






125 YEARS

TRAVEL IN TIME

1895 – 2020



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IMPRINT

Publisher:
HOCHDORF Group
Circulation:
2000 (German), 300 (English)
Editorial/authors:
Stephanie Bontekoe, Christoph Hug, Monique Inderbitzin, Hans Peter Ineichen (archivist)
Design & prepress:
Monique Inderbitzin
Copy-editing/printing:
SWS Medien AG Print, Sursee
Illustrations:
Ivo Kircheis
Photographs:
Brigit Willimann (cover picture, p. 3, 10, 13, 17, 19, 22, 24, 26, 27, 30), Daniel Hurter (p. 9, 14, 15, 21, 23), courtesy of Gilgen Logistics (p. 20), HOCHDORF archive images (p. 4–9, 16, 18, 28, 29, 32), Adobe Stock (p. 12: Andrey Popov), C ImagePoint.biz (p. 25), iStock.com/166052516 (p. 28)
Graphics:
Adobe Stock (p. 28, 29, 32, 33: pongsuwan, WoGi, leokavalli, kumdinpitak, warmwold, 3dwithlove, Petr, martialred)

EDITORIAL

“BEST PARTNER for 125 years.”



Dear Reader,

In 1895 Conrad Röntgen discovered X-rays (also known as Röntgen rays), Alfred Nobel decreed the establishment of the Nobel Prizes in his will, the Swiss Telegraphic Agency began operating as a news agency, and 28 men founded the “1st Central Swiss Natural Milk Export Company” in Hochdorf. It was a truly courageous and far-sighted step at that time – especially since milk was traditionally processed into cheese in Switzerland in those days.

125 years have now passed since the company was founded on 28 January 1895. 125 years of company history with highs and lows. Good times and bad times are both part of the story. The important thing has been to stay focused on customer requirements and continuously develop the company and its products. That is what generations of HOCHDORF employees have achieved successfully over our history. In this anniversary publication, we would like to show you where this has led us. Our features take you

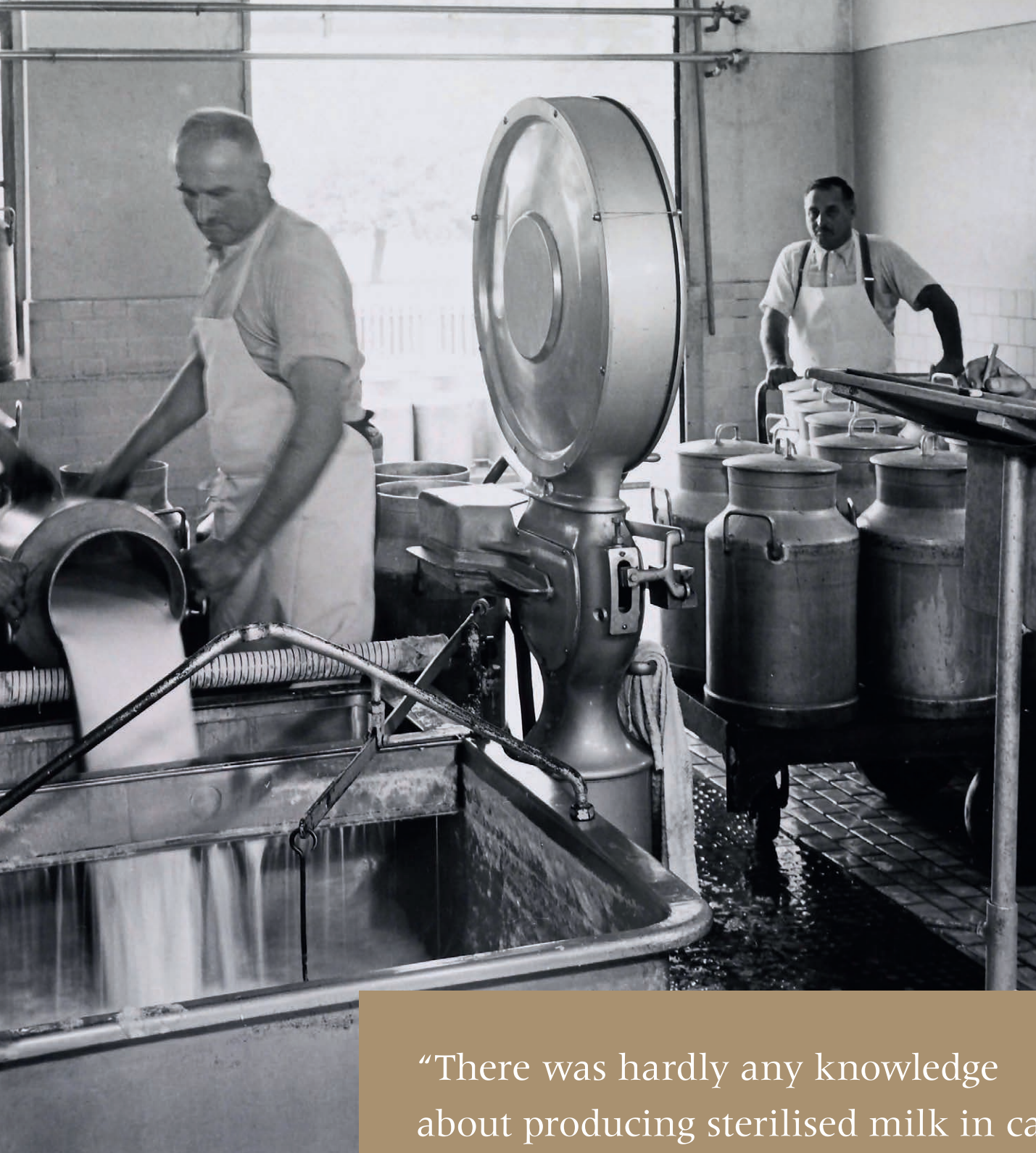
on the milk journey for the production of infant formula, describe what HOCHDORF means for Swiss chocolate and provide interesting details about our company history. Do you know how many products contain HOCHDORF milk powder? Take Swiss milk chocolate for example – our roller-dried whole milk powder makes it a delicious treat.

The history and fortunes of our company are shaped first and foremost by the many committed men and women who work with us. Day after day, as a BEST PARTNER, they take responsibility for our customers – whether industrial customers or end consumers – providing dependable commitment that achieves extraordinary results. They create something that is very hard to replicate: trust. I would like to take this opportunity to thank them for their tireless efforts.

Looking to the future, I am delighted to be part of the next stage of HOCHDORF’s success.

Kind regards from your BEST PARTNER

Dr Peter Pfeilschifter
CEO



> A weight check is carried out as milk is received in Hochdorf in the 1920s.

“There was hardly any knowledge about producing sterilised milk in cans when HOCHDORF was founded. But Chairman Schmidlin wouldn’t have been Chairman Schmidlin if he had let that get in his way.”

THE ECONOMY WASN'T WAITING FOR HOCHDORF IN 1895

“History includes the bad times as well as the good.”

The founding members of HOCHDORF had great ambitions. Together with the Board of Directors, the first chairman Theophil Schmidlin quickly acquired the technical knowledge, the appropriate equipment and the personnel for production and sales.

On 28 January 1895, 21 people left the Hotel Hirschen in Hochdorf with their heads held high. The “1st Central Swiss Natural Milk Export Company” had just been established. To cover the rapidly increasing capital requirements of the founding company, the conversion into a public limited company followed just two years later.

In 1899 Chairman Schmidlin persuaded the world-renowned dairy farmer Dr Niklaus Gerber to become a board member. Gerber invested in the capital and was the driving force behind the condensed milk and milk drying technology in the following years. The company’s name changed to “Schweizerische Milch-Gesellschaft AG” the same year.

Start of “baby flour” production

The first success with the Hochdorf chocolate factory “Lucerna” followed from 1905. It invested CHF 200,000 in the capital. The “Lucerna” era came to an end as early as 1911, but it did not prevent the company from continuing to grow. Production of our baby flour brand “Bébé” started in 1908; the construction of the first spray drying plant in Switzerland in 1912, the “Trufood” system, further contributed to the company’s success.

The British Admiralty became a customer shortly before the outbreak of World War I. During the war years we supplied significant quantities of condensed milk to the French and English armies and, under pressure from the Federal Council, also to the Axis powers. A bitter price war dominated the foreign markets in the second half of the 1920s. HOCHDORF was no longer able to compete. When Dr Maurice Lustenberger

was appointed by the Board of Directors to take over as managing director in 1932, he succeeded in rebuilding the company – with the help of capable employees and with great discipline, diligence and creativity.

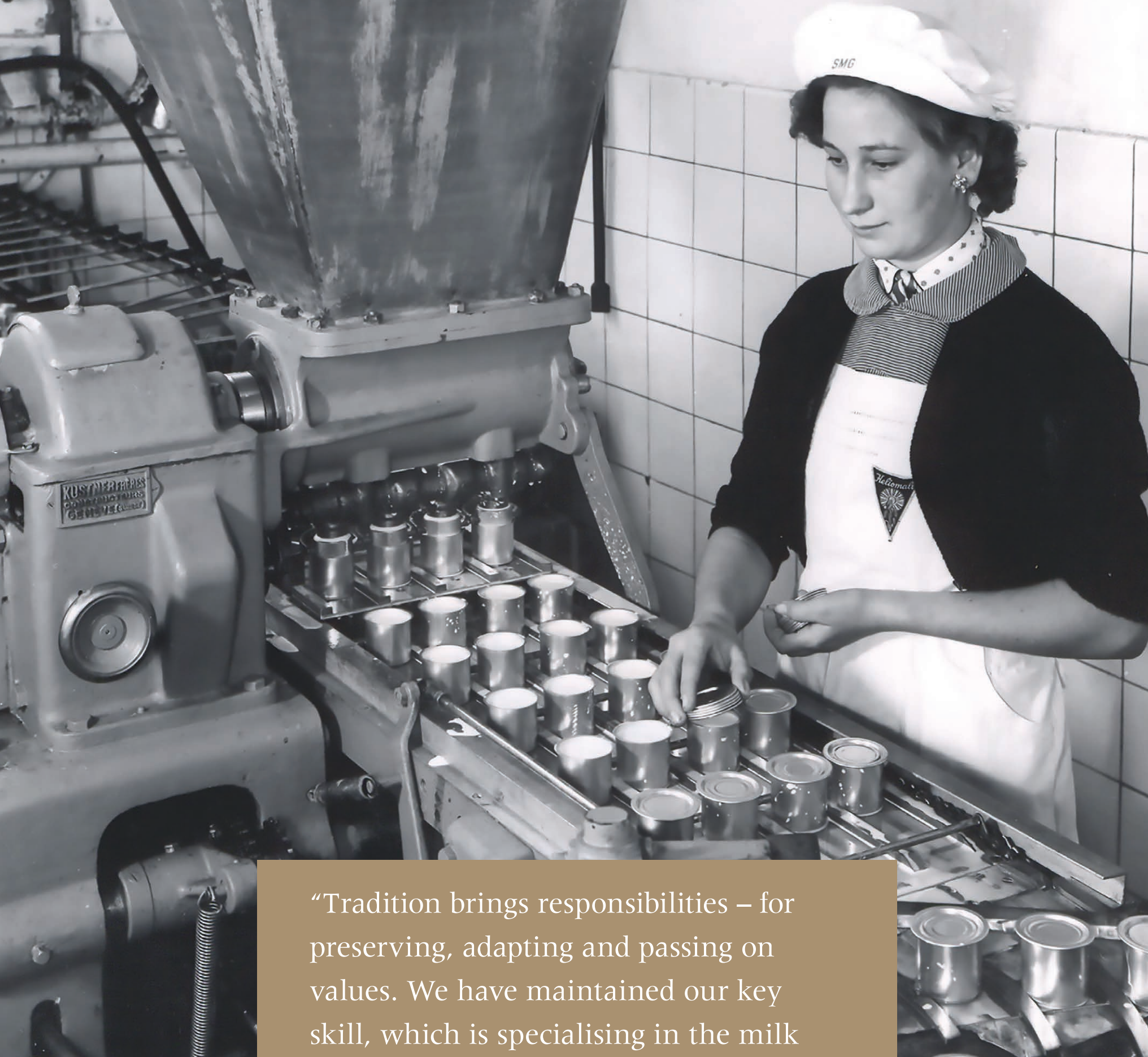
Europe had hardly recovered from the first World War when the next one followed. It created a strain on the population and the economy that lasted long beyond the end of the war. With energy in scarce supply, we had to heat our steam boilers with pine cones and peat.

The economy gradually recovered from the war and HOCHDORF became stronger. In 1954 we introduced the first fully adapted infant formula “Humana” and the period between the 1960s and 1990s was marked by significant growth. We expanded our product range for bakeries and launched new products for the retail trade. During these years we also made large investments in production facilities, new buildings, new technologies and quality standards.

Start of the 21st century

The 100th anniversary of the company in 1995 marked the prelude to the 21st century with new management and the digitisation of work processes. From 2000 onwards, the company underwent transformation at a breathtaking pace. We invested in new business divisions, in milk powder factories like Sulgen, and in the infant formula company Bimbosan in 2018.

What will the next 25 years bring? That’s a chapter that has still to be written! We look forward to history in the making.



“Tradition brings responsibilities – for preserving, adapting and passing on values. We have maintained our key skill, which is specialising in the milk drying process.”

> HOCHDORF has always attached importance to the occupational and social security of its employees and founded a welfare fund in the 1920s.

125 YEARS OF HOCHDORF PROCESSING MILK SINCE 1895

“Knowledge amassed through years of experience.”

A long, long time ago. The success stories of companies steeped in tradition often begin with these words. It’s no surprise really, because continuity is based on experience, quality and vision – as well as courage. Our story is similar.

Over generations, we have acquired considerable specialist knowledge in the field of preserving and drying milk. HOCHDORF laid the cornerstone for this experience as early as 1895, when it decided to produce sterilised canned milk instead of just cheese and butter. A very brave decision at the time, HOCHDORF broke new ground with canned milk.

However, our success story would never have been possible without major investments in the development of new products or technologies. It’s a path we have continued to follow since 1895.

Even our founders adopted a forward-thinking approach. In 1906, we expanded our production for the first time with new facilities and buildings. Our last major investment was in 2018 with the construction of a state-of-the-art spray tower for infant formula. Other investments will surely follow as we continue on our journey, well equipped for the 21st century.

Fabrik-Ordnung der Schweizerischen Milchgesellschaft A.-G., Hochdorf.

I. Arbeitsordnung.

1. Die normale tägliche Arbeitsdauer im einschichtigen Betrieb beträgt:
Montag bis Freitag 8 Stunden,
am Samstag 8 Stunden,
an Tagen vor gesetzlichen Feiertagen 8 Stunden.

Die Einteilung der Arbeitszeit wird durch einen Stundenplan geregelt, der in der Fabrik angeschlagen und der Ortsbehörde angezeigt wird.

Für Arbeiten ausserhalb des normalen einschichtigen Betriebs sind die Bestimmungen der betreffenden behördlichen Bewilligungen massgebend.

II. Fabrikpolizei.

2. Die Arbeit muss pünktlich begonnen und darf ohne Erlaubnis vor der festgesetzten Zeit nicht verlassen werden.

3. Wer von der Arbeit wegzubleiben wünscht, soll dem Vorgesetzten zum voraus davon Anzeige machen. Wer durch unvorhergesehene Ereignisse verhindert ist, bei der Arbeit zu erscheinen, hat sich nachher beim Vorgesetzten zu melden und den Grund der Verspätung oder des Ausbleibens anzugeben. Von eingetretener Krankheit und von Unfall ist so bald als möglich Meldung zu machen.



> Receiving milk in Hochdorf in the 1920s.

Once upon a time – the story of the HOCHDORF Group

An article in the Swiss Official Gazette of Commerce in summer 1894 that referred to export opportunities for sterilised milk in cans, especially for shipping companies, produced the first shoots of the idea to found a corresponding production company in Hochdorf. Jean Tschupp-Ineichen from Ballwil produced cans and was committed to business expansion; Theophil Schmidlin, Director of the Seethal railway line, hoped for transport volumes, and the president of the Hochdorf cheese cooperative was persuaded to found a company to this end.

At the founding meeting of the “1st Central Swiss Natural Milk Export Company” on Monday 28 January 1895, in the Hotel Hirschen in Hochdorf, 28 cooperative members subscribed to shares (21 were present). Seven were milk producers. The initial capital of the cooperative amounted to CHF 14,000; the first chairman of this new company was Theophil Schmidlin.

In the year it was founded, the technical know-how and the production facilities were procured, personnel recruited and first contacts made for export. The first cans of sterilised milk were exported in the same year.

TRAVEL IN TIME – THE HOCHDORF TRANSFORMATION

1895

Monday, 28 January: Founding of the “1st Central Swiss Natural Milk Export Company” by 28 cooperative members. Initial capital: CHF 14,000. Chairperson: Theophil Schmidlin.



1897

Founding of a public limited company with a capital of CHF 61,000.

1899

Name is changed to “Schweizerische Milch-Gesellschaft AG”.

1902

Planning of the condensed milk plant. Processed milk quantity: 3 million kg.

1898

Construction of a production building.



1896

Opening of a sales office in London.

1911

The HOCHDORF shares are listed on the Zurich Stock Exchange (up to 1923).



1913

Production of spray-dried milk powder, “Trufood” system. Further expansion of export business. The British Admiralty becomes a customer.

1908

Production and sale of infant formula, “Bébé” brand.



1920s

Creation of a welfare fund (forerunner of the pension fund). Reduction of working hours from 10 hours to 9 hours per day with the same wage.

1930–1939

Links with Gradine AG, Berlin/Paris, enable new technologies and products (milk baking agent “Albako”, margarine and fat production) and financing of the first spray drying tower (construction 1930/31). Introduction of “Héliomalt” (1934).



1914–1918

World War I. Significant volumes of condensed milk deliveries to the French and English forces and, under pressure from the Federal Council, to the Axis Powers (Germany, Austria). Start of peat extraction due to coal shortage; investment costs of CHF 40,000.

1939–1945

World War II. Wartime economy. Stringent controls by the authorities (including food stamps for consumers). Difficult procurement of fats.

1954

Market launch of the first fully adapted infant formula “Humana”.



1960–1992

The battle over milk; success of “branded products” for the retail trade, e.g. “Héliomalt” and “Pilatus”. Strong expansion of the industrial and bakery business, modernisation of the plant, first steps towards digitisation.

1955

Construction of another spray tower; further expansion of export business. A subsidiary is founded in Paris.

2006

Founding of “HOCHDORF Holding Ltd”. Investment in an state-of-the-art ultrafiltration plant for low-fat milk protein concentrates production.



1995–2004

Concentration on commission orders; branded goods business is cut back. Takeover of Multiforsa, Steinhausen (2001) and the milk powder factory based in Sulgen (2002). Commissioning of the biological waste water treatment plant in Hochdorf (2003).



1993

Development and registration of the Babina brand. HOCHDORF starts exporting the Babina brand.



2010–2014

New spray tower for infant formula goes into operation in Sulgen. Start of ultrafiltration and nanofiltration in Sulgen. Company takeovers in Lithuania and Germany.



2020

HOCHDORF celebrates its 125-year anniversary.



2018

New spray tower and filling line goes operational in Sulgen for manufacture and packaging of infant formula.



2016

Intensification of branded infant formula business. 2018: Takeover of traditional Swiss company “Bimbosan AG”, Welschenrohr.



2015

Commissioning of IONEX facility in Sulgen for the production of demineralised lactose for use in infant formula.





> Matthias Schleiss,
part-time HOCHDORF employee
on his family farm.

“There has been a close cooperation between HOCHDORF and its milk producers for 125 years. As the third-largest milk processor in Switzerland, HOCHDORF is an important buyer for the milk producers.”

MILK PROCUREMENT – FROM FARM TO FACTORY

“The milk producers – their cows produce the best Swiss milk.”

HOCHDORF processes milk from healthy Swiss cows into high-quality infant formula and milk derivatives. The first processing step for the milk takes place within 48 hours. HOCHDORF has strict quality controls to ensure that only perfect milk is used.

HOCHDORF produces infant formula and various milk derivatives, especially for the chocolate industry. One of the reasons our products are so popular: they are made from the best Swiss milk at the highest quality. What is the secret of the quality of Swiss milk? It lies with our domestic farmers who provide excellent care for approximately 575,000 dairy cows. With an average of 25 – 30 cows, their farmsteads are comparatively small and the cows live in a stable environment. They spend a lot of time outside in the fresh air and receive clean water in addition to the farm's own nutritious food. All this influences the good health of our Swiss dairy cows and allows them to produce high-quality milk.

Swiss legislation also shares responsibility for animal welfare – Swiss farmers are subject to some of the strictest animal welfare laws in the world and many also join voluntary label programmes that go beyond the legal requirements.

Freshly produced

The cows are milked twice each day. The milk flows straight from the milking machine into the milk tank, where it is cooled to 3 – 4 °C. The milk producer cleans the plant after every milking procedure. A tanker collects the milk straight from the farm every two days. Before filling the tanker, the driver checks the aroma and appearance of the milk. In the tanker, a quality and reference sample is then automatically taken from each collection. The time frame from milking the cow to the first processing step

is a maximum of 48 hours. The short transport routes to our processing plants are another benefit and guarantee of freshness.

Dozens of tankers deliver their precious loads to our milk collection points on a daily basis. It is important that the cold chain is never interrupted. We take an input sample from each delivery and carry out a sensory check on how it smells and looks. There is also a quick test for inhibitors (antibiotics) and a temperature check. If there are no issues with the raw materials then the milk or whey is unloaded into the interim storage facilities. Both raw materials are processed further on the same day. The strict requirements and controls guarantee that only the best quality milk is processed.

Milk producer organisations

The Swiss dairy market is a constantly changing entity. While the majority of negotiations were conducted directly with dairy farmers in the past, various milk producer organisations share this task today. As the link between the producers and processors, they deal with all aspects of milk trade, buy the milk from the farmers, organise all the logistics and sell the milk to the processors.

Today, HOCHDORF works with the most diverse milk producer organisations – a change from more than 100 years ago, when farmers brought their milk to HOCHDORF by horse-drawn carriage.



> All procurements are handled by our Purchasing Department.

Procurement

Our Purchasing Department is responsible for the procurement of raw materials, consumables and supplies (excluding milk) as well as for all packaging. That means everything from office supplies to ingredients for infant formula and product packaging. With great negotiating skills, our Purchasing Team agrees prices, conducts procurement market research, orders samples, sets conditions and draws up contracts with suppliers. The high demands on raw materials required for the production of infant formula are a particular challenge. This is evident, among other things, in the choice of suppliers. Only a few can meet the defined criteria worldwide. HOCHDORF only accepts raw materials that have an analysis certificate and this must comply with the quality agreements. The suppliers are also audited regularly by our Food Safety Team. Our Purchasing Department and Quality Assurance work closely together. After all, we can only produce our high-quality infant formula using perfect raw materials.

DEVELOPING THE FORMULATIONS FOR INFANT FORMULA

“Baby Care development – the basic principle of our infant formula.”

Every infant formula is based on a specific formulation. HOCHDORF produces product lines using its own formulations but it also manufactures formulations to meet specific customer requirements. The role of our Baby Care Development Team is therefore wide-ranging – it develops, optimises and maintains the formulations of our high-quality Swiss infant formula. It is also the link between the individual departments and supports every step of infant formula production – from the composition of the formulation to the first tests and the initial production.

Formulations influenced by multiple factors

The law stipulates the ingredients that may or must be present in an infant formula and in what quantities. There are minimum and/or maximum values that can vary from one country to another. In addition to legal requirements, other criteria influence the selection of ingredients, such as scientific findings and trends in the nutrition of infants and young children – always with the aim of getting as close as possible to the “Golden Standard” of breast milk.

The next challenge comes with production. The first analyses, trials and test products show if the product can be produced as planned. It often becomes necessary to optimise the formulation or the production parameters after the first tests. This is the only way to produce a product that meets the highest quality standard.

A united effort

Collaboration with other departments is key. The purchase of raw materials is subject to procurement, product analyses and compliance with legal quality assurance requirements. Process changes are only carried out in consultation with the Production Department. There is also close cooperation within the entire Baby Care division; this includes the sales and business development managers, nutrition marketing staff and all the product managers responsible for packaging and registration. It is the only way to successfully bring new products from the initial idea to the market.

Wide product range

HOCHDORF specialises in healthy formulas for expectant mothers as well as newborn babies, infants and pre-school children (junior milks). The wide range also includes organic milk for children from birth to preschool age, which gives HOCHDORF a special market position, as well as a complete range of specialist and medical nutrition.



“The HOCHDORF Development Team creates the formulations for our high-quality Swiss infant formula, working closely with other departments. We have BEST PARTNER status with our national and international customers.”

> Patriz Iten, Evelyn Voney and Lukas Hartmann (from left) from our 11-strong Development Team taste our infant formula.



> Internal and external fluid bed at Spray Tower Line 9 in Sulgen.

“HOCHDORF moves with the times, investing in the latest technology and new facilities. Following the state-of-the-art high-bay warehouse in Sulgen, the new production and filling line for infant formula went operational at the same site in 2018.”

PRODUCING SWISS INFANT FORMULA

“The Production Team – producing our infant formula.”

Producing infant formula is complex. It takes several processing steps and a host of individual ingredients to make a healthy infant formula in powder form. The spray towers where the liquid mixture is dried is the heart of the production process.

Once the formulation has been determined through various tests and trials, the regular production process begins with the successful initial production. It takes place in a closed system to ensure the highest-quality final result, with the milk subject to various processing steps.

Pre-treatment of milk

First the milk is pasteurised. This involves a gentle heat treatment to kill off pathogenic germs. The pasteurisation also deactivates enzymes that could adversely affect the milk fat or protein in storage. The milk is then concentrated at negative pressure and therefore at low temperatures. This procedure retains the healthy components of the milk. Now the milk or milk concentrate is ready to be processed further into a customised product.

The mixing is key

The various liquid and powdered ingredients for infant formula such as milk concentrate, whey proteins, lactose, minerals, fats, trace elements and vitamins are mixed fully automatically. The sequence in which the ingredients are added, the temperature and the amount of time the mixtures are allowed to stand are crucial for the properties of the dried end products. The “wet mixture” is homogenised again before spray drying so that the fats and the other additives are mixed in equal measure with the milk concentrate.

Gentle spray drying

This is followed by spray drying in one of our three infant formula spray towers. Tower 9, which is the most modern facility, is located in Sulgen. It stands at 25 metres with a diameter of 11 metres. In the spray-drying process, the mixed concentrate is atomised to a fine mist in the upper area of a cylindrical spray tower at high pressure.

The many tiny drops enlarge the surface greatly, resulting in fast water delivery to the drying air. Air that is cleaned, conditioned and warmed up to 200°C flows through the spray tower. The drops sink and the water evaporates at the same time, resulting in a fine powder. Spray drying is a very gentle process. Because the evaporating water cools down the milk substance, the powder itself is hardly heated. The powder is then further dried using a fluid bed before it is ready to be packed.



> Automatic small component feeding station for tower 8 and 9.



> Our lab in the 1920s.

Quality assurance at HOCHDORF – as old as the company itself

Quality assurance has always played an important role at HOCHDORF. In the past, analyses had to be carried out with the simplest of means and the products checked in terms of their quality.

The technology is much more complex now and operates at a very high level. Nonetheless, HOCHDORF was a forerunner for early testing of the quality and composition of its products with special equipment and devices. In 1940, for example, fractional distillation was used to separate a liquid into individual components. The “Milcosan” is an example of an apparatus used around 1975 to determine the fat, protein, lactose and dry matter content of milk and cream. At the same time, the nuclear magnetic resonance method was used to determine the fat composition. Production and quality control of food-stuffs have gone hand in hand with HOCHDORF right from the start.

QUALITY ASSURANCE AT HOCHDORF

“Food Safety – checking product quality.”

The Food Safety Team is responsible for quality assurance at HOCHDORF. More than 40 employees ensure compliance with all quality requirements. This includes operational quality assurance in the plants and daily quality control in the laboratories and the Infant Formula Department. The Regulatory Affairs Department is also involved, responsible for complying with legal requirements and approving product specifications. The QA international division, which supports the subsidiaries with quality assurance, is an integral part of this department.

The Food Safety Team tests samples of raw materials, intermediate products and end products for relevant parameters and issues the approval of conformity. From the raw material to the finished product, each production batch is analysed for various parameters, resulting in between 5 and 200 individual analyses. The laboratory technicians issue 1,400 raw material approvals per month for milk and 200 approvals for other ingredients. In addition, 10,000 in-process controls (IPC) are carried out every month. Over the course of the year, HOCHDORF thus achieves a total of approximately 220,000 laboratory analyses and 120,000 IPC results.

The in-process controls are an important tool for direct process control. The production employees analyse the defined parameters of products in a fixed inspection interval. The results are recorded directly in the laboratory information and management system (LIMS), which means deviation messages from production are immediately visible in the laboratory. The production employees are trained in IPC analysis and the quality of the analyses is checked periodically. Examples for an IPC are the pH measurement, the rapid iron test or checks on the spoon weight.

There is stringent regulation concerning the production and marketing of food worldwide through various legislative standards, with particularly strict legal requirements for infant formula. The Regulatory Affairs Department monitors changes in legislation, develops internal procedures in response and defines food safety measures.

> Liane Hanisch, Food Safety Lab Manager, at work.



“Food safety has the highest priority at HOCHDORF. It motivates the Food Safety Department every day to approve products for the market that meet the necessary legislation and specifications.”



> It's hard to imagine a pharmacy or chemist store in Switzerland that doesn't stock Bimbosan.

Bimbosan, the traditional brand for infant and young child nutrition

Bimbosan has belonged to the HOCHDORF Group since 2018. The Swiss company steeped in tradition is a great fit with HOCHDORF, with its infant and young child formula. The Bimbosan product means that HOCHDORF is now also represented on the Swiss market with its own infant formula brand. While the HOCHDORF Sales Team specialises in business-to-business (B2B) customers, Bimbosan focuses on end customers.

Five sales representatives work throughout Switzerland every day, advising pharmacists, paediatricians and midwives. They clarify questions about the wide range of Bimbosan products, train specialists and present new products. It's the only want to ensure that the consumer is properly advised. We also have an in-house sales team answering questions directly from families on a dedicated hotline every day about the products and how to use them.

bimbosan.ch

BABY CARE SALES TEAM

“Sales Manager and Support – the direct line to our customers.”

Establishing direct and personal contact with our customers and providing professional all-round support is particularly important to HOCHDORF. Infant formula is a very sensitive product and requires competent and intensive customer advice and support. The Sales Team supports our business-to-business customers before, during and after the order process.

Specialist sales units

The Baby Care division is dominated by exports. Around 95 per cent of our infant formula is sold to end consumers abroad. The regional specialists in each unit are familiar with the unique issues and legal regulations of the individual regions, enabling them to provide optimal customer support and advice. All the teams are also qualified to support customers in Europe.

Each Regional Sales Team has a sales or key account manager and sales support staff. The key account or sales managers support their customers personally, visit them on site worldwide and are always the first point of contact. They launch new projects, conduct negotiations, set prices and draw up contracts.

The Sales Support Team then takes over: dealing with the orders, coordinating the production with the Planning Department and working with logistics staff to organise transportation. As well as different formulations, many customers also have their own labels and packaging, which makes it complex and challenging to process infant formula orders.

360° service – from registration to marketing

Alongside our Sales Team, our registration and packaging specialists are also on hand to support customers. As well as product registration in new target markets our specialists can help create and monitor packaging. HOCHDORF also offers its customers marketing support, sales promotion material as well as product and sales training courses. These services are provided by our Nutrition Marketing employees. In summary: HOCHDORF provides a one-stop 360° service tailored to customer requirements.

> Janny Vedder, Nutrition Marketing,
Dr Helmut Büstrow, Sales Manager and
Evelyn Voney, Developer (from left), in
discussion with a customer.



“BEST PARTNER – a vision that everyone buys into at HOCHDORF. Happy and satisfied customers are what drive us. That's why our Sales Team does its best every day.”



> The state-of-the-art automatic high-bay warehouse in Sulgen can store more than 9,900 pallets.

“As an export company and manufacturer of food products, HOCHDORF depends on logistics that work. Our Logistics Team and our ultra-modern facilities control and regulate all of our internal and external goods transport.”

LOGISTICS – FROM HOCHDORF TO OUR CUSTOMERS

“The Logistics Team – controlling the entire flow of goods.”

The Logistics Department is responsible for all goods transport. Storage and transport of infant formula is particularly challenging and needs to meet high quality standards. A fully automatic high-bay warehouse and automated processes support warehouse management.

The Logistics Team at HOCHDORF plans, manages and checks the entire flow of goods, not only from HOCHDORF to the end customer, but also within the company and between partner companies and suppliers.

Centrally managed team

Around 11,500 trucks leave HOCHDORF every year. Approximately 20 per cent are heavy goods vehicles with sea freight containers that will be shipped around the world. The remaining 80 per cent are bound for Switzerland or Europe. It requires a competent team of people to manage the flow of this volume of goods. The logistics for the two sites at Sulgen and Hochdorf is managed centrally. A 38-person strong team, including six trainee logistics specialists, ensure the smooth movement of goods. They are responsible for ensuring that the goods arrive at the right place at the right time, in the right quantity, at the quality standard and at the best possible price.

Food safety places high demands on logistics

In terms of food safety, the logistics staff are subject to the extensive demands required by quality assurance. Infant formula, in particular, is subject to strict regulations regarding the movement of goods and storage. Logistics must comply with the norms of FSSC 22000 (Food Safety System Certification 22000), which guarantees food safety in food production. HOCHDORF has also established a Good Warehousing Practice standard

that includes general storage guidelines, which are binding for both the internal and external HOCHDORF warehouses.

Fully automated high-bay warehouse

In addition to the spray tower and the new filling line, an automatic high-bay warehouse and pallet conveyor system has been built in Sulgen. HOCHDORF thus invested in an ultra-modern system that enormously increased internal storage capacity and greatly simplified warehouse management. Comprising four aisles with 32 m high shelves, it can store more than 9,900 pallets of infant formula. Four fully-automatic storage and retrieval machines move over 4,000 pallets a day. This modern warehouse facility also requires new supplier standards: correct notification and delivery from the suppliers with precise logistics controls are vital for the flow of goods to function smoothly. The motto here is “quality through cooperation”.

> Sea freight containers are manually filled with around 20 tonnes of infant formula every day.





“Drying increases the shelf life of the valuable ingredients contained in milk. Other benefits include flexible storage options, consistent quality and the desired functional properties.”

MILK PROVIDES INGREDIENTS FOR THE MOST DIVERSE USES

“Not all milk powder is the same.”

Milk is 87 per cent water. Yet it is astonishing how many different uses there are in the food industry for remaining 13 per cent of milk ingredients – both dried and sometimes in a highly separated form.

As well as large parts of water, milk also consists of lactose (milk sugar), milk fat, milk proteins and minerals. Every milk ingredient has specific properties that interest the food processing industry. The properties also vary depending on how they are extracted and dried. Seen as a whole, this results in countless applications. HOCHDORF has been working in this area since 1895, making it Switzerland’s recognised expert in the field.

But how are the different milk ingredients separated? Firstly, the milk delivered to us is skimmed, resulting in skimmed milk and cream. The skimmed milk can then be immediately dried. For whole milk or cream powder, milk fat is added back to the skimmed milk to the desired fat value. Secondly, we can use ultrafiltration and nanofiltration to separate the two protein types whey protein and casein. For HOCHDORF’s own infant formula, we also fractionate high-quality demineralised lactose from whey.

Our key expertise is in gently concentrating and drying the milk components. We have spent generations acquiring substantial knowledge in this area – and we will continue to work intensely to maximise the potential for using the raw material of milk.

> A cross section of the milk powder diversity at HOCHDORF.

> View of the control centre at the Ionex facility in Sulgen for the production of demineralised lactose. Andreas Sepp, Production Manager Baby Care Sulgen.





> Christoph Brunner, Head of Production Milk Line 1 in Hochdorf, and Olaf von Maikowski, Head of Development & Application Dairy Ingredients (from left), monitoring the roller drying process.

“The largest and best known Swiss chocolate manufacturers have been placing their trust in the quality of our HOCHDORF LEDOR roller-dried whole milk powder for over a hundred years.”

HOCHDORF ROLLER-DRIED WHOLE MILK POWDER FOR THE FINEST SWISS MILK CHOCOLATE

“HOCHDORF plays a key role in the history of Swiss chocolate.”

The first close collaboration with a chocolate factory began in 1905. This is just one reason why HOCHDORF is the market leader in Switzerland for milk-based chocolate ingredients.

It's not just the Swiss who regard our own milk chocolate as the non plus ultra when it comes to chocolate. The quality of Swiss milk chocolate bears comparison with any rival product. One reason for this is the depth of knowledge and the sure hand of the Swiss chocolatier – along with our roller-dried whole milk powder of course.

Heat provides the caramel flavour

As the name suggests, roller-dried whole milk powder is produced on roller driers. The milk concentrate is deposited thinly on hot (120 – 160 °C), rotating rollers. The concentrate is completely dried after one short revolution. The dried milk is removed from the roller with a knife and then crushed to the particle size required by the customer. The relatively strong thermal treatment caramelises the milk sugar and the powder develops a pleasant, subtle caramel flavour.

Important for the delicate melting consistency

In addition to the typical caramel flavour, roller drying also produces disk-shaped particles with a larger and more porous surface compared to spray-dried milk powder. The disks play an important role in the delicate melting properties of Swiss milk chocolate.

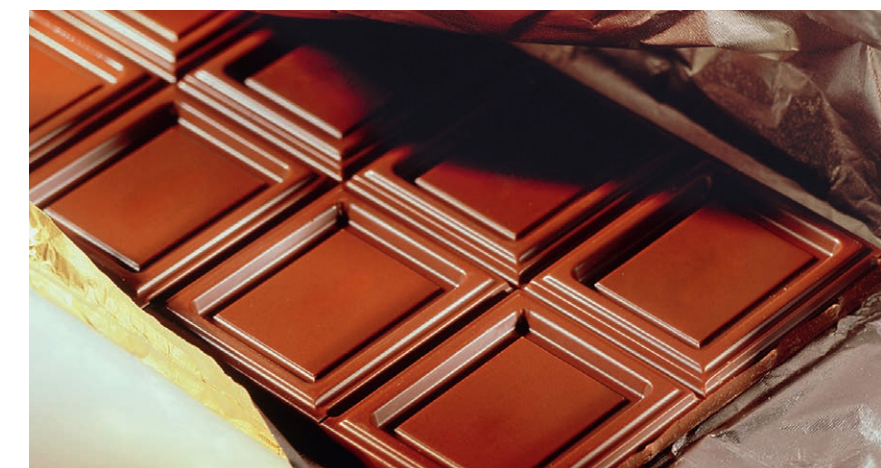
However, the milk powder chosen also influences the taste, the texture, consistency and even the snapping sound you get from breaking off a piece of the chocolate. So it's clear that the choice of milk powder is a key factor in chocolate making. Typical Swiss milk chocolate, with its gently melting consistency, frequently contains HOCHDORF roller-dried whole milk powder – and has done so for many years.

The customer is king

The choice of milk powder affects the production processes as well as the final product. So some of our roller-dried whole milk powders are even tailored to our customer's specific production processes. We have always set great store by a BEST PARTNER collaboration with our customers. This close partnership dates back to a collaboration with the Lucerna chocolate factory, which produced chocolate in Hochdorf from 1905.

Market leader in Switzerland

Those early beginnings with Lucerna chocolate means that HOCHDORF now has over 115 years of experience in manufacturing milk-based chocolate ingredients. There is no doubt that milk drying is our core business. HOCHDORF has two production sites with a total of five plants producing roller-dried powder, which enables us to offer high supply reliability – a key reason why Swiss chocolate manufacturers place their trust in HOCHDORF. HOCHDORF's employees and plants make it the main skill centre for chocolate milk powder in Switzerland.





“The Hochdorf plant’s spray tower is unique across Switzerland in producing high-fat powders for ready-made sauces, soups, bakery products and much more besides.”

> Aline Schär, Head of Production at Niro 4 and Development & Application Product Manager Joshua Wölfe (right) inspect milk powder production at the Niro 4 spray tower in Hochdorf.

FILTERMAT TECHNOLOGY FOR THE GENTLEST DRYING OF FAT AND BUTTER POWDERS

“Finest foods with LEDOR and NOVITTA powders.”

On its 100th anniversary, the company then known as the Schweizerische Milchgesellschaft invested in a “filtermat” for manufacturing fat and butter powders. HOCHDORF now produces unique powders for the food industry on this spray tower.

Creamy ready-made soups and finest cream sauces, bakery products and sweet creams are frequently produced in Switzerland using HOCHDORF fat or butter powders. This is because Hochdorf is home to the only filtermat spray tower in Switzerland able to make products with a fat content of up to 78 per cent.

For ambitious and challenging products

The spray tower Niro 4 first became operational in 1995 and is a filtermat spray dryer. This type of spray drying is specially designed for drying hygroscopic, thermo-plastic and slowly crystallising raw materials. This means that the filtermat can dry high-fat, glutinous products with a high proportion of butter, sugar, vegetable fats and oils.

The filtermat is a technologically ingenious system with a main drying chamber and a belt for targeted secondary drying or cooling. The system can be cleaned without leaving residues. From an allergen point of view, it is possible to dry highly sensitive products on the spray tower. This includes lactose-free milk powder, infant formula and products for special, medical nutrition requirements.

A wide product range – top customer service

Our customers really appreciate the uniqueness and quality of Niro 4 products. The products are particularly well known on the market as NOVITTA (fat and butter powder) and LEDOR RP (cream powder). The sprayed LEDOR cream powders have a particularly intense milk aroma and are used for the highest quality bakery products. Under the NOVITTA brand, HOCHDORF develops and sells high-fat products used for ready-made soups and as a base for

creams. HOCHDORF is able to combine the most diverse carriers and fats with each other. The NOVITTA fat powders frequently combine a milk-based carrier and a vegetable fat.

But we also produce customer-specific products on the filtermat, supporting our customers with their chosen products and with product development. Over the past 25 years, we have acquired substantial know-how in working with the filtermat and its capabilities, which is greatly appreciated by our customers. Technical improvements enable us to produce infant formulas, special foods for medical purposes and vegan powders in the filtermat.

> Some of the Dairy Ingredients Sales Team discusses the daily business (from left: Elisabeth Fleischli, Lukas Wilhelm, Jesabelle Summermatter, Christian Fanger).





AN OVERVIEW OF OUR SITES

“Our three Swiss sites make us very flexible.”

> The proximity to our milk producers guarantees the freshness of the milk, our raw material.

A stable environment for healthy products

We have been processing milk in the Lucerne town of Hochdorf and the beautiful Seetal valley for 125 years. In 2003, with the takeover of the Ostschweizer Milchfabrik factory in Sulgen, we developed from a regional to a supra-regional milk processor.

Our state-of-the-art production sites are located in a stable, rural environment close to our milk suppliers. Short transport routes mean we can process the precious raw material milk very freshly and under optimal conditions into high-quality infant formula and various milk powders and other milk-based ingredients.

With the takeover of Bimbosan in 2018, a third site was added at Welschenrohr in the canton of Solothurn. Our packaging facility for the Swiss infant formula brand Bimbosan is located here. Bimbosan is marketed from Welschenrohr and delivered throughout Switzerland and abroad.



Our latest addition – Bimbosan in Welschenrohr

Entire generations of the Swiss population have grown up with Bimbosan. In Welschenrohr, in the canton of Solothurn, Bimbosan has been doing the same thing for over 80 years: Bimbosan makes products of exceptionally high quality. The range includes specialist products for infants, infant and follow-on formulas as well as bottle supplements and porridges. In addition to infant formula, the range also includes various Yuma whey products. Both the infant formula and the whey are high quality, 100% Swiss products.

Bimbosan AG has been part of the HOCHDORF Group since the end of April 2018. In rural Welschenrohr, the infant formula and whey are packaged in stand-up pouches in three bottling lines. We fill 1.5 million packages for the retail trade in Switzerland and abroad each year.

Welschenrohr



Sulgen

Our specialists – the Sulgen plant

Our largest plant is located in Sulgen. It specialises in roller drying and the production of infant formula. Our production facility includes four spray towers, an ultra-filtration facility and the IONEX ion exchanger facility.

We currently process around 150 million kilograms of milk and 110 million kilograms of whey per year at the Sulgen plant. A good third of this is roller dried into whole milk powder. We produce infant formula in Sulgen in our two largest spray towers. We dry whole and skimmed milk in the other two towers as well as protein concentrates from skimmed milk, whey and butter milk.

We extract the proteins from the skimmed milk and whey using ultrafiltration and nanofiltration. This produces a permeate by-product that is treated in the IONEX plant to obtain demineralised liquid lactose using electrodialysis and ion exchangers that remove trace elements such as mineral salts and vitamins. It is either used directly for the production of infant formula or dried in a spray tower.

Hochdorf



Our diversity – the Hochdorf plant

We work with different technologies at the Hochdorf plant, which makes us highly flexible. Using spray drying, spray belt and roller drying as well as with our three mixers, we produce a large variety of milk powders. We also produce condensed milk for the food industry here. In the course of a year, we process around 130 million kilograms of milk into different products.

In terms of spray drying, we have concentrated on the production of high-fat powders and specialist food products. Both are mainly used in the food industry.

Roller-dried milk powder, on the other hand, gives many brands of Swiss milk chocolate the special qualities that make them so famous all over the world – the delicate melting consistency and the light caramel aroma. Our condensed milk is also very popular. We produce it for wholesale customers in containers and small boxes; it is also packaged for the retail industry in our familiar blue and white tubes.





“The first commercial apprenticeship contract was signed in 1901. HOCHDORF has been a training company since. Today HOCHDORF trains 39 apprentices in 15 different professions.”

> Food technicians and practitioners, logistics specialists, ICT experts, mediamaticians or sales staff. HOCHDORF provides training in the most diverse professions. Jaël Christen, Kevin Didi, Jetwin Ly, Anita Barmettler, Harrish Rathis (from left).

HOCHDORF AS AN EMPLOYER AND TRAINING COMPANY

“Employees are the heart beat of our company.”

HOCHDORF provides around 620 employees with exciting professional opportunities in an international environment. The daily actions of all employees are shaped by our BEST PARTNER vision. That is why we are constantly expanding our knowledge. Apprenticeship training is also very important to us.

HOCHDORF employees develop, produce and sell various dried milk and infant formula products produced from Swiss milk and exported all over the world. The staff who work at HOCHDORF experience the fusion of Swiss tradition and international flair. After all, HOCHDORF was founded in 1895 as a milk export company!

Diverse employer

Our target markets are global and diverse – and the same applies to our employees and their professions. As of the end of 2019, HOCHDORF employed staff from 26 countries. Almost two-thirds of the 620-strong workforce is based in Switzerland. Many of them work across different locations and travel internationally.

From dairy or food technologists to office and sales staff and to production and laboratory employees – HOCHDORF offers its staff a wide range of career opportunities. The work is diverse, exciting and challenging. The milk industry changes constantly and the requirements for infant formula must be continually adapted to the latest scientific findings.

BEST PARTNER commitment

Every day, our employees make every effort to live out our BEST PARTNER vision in how they interact with each other and with our customers and suppliers. Employees striving for a BEST PARTNER standard need to perform well,

striving for their best in everything they do. HOCHDORF is delighted by the commitment of its employees and supports this with training, education and other initiatives.

Our trainees

HOCHDORF trains 39 apprentices in 15 different professions. They are supported and mentored by experienced employees. HOCHDORF is committed to training the professionals of tomorrow. Many employees have also already completed their training at HOCHDORF and are still an important part of the company today.

Healthy pension fund

HOCHDORF has its own pension fund. It is positioned very solidly and operates successfully. The pension fund is managed by a committee of employer and employee representatives. Employees have the flexibility to take their pension between the ages of 58 and 70.

HOCHDORF has always been an attractive employer

Until well into the second half of the 20th century, experts had to be recruited from all parts of the country. Many employees remained loyal to the company and worked for it throughout their careers. It was not unusual for two or even three generations of the same family or different siblings to be part of the HOCHDORF team. Greater mobility from the end of the 20th century changed these structures.



HOCHDORF WORLDWIDE FACTS & FIGURES

“Swiss company with international flair.”

Baby Care foundations...

> Label for exported “CONDENSED SWISS MILK” from 1915 to 1930.

125 years as an export company

HOCHDORF was founded in 1895 with the aim of “exporting sterilised milk in cans”. This goal was achieved in that very first year. HOCHDORF has had a sales office in London since 1896.

The launch of condensed milk production after 1900 made it possible to produce and supply additional export markets, including Asia. Condensed milk exports reached a high point between 1913 – 1920. Considerably higher Swiss milk prices led to Swiss milk producers losing their foreign markets in the 1920s.

After 1950, exports were revitalised with sterilised milk in cans and infant formula. The most important markets at that time were Austria, Iran, Thailand and West Africa. The export share was around 10% of overall sales. 125 years after its foundation, HOCHDORF is still recognised as an export company. While the focus stayed on products from the Dairy Ingredients division in the early years, today the export of infant formula is key. We supply healthy, Swiss-made infant formula to babies and young children across the globe.



- > 1908 saw the first production of “Bébé-Kindermehl” infant formula.
- > 1954 marked HOCHDORF’s launch of the first global, adapted infant formula “Humana” onto the market.

Our exports...

- > We have been exporting our products for 125 years.
- > We export 95% of the infant formula produced.
- > We export our products to 91 countries across the globe.

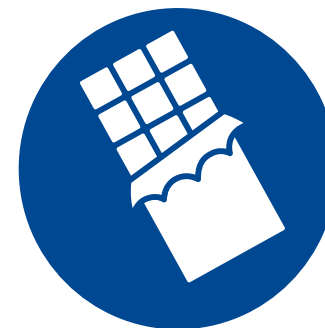


Our freight routes...



- > Each year around 11,500 lorries set off from HOCHDORF with finished products.
- > Around 20% of lorries loaded with HOCHDORF products are sea freight containers.

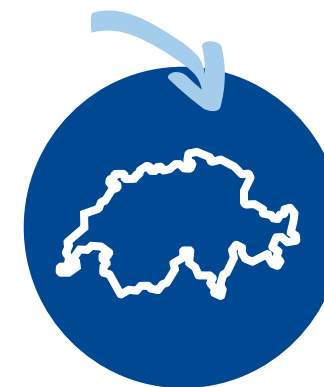
Our chocolate contribution...



- > The first close collaboration with a chocolate factory began in 1905.
- > Around 50% of the powder produced in the Dairy Ingredients division is used directly in the chocolate industry in the form of roller-dried whole milk powder.

Our imports...

- > HOCHDORF imports raw materials from 26 countries.
- > Around 280 different raw materials are imported annually and processed into high-quality products.



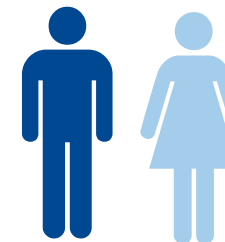
Our recycling...



- > In Sulgen, HOCHDORF uses a CO₂ recycling plant to filter almost 90% of the CO₂ in the flue gas that is released during the production of infant formula.
- > The gas produced in the company’s own waste water treatment plants is mixed with the purchased gas.

Our employees...

- > HOCHDORF employs people from 26 countries.
- > In 2019, the HOCHDORF Swiss Nutrition (HSN) employees worked a total of 662,668 hours.
- > At the end of 2019, HSN had 361 full-time positions, with around 24% held by women and 76% by men.





> This time Felice Fauxpas takes a journey into the future on behalf of HOCHDORF.

“My name is Felice Fauxpas. I have many business partners and I visit them regularly but you won’t find me in any HOCHDORF Group directory – mine is purely a fictional existence.”

FOOD CULTURE – A JOURNEY INTO THE FUTURE

“Gardens will be vertical in 2095.”

I spend most of the year on business trips, often in very exotic countries. I am usually accompanied by my business associates – as it’s not always easy to work out the different customs in the various countries.

I am not visiting a far-flung country this time; I’m jetting off to the year 2095 instead. You won’t believe what awaits us there! And it’s yet another trip that provides me with a treasure trove of amusing culinary tales.

It’s lunchtime and I’m comfortably ensconced in a nice little bistro. Suddenly, the idyllic sound of the birds twittering in the trees is shattered by a strange humming noise, like I’ve suddenly landed in the middle of a beehive. And it sounds scarily close. I look up with a start. Am I about to be attacked by bees in the middle of the city? I soon realise it’s a swarm of drones above me. I breathe a sigh of relief.

But then one of the drones hovers right in front of me. Two black camera eyes gaze at me innocently and address me in a perfectly pleasant voice: “Hello, my name is Karl, your personal chef de service.”

My body gives the order

Karl’s friendly voice asks me how I’m feeling, catching me off guard as he scans my retina. Then he projects a menu recommendation onto the tabletop. Karl claims that his choice is a perfect match for my body’s nutritional requirements. I am lacking in Omega-3 fatty acids, iron and calcium. My vitamin D3 values are not as good as they should be either. Karl’s navigation device promptly beams some data to my table and chair, causing both to shift a metre or so, taking me with them, as I try to make sense of the menu suggestions. “Your new seating position is the ideal sunlight angle for you,” says Karl.

“Are you ready to order?” I opt for a fish, lentil and vegetable curry with a special milk shake to provide calcium. My body doesn’t seem able to cope with much more. My chair suddenly rises up like a lift and I hover silently along the wall. Root vegetables, lentils, salads and tomatoes are growing on the façade, set out in vertical gardens. Simply everything you might desire.

Karl instructs me to look at my vegetables. “We only use fresh vegetables that are grown sustainably,” he says, before I am drawn gently down to street level again.

“This milk shake tastes delicious. Where did it come from?” I ask Karl. “It’s a Swiss speciality product from the HOCHDORF company. We are always sure that only the best ingredients are used in their products,” Karl explains to me, before winking, saying goodbye and whizzing off to the next guest.

Yours,

Felice

For **healthy**
nutrition.

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