The use of skis goes back to very ancient times. Over the course of his evolution, man has always known how to adapt himself to the geographic and climatic conditions of his surroundings. To ensure his survival, he often had to travel across very hostile terrain, and before breeding animals was introduced, he had to hunt in the wild for food. To ease his travels and to prevent his sinking into the fresh snow, he no doubt invented the precursor to the snowshoe. Early signs of such development can be found everywhere, e.g. in Europe, Central Asia, Japan, North America, New Zealand... Next, he sought to improve his performance, namely in speed; this would bring efficiency in hunting by permitting him to easily and rapidly follow animal tracks. Man invents the first skis!

**Introduction and spread of skiing**

**Scandinavia or Altai ?**

Scientists have tried to establish the place or places that could have been the birthplace of the ski. Two opposing theories exist, one favouring Scandinavia, and the other, Altai, a mountainous region in Central Asia.

- The oldest skis have been found in Hoting, Sweden, and date back about 4,500 years (marshes and bogs preserve wood), but Russian researchers maintain that they have found skis dating from 6,000 years ago. Other evidence has been displayed, in particular a number of rock carvings near Lake Onega and the White Sea (in northwest Russia), and in the island of Rodoy in northern Norway, depicting a man on skis with a stick in his hand. This carving dates from 4,000 years ago.

- Linguistic studies of the word "ski" show many strong similarities between not only the Scandinavian and Finnish languages, but also between those of the Altai and septentrional Siberian peoples, for example the Samoyed and Tungusic peoples. Researchers concluded that skis were invented by the Altai peoples, and later spread through the migration of the population (migratory movements towards Scandinavia, towards eastern Siberia, Manchuria and Japan, as well as towards North America across the Bering Strait, and finally towards the Caucasus and Asia Minor).

Finally, it is also important not to reject the theory that skis were developed independently, in several different places, where climatic conditions necessitated the development of such a means of locomotion.

In any case, wherever they were invented, the use of skis remained limited to only a few places in the world for thousands of years.

**Skis used in Northern Europe and Asia for more than a thousand years**

The knowledge of the ski, although mentioned by some ancient scholars (Herodotus, a Greek historian of the fifth century BC), was completely forgotten during the Middle Ages in
Western Europe. Nonetheless, on the basis of written sources and mythical tales, it is possible to trace the origins of the ski to where it was first developed and used. There is evidence of the ski being used in Northern Europe and in Asia, with two different locations in China. In the Altai Mountains in the northwest, the Dingling people used wooden planks to travel quickly over the snow, for hunting and during war. In Mongolia and Turkistan (former Soviet republics in Central Asia), skis were also used mainly for practical purposes. However, in the province of Jilin, in the northwest of China, the Han populations did not restrict their use of skis to purely practical purposes, but also practiced a primitive form of skiing as leisure, and even for competition (at the end of the hunting season).

In Scandinavia, the use of skis was told through sagas and legends, the trademark of the mythology of the Scandinavian people. These sagas indicate that in those times, the ski was a common means of travel in winter, but was also used for military and leisure purposes.

These different accounts hold a very important place in the history of the Scandinavia peoples. Indeed, they were subsequently used to confirm the nationalism and the identification of the populations at the beginning of the 20th century, particularly through the means of sport. Thus, the legendary saga of Gustave Vasa inspired the Swedish to create a cross-country skiing race from Salen to Mora, performed since 1922. This race, called the Vasaloppet (literally, the race of Vasa), over a distance of 90km, is very popular and remains the most prestigious cross country skiing race in the world, an equivalent to the mythic race of Marathon. Since 1932, the Norwegians, for their part, organised a similar race called the Birkebeineren to commemorate the saving of Prince Haakon Haakonsson by two warriors on skis. This 56km long race links the towns of Lillehammer and Rena, and the participants have to carry a bag weighing 3.5kg, symbolising the weight of the infant heir to the throne.

In the rest of Western Europe, the use of skis was practically unknown until the 15th century. Skiing in Scandinavia as described in books, was perceived as very exotic and unsuitable to the rest of the European continent. Only the Duchy of Crain, in the former Austrian province of Carniole (Slovenian Alps) showed any evidence of the persistent use of skis. However, this remains an exception, as the use of skis was mainly concentrated in the nordic countries.

A well founded tradition in Northern Europe: the role of the military

Skis were mainly used for travelling and for hunting, notably by the Lapps, but their use took a new direction in the early 16th century. Toward the middle of the 16th century, the military began to take an interest in skiing as a means of transport and the Russians as well as the Swedish quickly came to integrate skiers into their armies. During the war between Sweden and Denmark (and Norway, under Danish control at the time), nearly 4,000 military skiers were counted in 1564. During the 18th century, Norway institutionalised the use of skiers in its army, and in 1733, a training manual for the military about the use of skis was published.

A practice that "slowed down" in the modern era

The practice of skiing experienced a phase of stagnation, not to say a decline, towards the end of the 18th century in Northern Europe. While skiing was still used as a means of transport by some inhabitants of snowbound regions, skis were no longer necessary for survival. Progress in agricultural production (better harvests, development of animal
breeding, especially in reindeer for the Lapps) the increase in commercial exchanges which opened many regions to outside influences, as well as the development of other means of locomotion (the sleigh, the wheel...), especially by animal traction (reindeer, dogs, horses), were all competitors to the ski as a means of transport and viability. Scandinavia was particularly affected by this phenomenon. However, the use of skiing by the army and the deep-rooted national tradition made it possible to check the decline of skiing, contrary to the situation in Asia, where the use of skis became more rare. Western Europe resisted the introduction of skiing up until the end of the 19th century. Several reasons explain this indifference to the ski. At the time, winter was considered by most, particularly in mountainous regions, to be a very hostile season. The mountains were seen to be very dangerous, and existence there especially precarious. Mountain peoples, particularly in the Alps, tended to go into a sort of hibernation for the winter. Furthermore, the agricultural tradition was not very receptive to outside innovations. Finally, the difference in topography between the nordic countries and the rest of Europe was also a determining factor. While skiing lend itself well to areas with gently rolling hills and the great flat spaces so regularly found in Scandinavia, many perceived it to be unsuitable for the wild and craggy landscape of the mountainous areas.

During the first half of the 19th century, utilitarian skiing gradually transformed itself into recreation, and then into sport in Scandinavia, and particularly, in Norway.

### Skiing becomes structured in Scandinavia, inspired by Norway

#### The spread of skiing and its institutionalisation

In 1826, the Norwegian army decided to reduce its personnel, and in particular, to dissolve its companies of skiers. These soldiers were mostly from the regions of Osterdahl and Telemark. They continued to practice skiing when they returned to their native rural areas, thus ensuring its perpetuation. Children and youth quickly became adept, and went on to develop increasingly complex competitions requiring the ability to brake and turn. Slowly, competitions were organised between vil-

lages, facilitating the spread of skiing throughout the country. Progressively, skiing and ski competitions became more widespread among the young urban population. The first race reported on by the press took place in Tromso in 1843 and the increasing popularity of these events attracted more and more spectators. Similar events were also arranged in Sweden and Finland, where several skiing competitions were organised across the countryside, but it was only in the second half of the 19th century that the practice became institutionalised. In 1861, based on the German and Swedish model, the first organisation charged with overseeing physical activities was created: the "Centralforeningen for Udberedelse av Legemsovelser og Vaabenbrug" (Central Association for the Promotion of Physical Exercise and Use of Arms). The aim of this organisation was to encourage the creation of sports clubs and arms training practice for the purpose of producing "better defenders of the mother country" and to reinforce the strength of their national identity by distinguishing themselves from the Swedes.

The "Centralforeningen" met with immediate success, with 96 shooting clubs, with nearly 6,654 members signing up in the first year.
Among these, the "Trysil Skytte og Skiloberlag" (Shooting and Skiing Club of Trysil), founded on May 30, 1861, was without a doubt the first ski club in the world. The "Centraforeningen" gradually motivated its member clubs to organise skiing competitions. In principle, they were open to all, and reached all levels of society, but only rarely welcomed female competitors.

However, early in the 1860s, there were no standardised racing rules, so in 1867, the "Centralforeningen" decided to control the development of skiing races. In that year, an open competition was organised in Christiania (Oslo), controlled by judges whose duty was to grade the skiers on their technique, their posture, and their use of the poles. Newly established rules were strongly recommended to the clubs in an annual report.

At the same time, technical progress was rapidly advancing. The innovations that appeared in the region of Telemark (such as bindings, among others), developed by Sondre Nordheim, in particular, were decisive in the development of skiing. The use of the famous Telemark turning technique made it possible to stop or turn very easily, a decisive advantage for skiing downhill. This became a decisive step in the technique of ski jumping.

Skiing becomes the “king” of sports in Norway
The practice of skiing continued to become more structured in Norway. In 1883, the Norwegian Ski Association (Foreningen til skidriffjernets fremme), a type of national skiing federation began to oversee and formalise the sport of skiing in the whole country. Skiing became increasingly popular, attracting many new fans. Gradually, it carried the symbol of the national sport. It became so successful that the production of ski equipment, which had up to this period been rudimentary, began to be developed industrially.

Over the years, the competition at Christiania (organised regularly since 1866) gained in size and importance and became a sort of national championship. A turning point came in 1892, when it was transferred to the Holmenkollen hill, reinforcing its notoriety particularly at international level. Holmenkollen became the “Mecca” of Nordic skiing and according to the official history, was also the site of the first ski-jumping competition.

The adventure of Fridtjof Nansen (who crossed Greenland on skis from east to west in 1888) also reinforced the image of Nordic skiing, thanks to the account given of his journey in a book that met with immediate international success. Rapidly translated into several languages, it became available throughout Europe and inspired many to take up the sport.

The first signs of popularity
In the second half of the 19th century, skiing also became popular outside of Norway, but it continued to be for practical and not competitive purposes. Skiing was introduced in the United States in 1840, but it was primarily from 1848 with the start of the gold rush, that it really became widespread. Attracted to the search of this new “Eldorado”, the number of Norwegian and Swedish immigrants increased. However, the use of skis still remained somewhat limited, and was only popular among the Scandinavians. It was not until much later that skiing really took root in the USA. In fact, it was not until the 1920s and 30s that skiing really developed in the USA, Canada and Australia, and in the case of South America, not until after World War II.

Development of winter sports resorts and the Nordic and alpine disciplines
The spread of skiing had a totally different impact in Europe at the end of the 19th century. Several pioneers, such as Henri Duhamel in France, or Christof Iselin in Switzerland, amazed by the accounts of Nansen’s adventures, promoted the development of skiing in the Alps. But again, realizing the strategic role of skiing, the military would play a major role in its propagation by creating companies of skiers. The Austrian army established a skier’s regiment in 1892 with the Italians, Swiss and...
French soon following their example. Another important factor contributed to the perpetuation of skiing in Europe, namely the creation of tourist resorts in the mountains. From 1864, with the first attempts at winter tourism in Saint Moritz, several major stations emerged, particularly in the Alps, and continued to develop. To increase the success and fame of these holiday locations, it was necessary to occupy the tourists by offering the widest range of possible activities, especially sports activities. Thus, many winter sports were imported or even invented in the alpine resorts, including skiing which rapidly became popular and gradually overtook all the other sports. Ski instructors and ski equipment were brought in from Scandinavia to make it easier to learn to ski. Skiing clubs were created throughout Europe (the Black Forest Skiing Club in Germany and the Erster Wiener Club in Austria were created in 1891), and the first national skiing associations were set up (Czechoslovakia in 1903, Austria and Germany in 1905). The first competitions were planned in the Alps, most notably in 1907, when the first international skiing competition was held at Montgenevre in France. This event was organised by the CAF (Alpine Club of France) with the twofold aim of promoting skiing as a sport and also to establish competitiveness with the Austrian and Swiss resorts. The competition between the resorts in the Alps (and indeed between countries) was already taking place, as the political and economic spheres began to realise the potential benefits of mountain tourism.

The breakthrough of skiing in Europe brought about a new phase of innovation in the techniques and the equipment of the sport. The Austrian Mathias Zdasky reduced the size of the skis in order to make it easier to turn, and then invented the first metal bindings. He formulated a whole new method of skiing and presented the first slalom races. He thereby became one of the founders of the alpine skiing discipline, as did the Englishman Arnold Lunn, several years later. Techniical progress was received with some reluctance by the Scandinavians, who were attached to their supremacy in the sport. The Swedes, who since 1901 had been organising the very nationalist Nordic Games, as well as the Norwegians, fought for several years against the popularisation of alpine skiing. Reluctant to lose their dominant position in the organisation of major skiing competitions, they were also the main opponents, along with Pierre de Coubertin, to the creation of Winter Olympic Games. Even after the success of the first Winter Games in 1924 in Chamonix, it wasn’t until 1930 that they finally accepted the alpine disciplines. Their fears, however, were not completely without foundation, because the Nordic Games were unable to withstand the competition posed by the Winter Olympic Games, and finally disappeared in 1926.

**Organisation of skiing competitions**

The FIS (International Skiing Federation) was created in 1924 at the occasion of the first Winter Olympic Games. An International Skiing Commission (CIS) had existed since 1910, bringing together about 10 countries, but this commission was not concerned with establishing rules for skiing competitions. The mission of the FIS was to...
supervise the organisation of skiing competitions. It organised the first World Championships in nordic skiing in 1925 in Johannisbad, Czechoslovakia, followed by the first World Downhill Skiing Championships in 1931 in Mürren, Switzerland.

**Skiing matures : institutional structuring and the leisure dimension**

In the Alps, skiing developed increasingly after World War I, but its clientele was limited to wealthy tourists and people living in mountain areas. The construction of the first mechanical ski lifts in the 1930s stimulated the growth of alpine skiing, at the expense of the nordic discipline, which remained more popular only in Scandinavia.

The major competitions (FIS World Championships) were exclusively organised in Europe before World War II; the nordic championships were held in various countries, while the downhill championships were only held in the Alps. Many of nordic events took place in Poland and Czechoslovakia, which shows that skiing was also well developed in Central Europe.

The post-war period (particularly in the 1960s) was marked by the rapid explosion of alpine skiing as a sport, particularly in the Alps, in North America and Japan. Ski resorts popped up everywhere, sometimes even in completely uninhabited areas. The number of mechanical ski lifts increased exponentially, growing from 50 in France in 1945 to more than 4,000 today (the largest resort in the world). Alpine skiing became open to mass
tourism in western countries where the economies of mountainous zones are increasingly focused on tourism. The practice of competitive sport followed this development. The locations of the World Downhill Skiing Championships are no longer concentrated in European Alps, but are now organised further afield (Spain, Chile, Japan,...) even though the Alps remain dominant. The World Junior Championships, organised regularly since 1972, are often held in smaller resorts seeking recognition.

Nordic skiing is still very popular and widely practised in Europe, also experiencing significant development in alpine countries, particularly ever since the social upheaval of the 1960s. The World Championships have mainly been held in Scandinavian countries since the last World War, contrary to the Junior event, which is organised chiefly by the alpine countries (18 times out of 34 since 1968).

New disciplines are also appearing, making it possible to widen the range of social groups practising skiing as a sport. Snowboarding is a prime example. Invented in the United States in the 1960s (as an adaptation of surfing), snowboarding spread through Europe and Japan in the 1980s, reaching a different clientele, mainly young and urban. Its unusual and libertarian spirit was rapidly received by the economic world (clothes, equipment...), and was institutionalised by the creation of an association for snowboarding. The snowboarding movement was finally recognised by the FIS, which integrated the discipline into its federation in 1994. Since they were created in 1996, the World Championships have always been organised in the Alps. Freestyle skiing, whose origins can be dated back to the beginning of the 20th century, (when athletes tried out acrobatic movements while ski jumping), only became recognised as a separate discipline in the 1970s. The FIS recognised it in 1979 and World Championships in this sport have been organised since 1986, mainly in the Alps, but also in North America, in Japan, and even in Australia, thus encouraging the widespread popularity of this discipline.

The only winter sport that does not come under the auspices of the FIS is the biathlon, which has its own federation, the International Biathlon Union (IBU). The military patrol event in Chamonix in 1924 can be considered as one of the earliest biathlon events, recalling the two primary rationales for the use of skis, namely for practical and for military purposes. However, the military connotation of the sport contributed to its gradual decline, before its reappearance in the 1950s. The first World Championships were held in 1958, and were thereafter organised mainly in Scandinavia and in the alpine countries, although they were also organised in Eastern European countries (revealing the important role of the army in the time of the Socialist states).

Skiing, at the origin of winter sports, was invented thousands of years ago, and has been used by man ever since. For a long time, it was applied to practical purposes only as a mode of transport to facilitate travel over the snow. It was only in the 19th century that in Norway and Scandinavia, skiing became a leisure activity, and finally a sport. Skiing quickly spread to other geographical areas, first in Europe, and particularly in the Alps, where it met with rapid success. Over the second half of the 20th century, alpine skiing became a very fashionable leisure activity in western countries. Its practice, although democratized, continues to symbolise a certain social prestige. The keen interest in alpine skiing does not necessarily reflect an equal development of the competitive side of the sport, which remains dominated by people from mountainous areas.

In the Alps, the development of skiing completely changed the economic structure of the mountainous areas, transforming them from an agricultural system to an industrial economy in the valleys, and towards a mainly tertiary economy at high altitudes largely based on tourism. There is still room for the development of skiing in the world today, despite the fact that the geographical conditions (need for snow) and economic requirements (high costs of practice and infrastructure) clearly impose limits on its expansion.
Skiing: From its origins to the modern practice of Nordic and alpine disciplines

NOC’s affiliation to International Federation of ski and biathlon

Facilities used for Nordic sports

Transportation by rope: Europe far ahead

Different levels of development in snow skiing

Skiing events: from participation to excellence...

The development of skiing worldwide: a situation resulting from a combination of numerous variables