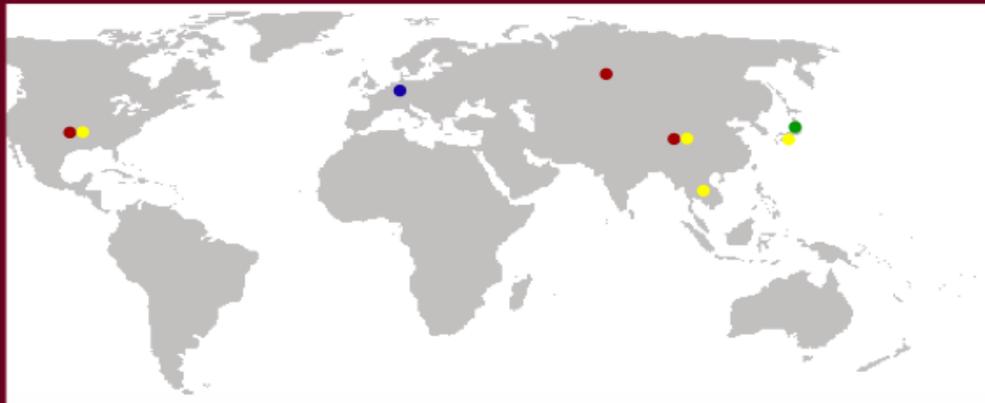


## Product Life Cycle



- → Raw materials
- → Component manufacturing
- → Design
- → Product assembling



### RAW MATERIALS

#### Germanium

You have access to it by treating germanium dioxide with either hydrogen or carbon, or by getting it from within the dust of smelting (used to produce a base metal from its ore) after processing zinc ores. Germanium mineral deposits are found in Utah, Colorado, Washington, Russia and China.

#### Silicon

Silicon metal can be obtained by reacting silica (silicon dioxide) with carbon materials such as coal, wood chips and coke. It is normally found in the form of sand, however it can also exist as rock crystal, amethyst, agate, opal, quartz, flint and jasper. After oxygen, it is the most abundant element in the Earth's crust, making up 27.7% of it, which is where it is typically obtained.

### MATERIAL PROCESSING

#### How is Silicon processed?

After the silicon is obtained (by heating silica with a carbon material), it is cooled in enormous iron trays. Subsequently, the metal is put from the mold into a truck, weighed and then piled up for storage. This truck breaks it down so it can efficiently be put for storage. The step after this is simply sizing it accordingly to the customer's requirements; making it ready for shopping.

### COMPONENT MANUFACTURING

#### The Lens

Although the camera is branded Sony, its lens is manufactured by a German lens company called "Zeiss". Zeiss lenses are manufactured in Japan. Even though, the Sony headquarters are also in Japan, the Zeiss headquarters are found in Oberkochen, Germany.

#### The Screen

- The surface of the glass is polished, washed, and then coated with silicon dioxide.
- A layer of indium tin oxide is evaporated on the glass, engraved and coated.
- An additional layer of a long chain polymer is applied so the liquid crystals are aligned correctly.

- A sealing resin is added as a top coat.

- Spacers are placed so the glass, that takes the form of a sandwich, which is filled with the liquid crystal substance, creating the screen.

### DESIGN

Different types of Sony electronic devices are designed and developed in various locations around the globe. Although Sony delegated most decisions to Operation Headquarters that were established in locations such as Europe and Southeast Asia, Sony's main headquarters in Minato, Japan are those in charge of the overall research, development and design of the Sony NEX 6. The most sensible designing software Sony uses to design and assemble this camera would be the computer aided design software.

### PRODUCT ASSEMBLING

In comparison to some other electronic devices and brands, this Sony camera is assembled by Sony. Most specifically, it is assembled in Nukata District, Aichi Prefecture, Japan, in Sony Kohda TEC factory. This area is one of the largest industrial centers in Japan's largest island, and also withholds the headquarters of other well-known brand names such as Toyota, Toshiba and Suzuki. Since manufacturing this camera requires manual assembly and adjustment by highly skilled technicians, their training limited Sony's ability to expand overseas. However, after long and hefty preparation, this was accomplished and now Sony also resides in the UK, Singapore, China and USA.

### DISTRUBUTION

Sony is vertically integrated. This means that Sony owns its own manufacturing plant and warehouses. Moreover, they own different retail formats: the superstore, retail shops, retail counters (within department stores), flagship stores in big cities (such as New York) and an online channel in order to reach out to their targeted audiences where there are most likely to search for the camera.

## Disposal

Sony has established a disposal procedure called "The Sony Take Back Recycling Program" which allows Sony consumers to recycle their electronic products at centers in the United States.

These programs may not be always completely honest and true, and the consequences of this being the case could have a detrimental impact on the environment. The camera would be shipped outside the United States towards developing countries such as India or Vietnam where the toxic materials within it would leave permanent damages in the environment, including cancer-causing dioxins.

