

#JUGAAD

This Hindi Word Rewrote the Rules of Innovation

The spirit of "make do and make it work" captured something deeper than improvisation: it reflected resilience, creativity



There is a Hindi word born in the farmlands of Punjab that has travelled from dusty village roads to the boardrooms of the world: *Jugaad*. Once used to describe the improvised vehicles farmers built by strapping diesel engines onto wooden carts, the term has now entered the vocabulary of Cambridge, Harvard Business Review, and some of the biggest global corporations. What began as rural ingenuity has evolved into a powerful philosophy of innovation embraced by companies such as GE, PepsiCo, Apple and Meta.

At its heart, *Jugaad* means finding a low-cost, clever solution using limited resources. In Punjab, farmers who could not afford tractors or trucks built their own machines, rugged, functional hybrids that did the job at a fraction of the cost. This spirit of "make do and make it work" captured something deeper than improvisation: it reflected resilience, creativity, and the refusal to let scarcity limit progress.

Today, scholars and business leaders often call it frugal innovation. But the world increasingly prefers the original word, because *jugaad* carries a cultural and emotional weight that "frugal innovation" cannot fully capture. A Cambridge professor even wrote an entire book dedicated to the concept, filled with case studies showing how global giants are adopting the

mindset. One of the most celebrated examples comes from General Electric. When GE needed a portable heart monitor suitable for rural India, the traditional route would have involved years of research and millions of dollars. Instead, engineers embraced *jugaad*. They repurposed a bus ticket printer as the display and stripped the device down to its essential functions. The result was a dramatically cheaper machine that later earned FDA approval and is now used in hospitals across the United States, proof that innovation born for resource-constrained markets can transform global healthcare.

India's space programme offers another striking illustration. ISRO's Mars Orbiter Mission stunned the world not just for reaching the Red Planet, but for doing so at a cost lower than many Hollywood movies. It demonstrated how resourcefulness, efficiency and creative engineering can rival, and sometimes outperform, big budgets.

Harvard Business Review has described *jugaad* as a "new growth formula for corporate America." In an era of rising costs, climate pressures and economic uncertainty, companies are increasingly looking for ways to do more with less. Tech giants, consumer brands and startups alike are embracing lean experimentation, rapid prototyping and cost-efficient problem solving, all principles rooted in the *jugaad* mindset.



PART:3

● Verna Mohon

Greenland was sparsely populated by humans but it had a sizeable population of polar bears and musk oxen. To have ventured far from the hut would have been suicide.

April is calving season for musk oxen, a month when the bulls are even more protective and aggressive than usual. If a bull senses danger, it will charge. That is 600 lbs (270 kgs) of bone and muscle, armed with a dense plate of horn across the forehead, together with powerful hooking horns hurtling at you with no sense of mercy. These meat juggernauts can reach speeds of 25-30 mph (40-50 km/h) with terrifying acceleration from a standing start.

Matador agility is limited when saddled in thick polar gear and avoidance nigh impossible. Without his rifle, Ritter would not have stood a chance against a musk ox. Similarly, it would have been fatal to venture unarmed into polar bear country. Polar bears were by far the most dangerous animals out there and they can sprint at 40 mph (64.4 km/h).

Marius Jensen arrived at Ella Island before the Germans but found that the crew there had already evacuated to Scoresby Sound. This was the southernmost terminus for the Sledge Patrol and a key radio station. It was also an administrative base, where the local official, Poul Hansen, still flew the Danish flag over government buildings and a safe harbour, where the US Coast established their Greenlandic foothold.

Scoresby Sound was south of Ella Island. Myggebugten was north. In his report, Governor Brun noted:

"The obvious thing under these circumstances would be to continue

directly to Scoresby Sound. But as Corporal Jensen thought it would be inappropriate to arrive empty-handed, he first sledged 150 km back to Myggebugten..." That is a journey of between 5 and 7 days, depending on the weather.

A POLAR BEAR WITH A GUN

April 30, 1943

A week of waiting alone in the arctic silence, broken only by screeching winds, even to a seasoned hunter like Ritter, must have been agonizing. Would his patrol return? Would Jensen return? Would anyone find him before supplies were exhausted?

Finally, late one morning, he heard dogs outside. For a moment, a deep breath of relief stilled his mind. He went to the door. Head bowed to shield from the blinding light outside, he heard the familiar click-clack of a bolt-action rifle chambering a round. Upon opening the door, he was confronted, not by one of his men, but by the surreal and menacing sight of a polar bear with a gun.

This fleeting mirage was in fact Marius Jensen. As well as holding Ritter's rifle, he was wearing the standard kit of the Sledge Patrol, polar bear trousers.

Polar bear hair is hollow, buoyant and warm. More importantly, it is naturally water-repellent. So, if a patrolman were to fall through the ice, it wouldn't soak up water as fast as wool; potentially saving him from immediate hypothermia.

It was a sight that must have been at once terrifying and comforting. In many ways, the men had become friends, valuing the 'code of the arctic' above the laws of nations. Ritter must have realized that Jensen had 'come back for him', as much to save him from certain death as he had to deliver him as a prisoner of war.



Present day Sirius Patrol crossing a frozen fjord.

The Greenland Sledge Patrol was disbanded at the end of the war, but re-established in 1950, under the dark clouds of the 'Cold War' with the Soviet Union. It continues to this day as an elite unit of the Danish Navy, though under a different name. They still use dog sledges (rather than snowmobiles) to patrol because dogs have greater 'mechanical' reliability and their early warning capabilities against polar bears are unmatched.

A Release And A Farewell

#DUEL ON ICE



A Mauser Karabiner 98k - note bolt action.

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THE LONG MUSH TO ALLIED HQ

May 1, 1943

After only a single night's rest, Jensen loaded the sledge with all supplies then; with his captive at gunpoint, set out on the 300-mile (480 km) trek south to Allied HQ at Scoresby Sound, a journey that required astonishing physical and mental endurance.

Marius Jensen rode the runners of the sledge. Hermann Ritter, the walking prisoner, was obliged to keep up on skis. To prevent the sledge from being bogged down in soft snow, Ritter often had to break trail in front of the dogs, or push the heavy cargo from behind.

Sledges only work on compacted snow or ice, the trappers' trails, but if it veered into a drift at the side of a trail, it had to be bumped and levered to set it back on the trail. Manhandling a heavy sledge on harsh shifting terrain was strenuous, grinding labour.

The great enemy of effort in the arctic is sweat. When you sweat, moisture fills the warm air pockets created by the insulation of furs. As soon as you stop to rest, your body temperature drops, and that moisture freezes into a layer of ice



The island of Greenland, showing its central ice sheet and a map of the North East, showing key locations in this story.

against your skin, risking fatal hypothermia.

Polar travelers move with a deliberate, slow trudge, constantly monitoring their exertion to ensure that they don't break a sweat. If they feel themselves getting too warm, they vent their clothing (opening collars or cuffs) to let the heat escape before it turns into moisture. Both men had oilskin anoraks that worked well for this. Their hoods were lined with wolverine fur, the only fur that doesn't hold frost from your breath; you can just brush the ice crystals away.

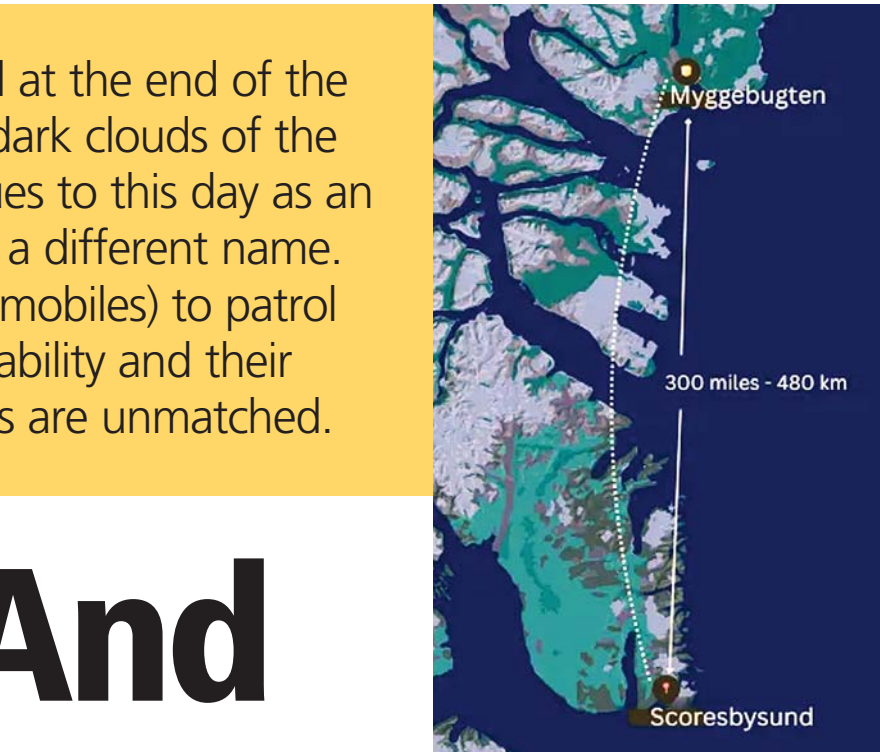
We don't know the exact route they took, but clearly, there were a lot of fjords to cross. For much of the year, these are frozen safely solid, but in May, when they were travelling, it was beginning to become treacherous. A layer of ice might look two feet thick and perfectly white, but could be honey-combed with internal melt-channels. This is known as rotten ice.

Marius needed all his skill to navigate the best route; to keep the journey as short as possible, but also to avoid rotten ice, and in addition, to take advantage of the trapper's huts on solid ground for overnight stops. Overnighting on the ice could only be done with a



Reformation Day

Reformation Day is observed on October 31 to commemorate the Protestant Reformation, a major religious movement that began in the 16th century. The day is traditionally associated with Martin Luther, who is said to have posted his Ninety-Five Theses in 1517, challenging certain practices of the Roman Catholic Church. His actions helped spark widespread debates about Christian faith, church authority, and religious reform across Europe. Today, Reformation Day is particularly observed by many Protestant and Lutheran communities through church services, lectures, historical events, and educational programs celebrating the movement's lasting influence on Christianity and European history.



Map of the journey, showing the distance and the amount of sea-ice that had to be crossed over the frozen fjords.

they were still operating the radio station there.

SABINE ISLAND IN FLAMES

May 14, 15, 1943

Alerted to their presence there by Marius Jensen's initial discovery, the United States Army Air Forces (USAAF) launched a long-range bombing mission from their base in Iceland. A flight of bombers strafed the buildings and dropped bombs, leaving the station in flames.

ARRIVAL

May 22, 1943

Three weeks after setting out, with his dogs almost dropping in their harnesses, an utterly wearied Marius Jensen pulled in to the Allied-controlled station at Scoresby Sund. Even more drained and spent was Lt. Hermann Ritter. Jensen handed over his captive to the U.S. authorities. It was a bittersweet moment; both a release and a strange way to bid farewell to a comrade with whom he'd shared so much adversity.

Ritter reportedly asked only for a bath and a long, undisturbed sleep; both requests were granted. At last, for him, the war was over. He was taken to the United States, where he spent the rest of the war at Camp Clinton in Mississippi. He was well treated. For a man who had spent so much of his life in the frozen, desolation of the Arctic, the humid heat of Mississippi must have felt like another, and very strange, planet.

AFTER THE WAR

In 1945, Hermann Ritter returned to Austria, where he lived the remainder of his life with his wife. Although he avoided the limelight, he always spoke of Marius Jensen with profound admiration. He viewed him not as an enemy who

tent. A trapper's hut was typically no more than ten feet square and there was no separate room for a prisoner. Sleep was obviously essential, but could Jensen trust Ritter not to turn the tables once more?

These two rugged outdoorsmen had found a common bond, but the fact remained that their countries were at war, and Ritter was a prisoner of war on his way to be handed over to the enemy authorities. It was conceivable that Ritter could take the rifle, while Jensen slept and force him to turn back for the German base on Sabine Island.

At night, Jensen put the rifle's bolt in a bag tied to his body. Despite this precaution, their mutual dependence on survival tripped over any suspicions. Hermann Ritter was unlikely to kill the only man who knew how to navigate the dog team back to safety. He had done his duty, as he saw it, but was privately glad for a way out of a war he disapproved of.

For Jensen and Ritter, their world was an endless horizon of frozen white, primed only by the coruscating frost on their goggles, but there was another world outside their solitary existence, a world at war. There were still German troops at Hansa Bugt on Sabine Island, and



Armband designating the Sledge Patrol as military personnel.

By Rick Kirkman & Jerry Scott

ZITS



In the early modern period, the Russian Empire witnessed an unusual and fascinating intersection of cultures through the life of Abram Petrovich Gannibal. Believed to have been born in Africa, possibly in present-day Eritrea or Cameroon, he was taken as a child and eventually brought to Russia, where his life would take an extraordinary turn under the patronage of Peter the Great.

Abram Gannibal: From Enslavement to Nobility

Gannibal's early life was marked by displacement. As a young boy, he was taken from Africa and transported through the Ottoman Empire before being presented to Peter the Great. Rather than remaining a servant, he became the tsar's godson and received an elite education in Europe, particularly in France, where he studied engineering and military science.

Rising through the ranks, Gannibal became a respected military engineer and nobleman in Russia. His life symbolized both the possibilities and contradictions of empire, an African-born man who attained status within one of Europe's most powerful courts.

Elizaveta Abramovna Gannibal: A Daughter of Two Worlds

Among Gannibal's children was Elizaveta Abramovna Gannibal, a woman of African and Russian heritage who became part of the extended Russian noble society. Through her father's status, she was connected, socially and culturally,



to the Russian imperial world. Her life reflects the blending of identities: African ancestry, Russian aristocratic upbringing, and participation in a society that was both inclusive in elite circles and yet structured by rigid hierarchies.

While not as widely documented as her male relatives, Elizaveta represents the presence of Black women within European aristocratic spaces, an often overlooked aspect of history.

Her Brother Osip and the Line to Pushkin

Elizaveta's brother, Osip Abramovich Gannibal, plays a crucial role in literary history. Osip became the grandfather of Alexander Pushkin, widely regarded as the founder of modern Russian literature. Pushkin was deeply aware of



his African ancestry and took pride in it. This heritage influenced his identity and creative work, setting him apart in Russian society.

Pushkin and The Moor of Peter the Great

Pushkin's unfinished historical novel, *The Moor of Peter the Great*, is inspired by the life of his great-grandfather Abram Gannibal. The work explores themes of identity, race, assimilation, and loyalty within the context of Peter the Great's reforms. In the novel, Pushkin reimagines Gannibal's journey, from Africa to the Russian court, highlighting both the opportunities he received and the cultural tensions he navigated. It stands as one of the earliest literary explorations of a Black figure in European aristocratic society.

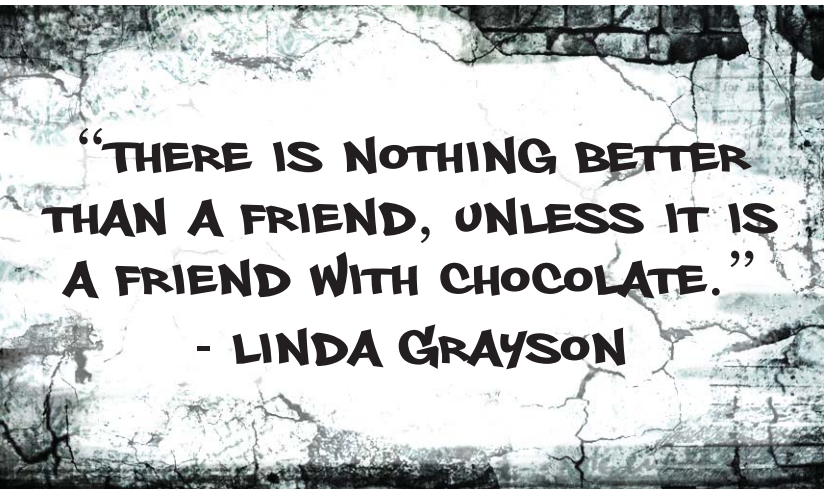
A Legacy of Cultural Intersection

The Gannibal family story is not just about one man's rise but about generations shaped by that transformation:

- Abram Gannibal, the African-born nobleman who entered the Russian elite.
- His daughter Elizaveta, representing Black female presence in aristocratic Russia.
- His son Osip, linking the family to literary history.
- And his great-grandson Pushkin, whose work immortalized this heritage. Together, they form a narrative that challenges conventional ideas about race and identity in early modern Europe.

By Jerry Scott & Jim Borgman

THE WALL



BABY BLUES

