sheet itself – is the world’s second largest and tracks the paths of neutrinos as they pass through Earth. These amazing particles help scientists uncover the secrets of deep space.

With its innovative systems and many services designed to enhance the quality of life of all its citizens, Sol Noctis stands as a model for cities around the world. Furthermore, by creating a global cultural exchange and eliminating negative impacts on the environment, our city is the “green” beacon into a new era.

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