

GOOD PRACTICE GUIDE for VET trainers

Be inspired to use
20 case studies of
small and-
medium-sized
enterprises (SMEs)
innovating food
for seniors in your
training
programmes



innovating food for seniors

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01

Introduction to PIFS and about this VET Trainer's Guide



Pioneering Innovative Food for Seniors (PIFS) project

The food sector is one of the most dynamic sectors in Europe, with changes in technology and lifestyles rapidly altering consumer preferences and affecting profit margins. The food and drink industry is the EU's biggest manufacturing sector in terms of jobs and value added. The industry is dominated by SMEs - 9 in 10 food & drink companies in Europe are SMEs, with 289,000 companies and 4.2 million employees.

However, the OECD contends that staff in small businesses are less likely to receive training than workers in larger firms with participation in professional training inhibited by factors such as the distance to training centres and the time and cost involved. Yet, these individuals have most to gain from skills development training: most have not participated in higher education. The food industry is traditionally considered as a sector with low research/innovation intensity and is quite conservative regarding the type of innovations introduced to the market.

So, the overall food sector needs more significant innovation, however, one high potential area in particular needs to be considered, foods for our seniors. Europe is home to the oldest population globally, with one in four of all Europeans aged 60 and over. According to the statistics from the [National Institute on Aging](#), the proportions of elderly aged over 65 will rise to 30% and those aged 80+ will be more than double from 5% to 12% in Europe by 2060.

As vocational education and training (VET) educators know, the development of successful innovative products is challenging. The food industry is traditionally considered as a sector with low research.



The Pioneering Innovative Food for Seniors (PIFS) project, for the VET sector, will:

- contribute to the professional development of food VET Trainers by increasing their pedagogy skills to innovate food products for the silver economy.
- make a substantial contribution to supporting educators to stay abreast of market opportunities in the silver economy and their implications for innovation and growth.
- impart specialist knowledge of the contemporary food market and specifically the potential of age-friendly food as an innovation driver therein.
- use innovative methods to assist VET educators to teach innovation and entrepreneurial skills for companies and students to respond to the increasing demand for new food products and services within the Silver Economy.

For all PIFS project resources Click weblink:

www.innovatingfoodforseniors.eu

About this Good Practice Guide for VET

Our Good Practice Guide for VET is a unique training tool for VET educators to get a complete view of commercial examples of the drivers and opportunities for food innovation in the silver economy in Europe.

20 Good Practices have been carefully selected from project partner regions, spanning nutrition-led product development, fortifying nutraceuticals, commercialisation of innovation, supply chain and distribution opportunities, smart food, technology, and niche consumer marketing. It is a practical resource to guide your training/teaching practice in applying innovation. From the good practices collected, your learners will understand how the food market for seniors is multidimensional, ranging from innovative food supplements, food development for people with specific health problems to food delivery services. Throughout, the PIFS team have been mindful to select practices which can improve how you reach and teach innovation.

Who will benefit?



1

VET trainers, VET providers & academics across the food value chain interested in acquiring competencies to train food sector personnel.

2

Existing or future food product or service business.

3

Clusters or associations of food sector SMEs.

4

Agents of Innovation e.g., ageing bodies, public health associates, regional development organisations.

The Power of Case Studies as a Training Tool

The PIFS compendium of **20 Good Practice case studies** provides a unique training resource that pools the diverse knowledge to provide VET educators with a complete guide to the drivers and opportunities for food innovation in Seniors in Europe. As the added-value food sector continues to grow across Europe, this will provide vital input to their own professional development, improving their results and opening doors to future career opportunities for their students.



We encourage you to use case studies as part of your teaching/training practice.

Why? Case studies are:

- used as a teaching tool to show the application of a theory or concept to real situations.
- fact- and context-driven. They create empathy with the main characters, are relevant to the reader, in relating to a challenge that needs to be solved.
- a way of discovering the concept in a new manner.

A major advantage of teaching with case studies is that the learners are actively engaged in figuring out the principles by abstracting from the examples. This develops their skills in the key competencies of:

- problem-solving.
- analytical tools, quantitative, and/or qualitative, depending on the case.
- decision making in complex situations
- coping with ambiguities.

PIFS will substantially improve training for food SME's companies and their staff by:

- raising their awareness & commitment to innovation for business growth via innovative foods.
- providing applied industry input to their own professional development, improving their results and opening doors to future career and commercialisation of innovation opportunities.

The pedagogy of case studies

Food SMEs are hungry for innovation. Although the food and drink sector plays a vital role within the EU economy, innovation in food sector SMEs has received little previous attention¹. In applying the PIFS Good Practice case studies in your training/teaching, you have the opportunity to address specific pedagogical issues and to develop higher-order skills in learners. We are adapting from the case method, based on a professional education philosophy that directly associates knowledge with action². The case method is a rich and powerful approach to the development of cognitive skills in learners. It is also a flexible approach, in the sense that trainers can use it in alternative ways.

Velenchik (1995)³ highlights that case method is a **motivation to learn theory**. In VET training practice, we often use examples to illustrate the application of specific theoretical concepts. However, we tend to use examples to reinforce the theory, rather than thinking of the theory as a set of tools for answering the question posed by the application. The focus, therefore, is on the theory itself, and the application is often perceived as incidental. When students do not understand the purpose of theory, the process of learning becomes more difficult than it needs to be, and they often fail to grasp the tools they need. In the case method, the problem that the students are challenged to solve takes centre stage. They soon realise that they do not have the tools, and they start looking for the tools. They want to learn theory.

The case method can also be used effectively to move learners gradually up the cognitive skills ladder from the low skills levels of knowledge, comprehension and application to the higher skills of analysis, synthesis and evaluation. This educational taxonomy was initially proposed by Bloom (1956)⁴ and provides a transparent and structured approach to developing learner skills.

In terms of the pedagogy power of case studies, the case method delivers:

Knowledge within a real-world context. The case method supports and facilitates the comprehension of basic knowledge. It involves recalling a wide range of material, but all that is required is bringing appropriate information to mind, not necessarily understanding its meaning. When combined with other training content, the case method is used to broaden knowledge.

Comprehension. This skill is defined as the ability to grasp the meaning of the material. It can be demonstrated by translating material from one form to another, interpreting it, and extrapolating information. By equipping knowledge within a real-world context, the case method supports and facilitates the comprehension of basic knowledge.

Application. This is the ability to use learned material in new and concrete situations (i.e., taking influence to apply learning in their food innovation journey). Through our 20 Good Practice cases, learners can understand how theories can be applied in real-world contexts.

Analysis. Our Good Practices require students to break down complex information, establish relationships and identify issues. The process generally includes identifying the innovation parts, analysing the relationships among the parts, and recognising the innovation principles involved. Analysis is at the centre of the case method.

Synthesis. This skill refers to the ability to put parts together to form a new whole. The process may involve, for example, the production of their own new product development plan or research proposal.

Evaluation. Critical evaluation is concerned with the ability to judge the value of material for a given purpose. After having analysed and synthesised a particular case, learners should evaluate alternative policies or strategies available to the Good Practice business, including evaluating decisions taken against possible alternative solutions.

¹ Baregheh, A., Rowley, J., Sambrook, S., & Davies, D. (2012). "Innovation in food sector SMEs", *Journal of Small Business and Enterprise Development*, 19(2), pp. 300-32.

² Boehrer, J. (1995). On teaching a case. *International Studies Notes*, 19(2), pp. 14-20.

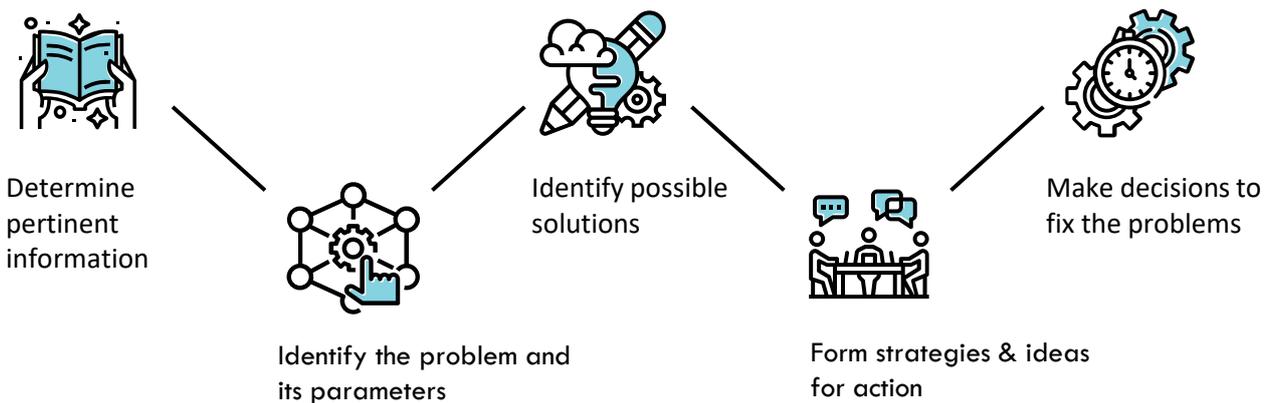
³ Velenchik, A. D. (1995). The Case Method as a Strategy for Teaching Policy Analysis to Undergraduates. *The Journal of Economic Education*, 26(1), pp. 29-38.

⁴ Bloom, B. S. (1956). Taxonomy of educational objectives. Vol. 1: Cognitive domain, 20(24), pp. 1.

How to use the PIFS Good Practice case studies

The objective of the Good Practice Guide is to provoke critical thinking and a broadening of perspectives and knowledge of food SMEs and the VET bodies on the opportunities to innovate and commercialise nutrient-enriched foods for our ageing population. Either in groups or individual learning, empower your learners to take over a Good Practice case, and dissect key information to identify the problems that arose and find solutions to the problems.

This allows learners to be able to:



Instructions for learners

To achieve the full benefit from our Good Practice case studies in your training/teaching practice, encourage your learners to approach each case with the following checklist.

- Thoroughly read the Good Practice cases and formulate your own opinions before sharing ideas with your group or class. You must be able to critically examine the cases presented, identify the problems on your own, and offer solutions and alternatives. Before the study is discussed with the group, you must be able to form your own outline and course of action.
- Once you have a clear understanding of the Good Practice cases, you can share your ideas with other group members.
- Open discussion of the case and listen to the input of others in your group and class.
- Reflect on how your original ideas changed as a result of the group discussion.

This is the first training deliverable of PIFS. As an educator and as the project progresses, you will also benefit from our:

- Digitised Innovation Self-Assessment, the first-of-its-kind digital tool and set of templates, which enable companies to measure how innovative they are to develop food products or services for seniors with a recommended learning pathway.
- Open Education Resources, which realises a classroom course that makes maximum use of multimedia resources, and our trainer's resource will introduce educators to the Education 4.0 agenda of forward-looking technology for adaptive learning.
- Online Course, which enables food SME managers and employees to continue learning in a flexible, mobile environment.



Structure of this Good Practice for VET Guide

The Good Practice for VET Guide is structured in 6 parts.

Chapter 1

An introduction to the Project and this Good Practice for VET Guide.

Chapter 2

An outline of the meaning of Silver Economy and its size.

Chapter 3

A description of policy drivers and impact of policy changes for Silver Economy.

Chapter 4

A presentation of innovation-based business development and describes innovation's role in the organisation, innovative activities and their meaning, organisational factors which affect the innovations and defines knowledge and competencies as main innovation drivers in the organisation.

Chapter 5

An outline of contemporary food market, its trends, and the definition of innovative foods.

Chapter 6

A description of the results of our 20 Good Practice cases, with relevant information including what is the Good Practice, why it is successful, what are the results achieved, and why it can be transferred to other regions.

02

The Silver Economy: A Description



The Silver Economy: A Description

In the Europe of 2060, one in three inhabitants will be over 65. A similar trend of increasing life expectancy and a reversal of the population pyramid will be followed by the rest of the developed countries on the planet. **World Bank and World Health Organisation (WHO) statistics indicate that in 2020 people lived an average of 72.5 years, 20 more than in 1960** and that the total population over 60 will have doubled by 2050 compared to 2000.

The ageing population's needs were a stimulus for the "Silver Economy" concept emergence. **The Silver Economy** includes all those economic activities, products and services designed to meet the needs of people over 50. This concept has been derived from the so-called Silver Market that emerged in Japan, the country with the highest percentage of people over 65 during the 1970s. To refer to the senior market, one brings together sectors as diverse as health, banking, automotive, energy, housing, telecommunications, leisure, and tourism.



03

Policy drivers and the impact of policy changes for Silver Economy



Policy drivers and impact of policy changes for Silver Economy

Europe is ageing. Therefore, older people are the focus of a range of EU policies and programmes, including those concerned with discrimination, active ageing, social protection, accessibility of public services, and research and innovation. Discrimination based on age is prohibited in general terms by the treaties of the European Union. Age discrimination can affect younger people, but the discrimination can be more pervasive against older people. Discrimination is often an issue related to the employment of older people. For some seniors, working longer may be necessary or beneficial financially, but it is also a way for many to contribute to society and to keep physically and socially active.

Embed policy as part of your training practice

Help your learners understand the macro-environment in which their food products will perform by teaching them the importance of policy context. It is the Big Picture piece that each SME must appreciate and learning from. We summarise the key policies that are important for your learners. Use the hyperlinks to learn more.

- The [EU's European Employment Strategy](#) provides a framework for coordinating policy and sharing of experience in line with overall EU recommendations. According to guidelines adopted in 2010, Member States are to increase labour market participation of people aged 50 and over through active ageing policies dealing with work organisation and lifelong learning. The EU also supports dialogue between the European Social Partners (employer organisations and trade unions) that has led to EU-level framework agreements on e.g., part-time working, teleworking and working conditions for temporary workers that can make it easier for seniors to continue working.
- [The Active & Healthy Ageing \(AHA\) initiative](#) involves encouraging older people to remain active by working longer and retiring later, engaging in volunteer work or caring for young or very old family members, and leading healthy and autonomous lives.
- The EU declared 2012 to be the [European Year for Active Ageing and Solidarity between Generations](#), which focused on a wide range of initiatives. The EU has helped to put a range of policies and programmes that promote active ageing, particularly in terms of help for seniors to work longer. The EU supports Member States in finding adequate and sustainable solutions for pensions, healthcare, and long-term care, which are vital issues for seniors and the elderly.
- As it is indicated in the [Background Paper of European Commission](#) (February 2015), the European Commission has been implementing several policy initiatives related to the Silver Economy already. For examples:
 - Advocating for the potential for new markets and economic drivers, such as the renovation of building stock, independent living, and low-season (senior) tourism.
 - Ensuring the long-term health and social care systems are accessible, high-quality, affordable, and sustainable for meeting the population's needs. Promoting a life course and social investment approach to social protection systems and services. Considering stakeholder-driven innovation for active and healthy ageing through large scale innovation actions.
 - Promoting new skills and entrepreneurship concerning the needs of an ageing population, supported by a new [Knowledge and Innovation Community on Healthy Living and Active Ageing](#) under the European Institute of Technology (EIT).
 - Smart specialisation and eligibility for regional funding have led 110 European regions to identify Active and Healthy Ageing as a smart specialisation priority.
 - Promoting research and innovation in response to demographic change through [H2020](#).

04

Innovation-based business development



Challenges and opportunities for Silver Economy

Innovation is considered as a new idea and a new way of doing things. Innovation is essential when wanting to improve products, services, increase sales, reduce costs or make organisation processes more effective and efficient. Teaching innovation-based business development will yield powerful results.

Innovation is no less than the lifeblood of long-term development and growth. Your teaching should reflect that it is a process or a journey, not a destination. Our Good Practices will give you tangible examples of 20 businesses on that innovation journey.

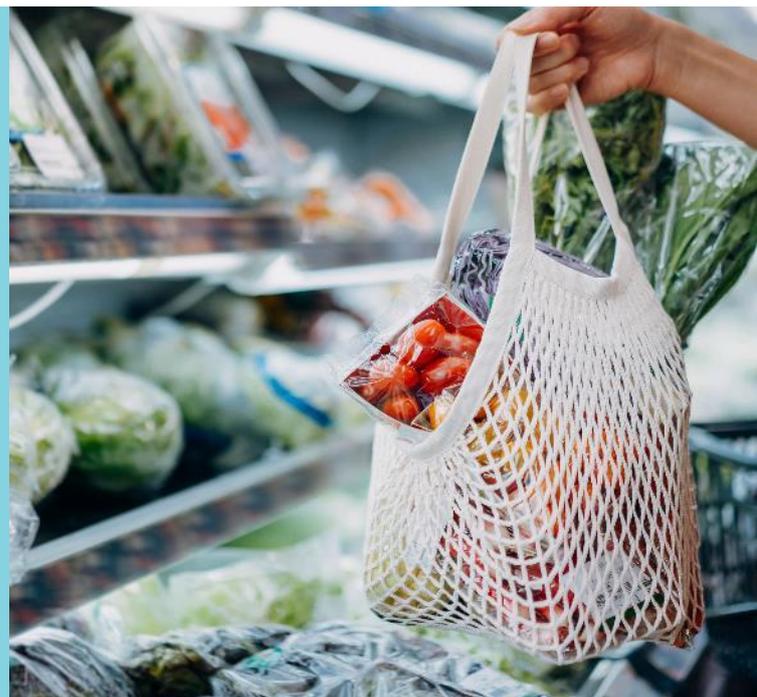
Learners will understand the creation of new processes, experiences, features, customers, offerings and models, but through the unique lens of innovative thinking and innovative action to meet the needs of our seniors. The best innovations come in the execution, not necessarily the initial idea. Learn from our 20 Best Practices who have taken the challenge to think and execute differently.

Innovation and its role in the organisation

Innovation as a phenomenon can be defined in various ways depending on various approaches and methodology of classifications. The basic definitions and types of innovation are presented by the [Organisation for Economic Cooperation and Development](#) (OECD) in a series of manuals. The latest manual - [the Oslo Manual \(2018\)](#) - defines innovation as:

The European Commission in its "[Green Paper on Innovation](#)" defines the term "innovation" as a synonym for the successful production, assimilation and use of novelty in the economic and social spheres. Innovations offer new solutions to problems and thus make it possible to meet the needs of individuals and society.

A new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)⁵.



⁵ OECD. n.d. *Defining Innovation*. Available at: <https://www.oecd.org/site/innovationstrategy/defininginnovation.htm>

The variety of innovation characteristics is expressed by many different definitions and authors. Different innovation definitions reflect the broad spectrum of aspects of innovation. The analysis of innovation aspects shows that since the first innovation definitions were developed the discussion of innovation aspects has progressed substantially - **innovation is seen not only as process of change or physical object, but also as instrument of change and the condition for this change.**

Thus, the aspects of innovation can be summarised as follows:

- 1 innovation as something new (some real object: product, service or software);
- 2 innovation as the process of doing, creating something new;
- 3 innovation as the instrument for doing, creating something new;
- 4 innovation as the condition (environment) for doing something new;
- 5 innovation as the idea (concept) of something new;
- 6 innovation as human abilities for doing something new;
- 7 innovation as the process of change.



The innovation classification has gone a long way and the latest categorisation of innovations following OECD methodology can be summarised as follows. Two major types of innovation are:

- innovations that change the firm's products (product innovation)
- innovations that change the firm's business processes (business process innovation).¹⁰

Product innovation

Product innovation is a new or improved good or service that differs significantly from the firm's previous goods or services, and that has been introduced on the market. Product innovations can involve two generic types of products:

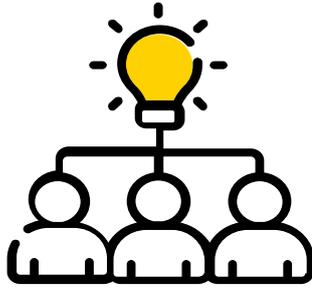
- **Goods** include tangible objects and some knowledge-capturing products over which ownership rights can be established and whose ownership can be transferred through market transactions; and
- **Services**, the intangible activities produced and consumed simultaneously, and that change the conditions (e.g., physical, psychological, etc.) of users. Users' engagement through their time, availability, attention, transmission of information, or effort is often a necessary condition that leads to the co-production of services by users and the firm. The attributes or experience of service can therefore depend on the input of users. Services can also include some knowledge-capturing products.

A business process innovation

A business process innovation is a new or improved business process in which one or more business functions differ significantly from the firm's previous business processes and have now been brought into use by the firm. Business process innovations concern the different functions of a firm. According to the latest edition of the Oslo Manual, there are six main business functions that are subjects of innovation:

- production of goods and services,
- distribution and logistics,
- marketing and sales,
- information and communication systems,
- administration and management,
- product and business process development.

There are many discussions about how innovation at every stage should be measured and assessed. Some authors suggest measuring new and improved products as a direct output of innovation associated with new product development; others speak about the market success of innovation, suggesting the "ratio of innovative product sold in the market to total sales" is important. Some authors refer to the patent applications for innovation.



So, the innovation in companies can be summarised as the application of practical tools and techniques that make changes, large and small, to products, processes, and services that results in the introduction of something new for the organisation that adds value to customers and contributes to the knowledge store of the organisation⁶.

Innovation in the food sector is identified as a core requirement for assuring the sustainability and competitiveness of food SMEs. Innovation in the food industry is an opportunity and an important instrument to stand out from the competition and satisfy consumer demands. Ultimately, it is the tool to success in an economic environment, the carrier to penetrate new markets, and the key to establish new products or processes. On the other hand, the food industry is traditionally considered as a sector with low research intensity. Although researchers continuously develop innovative products and technologies, their applications in the food industry face several obstacles. The latest fact is concerned more with the introduction of the innovations within the food industry, as well as the reaction of related consumers, and less with the technological adequacy of the innovative techniques. Many of the challenges faced by the food sector such as the delivery of sufficient food are not challenges as such. They become challenges because of responsibilities placed by society on the food sector. This is where the responsibility of policy comes in, and the justification for policy engagement in facilitating initiatives toward improvements in innovation support. Specifically, they include the support of networks that could facilitate the emergence of innovations in the food sector for SMEs. However, while networks may provide an environment that could support initiatives toward devising and realizing inventions, the actual drivers for engaging in such initiatives are linked to the pressures and challenges the sector and its actors are facing. The drivers in combination with a fitting environment may lead to inventions that could in principle support the sector in coping with the challenges. However, the further development of inventions toward usability in routine operations as a basis for potentially reaching innovative status is based on the availability of enabling technologies or concepts⁷.

Innovative activity and innovation process

The classic approach of an innovation process is hitting its boundaries because of the increasing speed in innovation cycles. Customer needs and technological possibilities are changing quickly and offer great chances to create new value for companies that adopt this information and trends. Companies are merging all kinds of internal and external information to get a clear understanding of future requirements. In order to meet these market requirements, many companies adopt different styles in managing innovation processes. While analysing the development of new products, researchers are presenting many models of the innovation process, which consist of several stages. Some authors present the innovation process model, which consists of thirteen steps where the process begins with selecting ideas and ends with the launch of products.

Others describe 5 stages of the innovation process: idea generation, idea refinement, solution decision, design and development and marketing or commercialization. Another classification is based on four stages: idea generation, innovation idea support and promotion, innovation development and implementation. The process continues with the commercialization of a product or service once its economic viability has been established.

In all of these innovation processes mentioned above, the innovation process begins from the concept and new products, or services introduced to the market are ending it. The innovation process in an organisation is influenced by many factors, which can be internal and external. External factors may include the government, environment, e-commerce regulation, industry, suppliers and customers, partners. Internal factors are organisation size, strategy, organisational structure, organisation type, resources, organisational culture and climate, organisational communication, social structure, personnel, technology management, and market information. The [interaction of innovation activities](#) with the external environment forms the life cycle of innovation.

⁶ O'Sullivan, D., & Dooley, L. (2008). *Applying Innovation*. Sage publications.

⁷ Galanakis, C. M. (Ed.). (2021). *Innovation strategies in the food industry: Tools for implementation*. Academic Press.

While thinking of external factors influencing food SMEs, it is worth mentioning that the crucial factor for innovation is networking. Networks may deal with innovations in products, processes, resource use, or services. Close cooperation with suppliers and customers may lead to network cooperation commonly referred to as a “food chain.”

Other external factors which support the food sector’s development can be grouped into four main categories:

- 1 individuals, such as experts, thought leaders, and consultants;
- 2 the academic world, such as universities and research centres;
- 3 supply chain partners, such as suppliers, consumers, retailers, and distributors;
- 4 companies belonging to other industries.

Generally, food SMEs prefer to engage in partnerships with actors belonging to their sector, and thus they are characterised by similar knowledge, skills, and competencies. However, companies belonging to high-tech industries are also involved in the food chain; many of the innovations introduced in new food products have been developed outside the food industry (For instance, in the biotechnology or nanotechnology industries). Food companies are, as a result, demonstrating a greater openness to external knowledge, new organisational models and principles, with a view of accelerated innovation⁸.

In this Guide, we have categorised the Good Practices into 3 groups:

- 1 Innovative Products - Those offering innovative products to the senior market
- 2 Unique or Helpful Services - Those offering unique or helpful services to the senior market
- 3 Alleviating Problems or Challenges - Where a product and service are combined but aimed at alleviating problems or challenges the senior market experiences



⁸ Galanakis, C. M. (Ed.). (2021). *Innovation strategies in the food industry: Tools for implementation*. Academic Press.

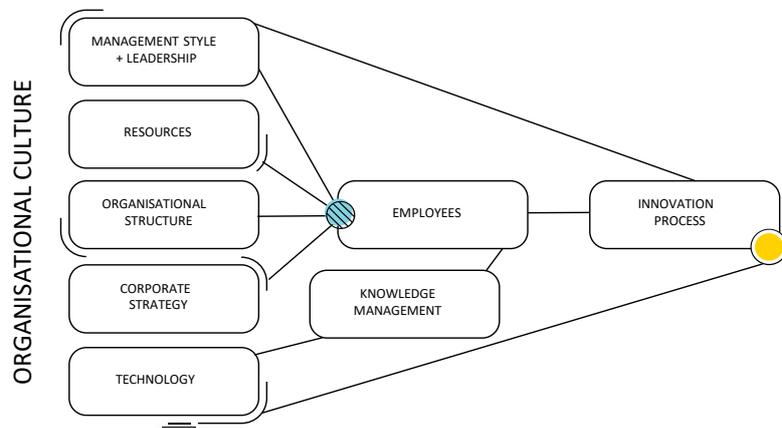
Organisational factors affecting innovation in business

Several types of innovations are relevant to companies, which allow them to be treated as innovative companies. Innovative activities of business enterprises can occur in product development, new technology, new social structures or by combining all areas. An innovative company also must contain certain characteristics, and several factors that affect a business's ability to innovate, namely: management style and leadership, resources, organisational structure, technology, knowledge management, corporate strategy, employees, and the innovation process⁹.

Figure 1

Organisational factors affecting innovation

(Source: *International Journal of Innovation Management*, 2019, *Factors Influencing an Organisations ability to Manage Innovation: a Structured Literature Review and Conceptual Model*⁹)



Organisational culture is a crucial factor in the management of innovation. It is a factor that impacts all others and is also impacted by changes in the other factors or elements of an organisation. Therefore, it can be concluded that an organisational culture emerges and develops through changes throughout the organisation. A literature review on factors influencing an organisation's ability to create and manage innovation⁹ allow us to conclude that the innovation process is a key factor to which all other factors impact, which suggests that the other factors impact an organisation's ability to manage innovation through the mediating effect of the innovation process.

Knowledge and competences as main innovation drivers

At the beginning of 21st century, many researchers argued that knowledge and intellectual capital play a fundamental role in modern enterprises of a knowledge-based economy. Innovation is an important driver of improvement in productivity. Various factors influence business's incentives and their ability to innovate, ranging from the prevalence of corruption to the availability of an adequately skilled workforce and access to finance. Some of these factors are internal, reflecting either characteristic of the business itself (its size or age, for instance) or decisions made by the business (such as the decision to compete in international markets or hire highly skilled personnel). Other external factors shape the general business environment in which these businesses operate (such as customs and trade regulations).

A business's willingness and ability to innovate will depend on various characteristics. In particular, young and small enterprises are often perceived to be the main drivers of innovation. While such businesses do contribute to the development of new products, they are not necessarily more innovative than other enterprises when viewed as a whole. A suitably skilled workforce (including strong management skills) is one of the key prerequisites for successful innovation – both innovation at the technological frontier and the adoption of existing technology – as workers are required to develop and learn new production techniques. Another important decision that a business faces is spending on Research and development (R&D) to support the development of new products. R&D is a systematic creative work designed to accumulate knowledge and find ways to apply it.

⁹ Smith, M., Busi, M., Ball, P., & Van Der Meer, R. (2019). Factors influencing an organisation's ability to manage innovation: a structured literature review and conceptual model. *Managing Innovation: What Do We Know About Innovation Success Factors?*, pp. 69-90.

R&D is not a prerequisite for the introduction of new products or processes, as businesses may decide to acquire existing knowledge from elsewhere. At the same time, R&D significantly increases the likelihood of successful innovation. Businesses that invest in R&D are an average of 22 % more likely to introduce new products or processes. They are also an average of 20 % more likely to introduce marketing or organisational innovations.

According to some authors, the knowledge that each person has can be transferred to several individuals simultaneously. So, one of the most important knowledge characteristics is that connecting knowledge in many areas helps create new business activities and better jobs and encourages businesses growth. It is widely accepted that an organisation's ability to innovate is closely tied to its ability to utilise its knowledge resources or intellectual capital¹⁰.

There are various definitions of *intellectual capital* in literature, but most commonly it has been defined as the difference between a company's market value and the cost of replacing its assets¹¹. Components of intellectual capital consist of human capital, structural capital and external (customer) capital, subsequently extended to relational capital. Each of the classifications of intellectual capital requires different forms of investment. Human Capital means the staff's competencies, skills, attitudes and employee's

motivation. The employee owns human capital, and it requires investment in hiring, training, and retention of employees.

Structural capital comprises all structures and processes needed by the employee in order to be productive and innovative. It requires the establishment of work routines and procedures to retain knowledge. Relational capital sums up all relationships to external groups and persons established by the organisation, e.g., customers, suppliers, partners and the public. Relational capital requires the development of standards to facilitate interaction, relationships and collaboration. Knowledge flow and intellectual capital in the organisation can be summarised as follows (Figure 2)¹²:

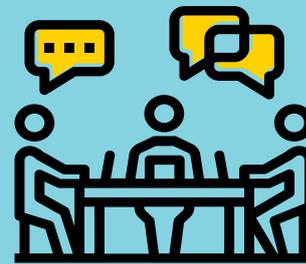
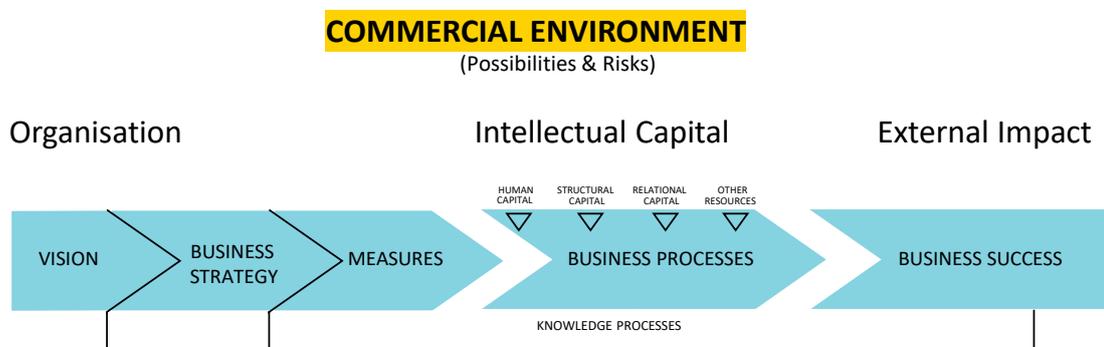


Figure 2
Knowledge and intellectual capital in the organisation (based on Mertins et al. (2009)¹³)



¹⁰ Subramaniam, M., & Youndt, M. A. (2005). The Influence of Intellectual Capital on the Types of Innovative Capabilities. *Academy of Management Journal*, 48(3), pp. 450–463. <https://doi.org/10.5465/ami.2005.17407911>

¹¹ Manzari, M., Kazemi, M., Nazemi, S., & Pooya, A. (2012). Intellectual capital: Concepts, components and indicators: A literature review. *Management Science Letters*, 2(7), pp. 2255-2270.

¹² Galeitzke, M., Steinhöfel, E., Orth, R., & Kohl, H. (2015). Strategic intellectual capital management as a driver of organisational innovation. *International Journal of Knowledge and Learning*, 10(2), pp. 164. <https://doi.org/10.1504/ijkl.2015.071622>

¹³ Mertins, K., Will, M. and Meyer, C. (2009). InCaS: Intellectual Capital Statement. Measuring Intellectual Capital in European Small- and Medium-sized Enterprises. *Proceedings of the European Conference on Intellectual Capital 2009*.



Human Capital and Innovation

The capabilities that are brought into the value-adding process of an organisation, the human capital, are an essential prerequisite for product innovation and process optimisation and innovation. Professional competence has a powerful influence on product innovation and a strong influence on process optimisation and innovation, as collective expertise and experience are prerequisites for developing technical enhancements or new technical solutions. Generally, competence management should target highly competent employees and their further professional development to increase a business's innovation capability.

This competence, however, needs to be balanced across the knowledge domains of the operation and organisation and should include the ability to implement and adapt solution-orientated innovation systems and methodologies. Social skills, especially communication, are essential for product innovation activities as they support the employee's creativity and flexibility. Moreover, the communication of ideas and the nurturing trust-enhancing behaviour fosters the generation of ideas and innovations through constructive discussions and co-operation.

The specific training of communication and co-operation skills can improve the idea generation and communication¹⁴. This is important in order to align the technological and product strategies with the idea evaluation. Social competence has only a weak

influence on process optimisation and innovation, which can be explained as the general value-adding processes of an organisation are set within the business model. It is the human capital that determines the quality and efficiency with which these are executed.

The employee's motivation to play a part in the organisation has been identified that a sense of participation and/or achievement strongly influences product innovation. In general, the individual employee's motivation influences the performance in terms of quality and efficiency. Some findings¹⁵ suggest that the employee's motivation (to innovate) is influenced by extrinsic and intrinsic factors that impact the individual effort in idea generation and implementation.

Therefore, utilising methodologies to develop and communicate strategies, visions, and their empathic implementation should foster the intrinsic factors for motivation to innovate.

¹⁴ Jones, J. E., & Pfeffer, J. W. (1998). Three approaches to organizational learning. *The Pfeffer Library*, 16(2). Available at: <https://home.snu.edu/~jsmith/library/body/v16.pdf>.

¹⁵ Galeitzke, M., Steinhöfel, E., Orth, R., & Kohl, H. (2015). Strategic intellectual capital management as a driver of organisational innovation. *International Journal of Knowledge and Learning*, 10(2), pp.164-181.

Structural Capital and Innovation

The organisational structures and processes that determine the employees' interaction and overall productivity have a weaker influence on product and process innovation when these are part of the structural capital. Internal cooperation and knowledge transfer have a powerful influence on product innovation. Here the ability to co-operate, as included in the social competence, is applied across the different hierarchy levels. The focused internal knowledge transfer builds professional competencies and retains knowledge within the organisation, thus building the innovation capabilities regarding products and processes between generations. Information and communication systems are a significant part of today's working environment and implicitly influence knowledge acquisition, processing, and utilisation.

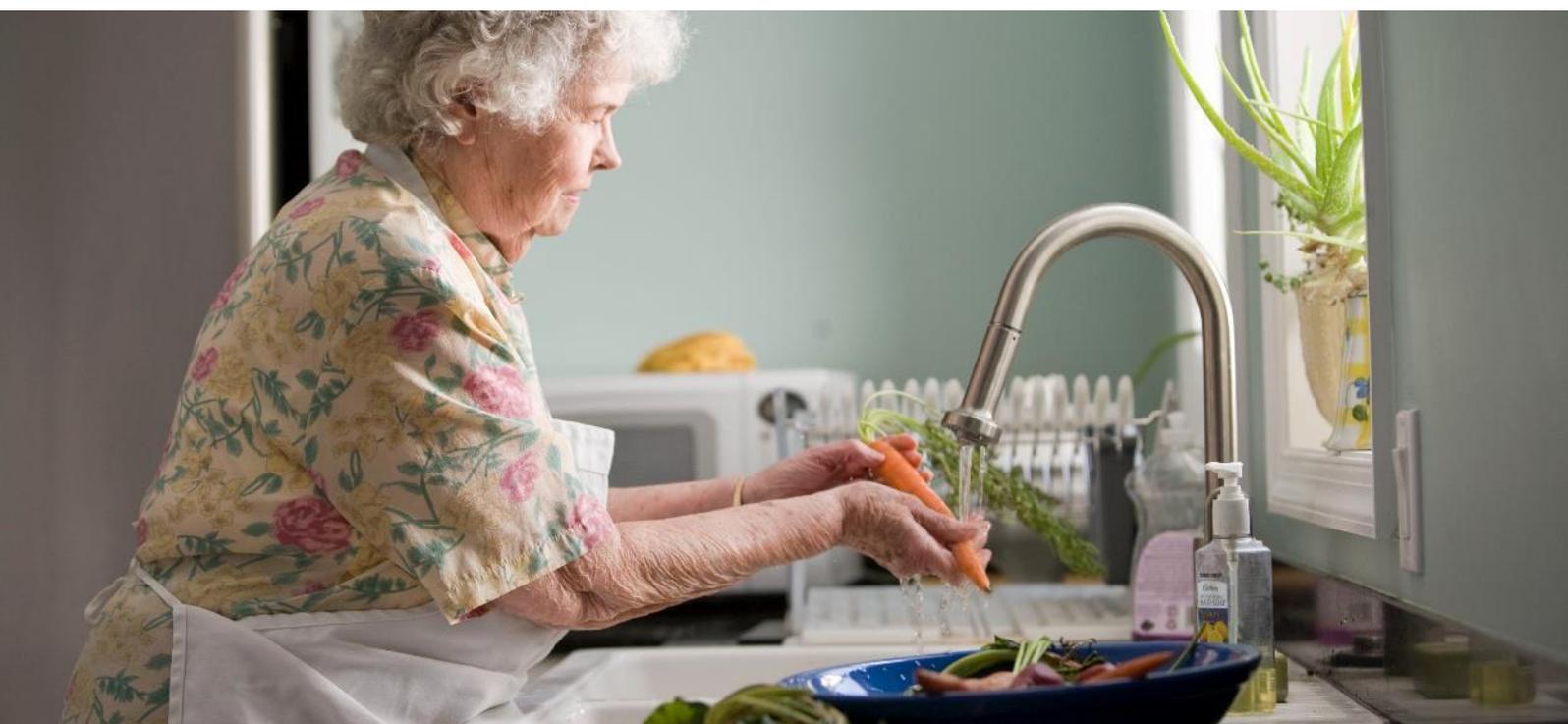
The information and communication systems help effectively and efficiently perform given tasks and assist the employees in operating and controlling integrated production systems. Moreover, the fast and convenient access to information, design and simulation systems may optimise products or processes and generate innovative ideas. The corporate culture, comprising all values and norms, influencing joint interaction, knowledge transfer, and working manner, substantially impacts product innovation. Compliance with rules, good manners, "Do's and Don'ts", and handling failures are essential aspects of this factor.

Relational Capital and Innovation

The relational capital, comprising all relationships to external groups or individuals established by the organisation, e.g. customers, suppliers, partners and the public, overall impacts product and process innovation. Relationships to customers, regardless of former, current or potential customers, strongly influence product innovation. It is evident as the innovative solution generation is at least in part based on the customer's demand or needs.

It is noteworthy that the relationships to the public, on average, do not influence the innovation factors, and the investor relationships play only a minor role in the product innovation. The relations to professional cooperation partners where joint activities in customer, supplier or investor acquisition and the networking knowledge transfer activities, influence the product innovation more than on the process optimisation and innovation. The transfer of knowledge and best practices in research and development partnerships has a higher impact on product innovation activities. So experienced-based knowledge and transfer of best practices (processes) play a crucial role in innovation processes for organisations.

Thus, as knowledge and competencies are the main drivers in all organisations towards innovation processes, food sector companies are dealing with the same challenges.



05

Contemporary food market



Contemporary food market

One of the main economic drivers of the European Union is the food and beverage industry. An important part of the European food industry produces traditional foods, the commercialization of which is supported by SMEs. This means that over 70% of the total employment generated by the European food industry is in traditional food production. In addition to its economic and social importance, traditional foods are a significant part of a culture, identity, and European gastronomy heritage. They contribute to the development, diversification, and sustainability of many rural areas, protecting them from depopulation, allowing a clear product differentiation for their producers and processors and providing a greater variety of food choices to final consumers. In general, traditional foods are associated with regional identity and a particular sensory quality.

With the Silver Economy, an increasing knowledge of ageing mechanisms and improving healthcare are contributing to a longer life expectancy in Europe. Consequently, traditional food producers face the challenge of improving their products' safety, health, and convenience, according to the market demands. They are doing this by using different innovations to maintain and expand their current area of influence in a highly competitive and globalized market. Along with this, in recent years, the purchasing power of the elderly population has been seen to increase in most European countries, and their willingness to spend more on health-related expenses is also on the rise.

As the current trends in nutrition go towards eating healthier to improve general health, the economic market favours the development of new products or services. Recent advances in medicine point out that older people need to shift their nutritional intake by adding more proteins and specific vitamins into their daily diet. Simultaneously, the development of information and communication tools allowing for monitoring nutritional requirements and intake is also on the rise. Altogether, there is a need for a specific focus on the nutrition of older people and tools to help monitor and support this need. This will therefore introduce opportunities in [personalized nutrition for the senior market](#).

As [many studies](#) show¹⁶, simply increasing portion sizes or meal frequency is usually not successful in older people because of physical problems with eating or decreased appetite. However, specialized, nutrient-dense foods can provide large amounts of nutrients in relatively small amounts of food and maybe more appropriate. So, replacing conventional foods with protein-enriched foods may be an effective way to increase protein intake in the elderly.



¹⁶ Drewnowski, A. (2005). Concept of a nutritious food: toward a nutrient density score. *The American Journal of Clinical Nutrition*, 82(4), pp. 721–732. <https://doi.org/10.1093/ajcn/82.4.721>.



Functional food as one of market trends

Protein-enriched food may be considered a type of functional food- product. Functional food is widely described as providing health benefits beyond simply satisfying hunger and delivering their basic nutritional value. However, no single definition of functional foods has been agreed upon so far. Although most foods provide some additional health benefits, most literature is limited to functional foods enriched with micronutrients or macronutrients¹⁷. Functional foods are often perceived to be healthier than conventional foods, and willingness to try them is generally high, especially in older adults.

From a marketing perspective, older people may thus also be a suitable target group for protein-enriched food. Nevertheless, a variety of barriers to functional food acceptance exists. For example, consumers expect functional food to taste poorly, to be expensive and unnatural. In addition, health claims attached to functional food are sometimes thought to lack personal relevance or to be merely advertising tools and are confusing to both consumers and dieticians.

Senior consumers report various barriers to making healthy food choices in general. Besides the mentioned barriers, the elderly may feel constrained by inconvenience in food preparation and purchase, being on a special diet. Next to these perceived barriers, a lack of nutritional knowledge has a limited acceptance of functional foods. More specifically, both attribute knowledge (i.e., about the nutrients in food) and consequence knowledge (i.e., about the effects of nutrients on the body) are found to be necessary for functional food acceptance.

Personalised nutrition market as a trend

According to the results of the [analysis of personalised nutrition in the Silver Economy](#), the nutrition market for older people can be divided in several segments:

The **first segment** is the agrifood industry, which represents the largest part of the nutrition market. It can be divided into the development of new products, specifically developed for older people's needs. Typically, it can be products with specific nutrients that older people lack, such as vitamins, or easy-to-eat products. Then agrifood industry can be divided into product design (food texture (i.e., easy to eat products or shape) and packaging (i.e., easy-to-open format and bigger fonts).

The **second segment** of the nutrition market is information and communication technologies (ICT), which gather all connected objects that could help personalise the diet of older adults. For example, web platforms and applications helping older people in their nutrition are part of this category. It can also be services to choose or localised products.

The **third category** is home services, consisting of food delivery or at home cooking services. It also includes all services that target well-being at home of older people. Besides, home services could also be used for personalised nutrition of older people.

The market of personalised nutrition for elderly people is largely open to innovation. However, with the specific needs of older people, it looks like the actors of the agrifood, ICT or at home services are not occupying most of the market yet¹⁷. With the increasing number of elderly people, there is evidence that the market will grow exponentially. In addition, their progressive appropriation to new technologies and their increased interest for services at home offers large possibilities for the personalised nutrition market.

¹⁷ Säöksjärvi, M., Holmlund, M., & Tanskanen, N. (2009). Consumer knowledge of functional foods. *The International Review of Retail, Distribution and Consumer Research*, 19(2), pp.135-156. <http://dx.doi.org/10.1080/09593960903109469>.

The agri-food market for seniors as a trend

[Agrifood market for seniors](#) includes all types of food products that can be bought in grocery shops, supermarkets, greengrocers or pharmacies and are enriched in specific nutrients. These products are not labelled for elderly people, but because of their enrichment, they are adapted to senior people's need. This category of food product could be preferentially targeted towards the part of elderly people that are still healthy, to prevent potential malnutrition. In the current context, the "elderly food" market labelled as such is non-existent. The unfamiliarity of the elderly population with their nutrient needs makes it very difficult to target food products to this population directly. However, food tendencies are going towards healthier eating. Nowadays, foods labelled as "organic", "gluten-free", "vegetarian" or "vegan" are on the rise. The ability to trace components of food products or consume locally-grown and/or organic food is also becoming increasingly important in the eyes of consumers. This includes people aged over 65. Thus, if this part of the population was aware of their needs, it would probably open new doors to the personalised market of nutrition for elderly. Importantly, the actors that want to position themselves in the personalised silver food market need to recognise that the purchasing power of those aged 60+ is increasing. With the proportion of elderly people increasing in each European country, there is a huge opportunity to satisfy their needs.

In addition, specialised food is also an important part of the market of food products for the elderly. In this market segment, products like beverages, soup or sauces with high protein content, modified-texture food products (jellified or dehydrated products) can be included, among others. However, because of the lack of knowledge in malnutrition or various physical eating related issues that arise with age, this market is largely unknown and only specialised actors have invaded the market. As people want to stay at home for as long as possible, the tendency might shift in the next few years, if the general population is more aware of the nutritional needs of elderly people.

In fact, the market for people aged 85+ is largely open to the production and commercialisation of new specialised food items. There are already products on the market, but an effort should be put into developing products that are easy to eat, contain nutrients

necessary to fight malnutrition and most importantly look appetising and taste good even if this is an enhanced taste.

A specific segment of this market concerns food products for meal preparation in elderly residencies. This market might be accessible if products are sold at a very low cost, especially for public residencies that do not have much funds to spend on food products and rather go to vegetable, fruit or meat producers directly to reduce intermediary costs. This might be different for private institutions. Therefore, if planning to target elderly residences, SMEs should commercialise specialised products that will be needed by these residencies, such as products with modified textures or increased nutrients content, among others.

Proper packaging of food item is important when targeting specific populations. In fact, as people get older, their strength decreases and they will more likely buy products that are in "easy to open" packages. SMEs and larger Agrifood groups already developing products targeted towards elderly are thinking about such issues. Increasing font size does not seem to be a strategy adopted by packaging leaders. Therefore, it might be considered as a common constrain when developing a food product to consider the most convenient packaging solution for all, including the elderly population.

Summarising all that is said above, it is evident that the contemporary food market has potential to grow towards development of functional food and nutrition-based food for seniors. However, there is a need to raise awareness in both SMEs and the elderly on their nutritional needs in order to stay healthy in active ageing period of life.





Project Good Practice: Case Studies





Project Good Practice: Case Studies

The case studies have been
categorised into 3 groups:



INNOVATIVE PRODUCTS

Those offering innovative products to the senior market



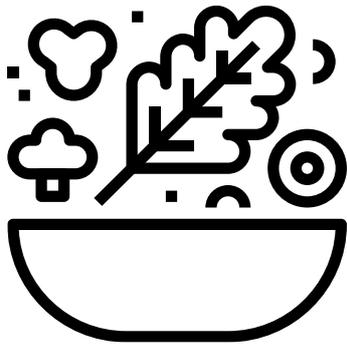
UNIQUE OR HELPFUL SERVICES

Those offering unique or helpful services to the senior market



ALLEVIATING PROBLEMS OR CHALLENGES

Where a product and service are combined but aimed at alleviating problems or challenges the senior market experiences



Those offering innovative products to the senior market

- 01 NUA Naturals
- 02 Gusto Vitas
- 03 Ventro Bio-gels
- 04 AB Auga
- 05 BIOCENTRAS
- 06 Ekofrisa
- 07 Ooho, Skipping Rocks Lab & Jelly Drops Ltd
- 08 AINIA- ALTEX, Microencapsulation
- 09 Health Care - Campofrío

Product: Natural Organic Superfoods

Region: Galway, Ireland

“ Their mission is to create a healthy happy balance for body, mind and spirit for all ages ”



Why this is a Good Practice:

Nua Naturals is a market leader in enhancing health and well-being, with its delicious range of Organic Natural Superfoods. Their mission is to create a healthy happy balance for body, mind and spirit for all ages. Although Nua Naturals don't specifically target the Senior market, their products are ideal for this market segment. Being able to supplement the diets of seniors easily, and nutritiously combats the challenges of malnutrition, and swallow issues as these super-food powders can be added to liquids, pastes, or foods to improve the nutritional value.

About:

This is an Irish-owned family business, passionate about health and wellness. It brings its packaged Organic Superfoods to a global audience, mindful of sustaining well-being and the environment. They are advocates, suppliers, and producers of flavourful superfoods, vegan and plant-based proteins. All NUA Natural's products are created with simple, natural ingredients to optimise diet and boost energy. From Cacao Powder to Chia Seeds, Spirulina Powder to Chlorella Powder, and a diverse selection of vegan and plant-based proteins. They sell their quality, sustainably sourced and locally packaged health foods online and in stores across the country.

Challenges:

The Senior market is expanding and ageing and as their dietary needs change so too do their eating habits. Often leading to poor intake of valuable and required nutrients. As people age, they usually need fewer calories, but their nutrient need is still high or even higher than when they were younger. In particular their requirements for Calcium, Protein, Dietary fibre, Potassium, Vitamin D and Vitamin B12 remain high.

As recently as 10 years ago superfoods such as chia seeds, goji berries or acai powder were somewhat inaccessible in Ireland. Nua Naturals was the first brand to introduce superfoods to the Irish market, and they continue to bring innovative, healthy & quality products to consumers in Ireland. They are a small business that takes pride in what they do and in every item they sell.

Success & Transferrability:

Nua Naturals provide these nutrients in an age-friendly manner, in particular their supplements are versatile and adaptable to the consumers tastes and requirements. Having these superfoods in powder form makes it easy to supplement meals for Seniors. The powders are made so that they dissolve easily, and they can be used in a multitude of recipes and manners. Nua Naturals often provide easy recipes with their products to maintain interest and thus families, children and seniors can all benefit from nutraceutical supplementation on a daily basis.

Nua Naturals is a SME trying to make a difference to the health and well-being of the community, including seniors. All packaging is clearly marked as to what it contains and also highlights the main nutrient benefits contained in the product. Packets and tubs are easy to open. They provide an abundance of information on all their products and simple recipes to use them in, as well as interesting discussion topics on their easy to navigate website, demonstrating an appropriate use of digitalisation in their market. The website is also used for e-commerce. The direct sales and delivery are perfect for those seniors unable to travel or go in-store to purchase the products.

Product: Easy to heat & serve Nutritious Meals in Jars

Region: Petersburg, Germany

“ Nutritious foods in glass that are perfectly portioned for seniors ”



Why this is a Good Practice:

Gusto Vitas provides a solution to people with chewing and swallowing problems. They produce a wide variety of classical dishes, prepared by chefs who are trained in geriatrics. The meal-in-a-jar concept offers visually appealing and nutritious meals that meet the needs of all adults with physical eating difficulties in all types of care facilities. They are particularly suitable for those with oral and pharyngeal discomfort (e.g., after dental/orthodontic treatment or after treatment/ radiation to their throat and oesophagus). It is also suitable for all older adults with geriatric, motor, or dementia disorders or those with disabilities.

About:

The person behind Gusto Vita is chef Michael Staubach, who after spending years working in wellness hotels, pivoted his professional focus to catering for the elderly. As a kitchen manager in senior catering, he acquired specialist gerontological knowledge on senior nutrition and he has undertaken specialist additional training courses on the topic. Through this specialization, he now combines the professional competence of a chef with the nursing concepts and now works with his team to support the healthy and balanced nutrition of seniors.

Challenges:

Many seniors struggle to eat or swallow due to discomfort or dysphagia. They also tend to have a reduced appetite, and this can lead to malnutrition and unwanted weight-loss. Gusto Vita provides a solution to these challenges as the portion sizes are highly suitable for seniors, and each jar provides a balanced, high-calorie, nutrient enriched meal, supplying a large part of the daily requirement of energy, vitamins, and minerals.

Success & Transferability:

The concept overcomes the poor nutritional problems faced by many seniors. It offers a high degree of convenience, good appearance, proper meal size and great public acceptance. Thanks to the simple heat and serve principle, nursing and care staff can now serve the food in a flexible way suiting the respective dining needs & mealtimes of senior guests. The glass jars are also easy to store (can be kept for at least six months without refrigeration), saving space and energy, and offer a high degree of convenience.

The concept is ideal for hospital wards, inpatient facilities for the elderly and disabled, residential groups, ward kitchens, short-term care, or areas where sporadic and individualized food options are required. Thanks to the high-calorie enrichment, Gusto Vitas is an adequate alternative to the usual sweet, high-calorie drink packets and are ideal as a snack or meal replacement.

Additionally, courses offered by chefs, entrepreneurs, and innovators in the food industry generate new concepts that consider the real needs of the elderly in terms of nutrition and portions with a high degree of convenience and good looks. Convenience plays a significant role in improving the acceptance of innovative food options among older adults. Apart from nutrition, visually appealing and convenient preparation of meals are crucial factors for older consumers.

The Gusto Vitas concept was one of the five winning Start-ups that received awards from experts and visitors in the "Start-up Challenge 2017" competition as part of the show "Aveneo - Space for Innovation" at the ALTENPFLEGE 2017 trade fair.

Product: Bio-gel Pro/prebiotics as food supplements

Region: Münster, Germany

“ We are experts in culturing live & active beneficial micro-organisms, together with nutrients that can help restore balance ”



Why is it a Good Practice:

Ventro Bio-gels are an excellent method of meal supplementing for seniors. Consumption of probiotics in older adults has been proven to prevent gastrointestinal, respiratory and urinary diseases caused by pathogenic microorganisms and strengthen our immune systems. The strategic partnership with universities in the co-working hub enables better access to knowledge, expertise and capacity thus facilitates the development and validation of new food technologies.

About:

Kurago Biotek has developed these edible Bio-gels to promote the health and nutrition of the community. Their ambition is to be the leading company in the fermented biotechnological foods industry. Through innovation and culturing beneficial bacteria to generate balance, well-being, health, and harmony in all living things.

Ventro Bio-gel contains live probiotics which can help to regulate and maintain the balance of our microbiota (gut flora), thus supporting our intestinal functions and they are the first of their kind in the world, in that they are derived without the use of dairy or freeze dry processes. Each sachet is dairy & lactose-free with a fruit-flavored gelatin, only 2.32 calories per serving, no fat, no artificial colors or sweeteners. The concept for them was developed in a co-working space called Technologie of Munster.

Challenges:

In studies it has been found that elderly subjects show a reduction in the diversity of the microbiota in their guts compared to younger adults. These differences of the intestinal microbiota of the elderly may not necessarily be caused by ageing, but they could be associated with the decline of the general state of health with malnutrition and with increased need for medication, such as antibiotics and nonsteroidal anti-inflammatory drugs, situations that occur frequently in the elderly. These can be particularly useful for seniors, as they are easy to use and have substantial health benefits.

Success & transferability:

Probiotics help regulate organic functions in all living things, improving their nutrition, health, and well-being. They have wide implications and can be applied in different settings. These can be particularly useful for seniors, as they are easy to use and have substantial health benefits. Their use has been associated with a reduction in the occurrence of both diarrhea and constipation, something many seniors suffer. There is some evidence that certain strains of probiotics can reduce your risk of heart disease by improving blood cholesterol levels and reducing blood pressure.

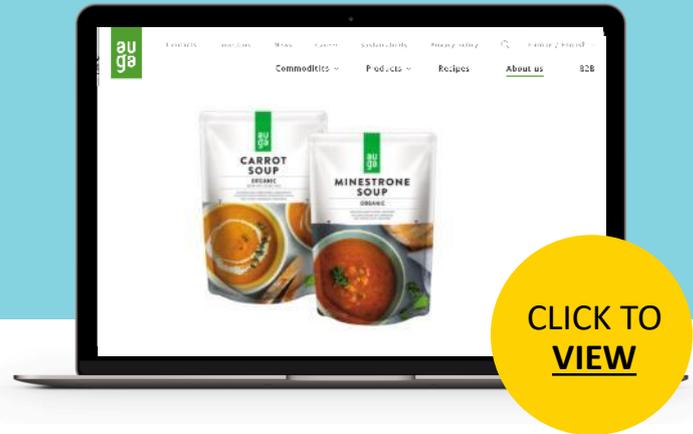
Outstanding awards:

- 2012 - Winners of the Mexican Nation prize for technology and innovation
- 2014 - Winners of the Mexican award of health
- 2015 - Second time winners of the Mexican Nation prize for technology and innovation
- Bio-Gel is ranked as the best project at Oxford University Innovation by Oxford University, U.K.

Product: Organic Soups in innovative packaging

Region: Vilnius, Lithuania

“ AUGA products are based on innovative food production & growing global consumer demand for organic and sustainable food ”



Why is this a Good Practice:

The company AB Auga created nine varieties of organic soups, which have a mashed and thick texture, so they are suitable for seniors having chewing and swallowing issues. The product is created using only organic ingredients and contain no preservatives. The innovative packaging of the soup is easy to use, and the soup requires only to be heated in a pot, microwave oven or by immersing an unopened pack into boiling water for 10 minutes .

About:

The group of companies which make up the AUGA group, AB and its subsidiaries, are developing a sustainable agricultural model based on new technologies, covering crop production, dairy farming, poultry farming and mushroom growing. Using its own and outsourced production capacity, the company produces a wide range of organic products for end-users and supplies raw materials to the market. Over 70 % of their products are exported to more than 30 countries around the world.

Challenges:

Relatively few food and drink products have been actively targeted to the ageing consumers, which means that this segment of the population represents both a challenge and an opportunity for food and beverage manufacturers.

AUGA aim to achieve the best understanding of the present and future needs of their consumers and other stakeholders. As leaders in their field, they initiate change, create value, and positively impact the entire community.

Success:

The 9 varieties of soup ensure that everyone finds a favourite flavour. Full of natural and organic ingredients, the thick texture and easy way of preparation- all ensure that these soups are popular among the senior population and are readily available. From a nutritional point of view, they are wholesome, nourishing products and perfect for those unable to prepare & cook food themselves. They are easy to buy, handle, and store. Soups are packaged in innovative environmentally friendly packaging which is proven to have significantly less CO2 emission during the product lifecycle, compared to a glass jar of the same size. Packaging is safe for food products since it contains no BPA plastics.

Transferability:

The AUGA group, the largest organic food company in Europe, is expanding its range and introducing 5 types of quick-preparation oatmeal with fruit and berry pieces. 100% Vegan porridge, without added sugar, flavours, thickeners, sweeteners or colors has already reached the main Lithuanian retail chains and will appear in foreign markets in the near future. The success of ready-to-eat AUGA soups has confirmed the company’s insight that modern consumers who want to eat healthily and care about sustainability do not always have time or capabilities to cook. In search of an answer to what new product would meet the need of consumers to eat organic food quickly and conveniently, they noticed that there is a lack of organic breakfast alternatives on the market, so the idea of creating oatmeal was born. AUGA porridges will undoubtedly meet the needs of consumers with different tastes - they will have the opportunity to try 5 different types of oatmeal. Another advantage of AUGA porridge is the packaging: 95% of its composition is a vegetable fiber.

Product: Food supplement to promote immunity

Region: Vilnius / Municipality, Lithuania

“ *An innovative biotechnology company offering solutions to improve human health* ”



Why it is good practice:

People need a well-developed immune system to protect against infection and malignant cancer cells, but due to ageing and other factors, the immune systems performance and functionality can diminish. To restore these functions, reprogram the immune system, stimulate, and destroy cancer cells, UAB Biocentras have developed a new, Therapeutic Beta-glucan composite called Fortuna, that enhances the human immune system and promotes the breakdown of cancer cells. They have made this possible using science and innovation.

About:

The weakening of the immune system is rather common among seniors, and this can lead to various illnesses & diseases. Food supplement Fortuna is used to restore and stimulate the immune system and destroy cancer cells. It is made of Beta-glucan which is degraded by specific enzymatic hydrolysis to soluble structural elements of different molecular weights. It has been clinically proven that the food supplement Fortuna, when used properly, has the following effects:

It promotes the functional activity of the immune system; they are cytotoxic to malignant cells and can suppress the enzyme telomerase, which restores the telomer and is involved in the process of malignant cell proliferation.

This supplement can be used as adjuvants to promote the development of more effective acquired immunity against target antigens. FORTUNA, as a dietary supplement, can be used to help the body strengthen the immune system and inhibit the active form of the enzyme telomerase.

Challenges:

The price of the product is high and not every senior may be able to afford it. Also, this food supplement is available only on the company’s website. Blood tests are required periodically, and its usage is possible only under strict supervision of one’s medical consultant.

Success & Transferability:

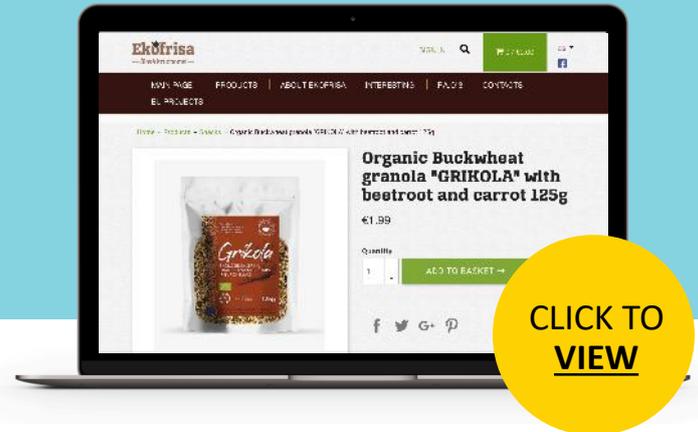
One of the proofs of success is that the company, together with the Center for Innovative Medicine, won the competition “Business and Science Partnership 2015” for cooperation in the field of research. The main achievements and research results are presented in publications in scientific journals and patented in EU and USA.

This Food supplement is developed through strong collaboration with science institutions so the involvement in international science-business projects could allow to create new forms of such supplement.

Product: A Healthy Snack for Senior citizens

Region: Kaunas/Prienai municipality

“ A healthy snack, developed together with senior citizens in order to better meet their taste and nutritional needs ”



Why this is a Good Practice:

“Grikola” - an organic buckwheat granola with added beetroot and carrot is one of the first special products developed by a major manufacturer of grains in the Baltic States UAB “Ekofrisa”. The product was developed with much consideration of the needs and problems of the senior market and by connecting with this market directly. Much attention has been paid to nutritional value, fiber, vitamins, and the developers have sought to make the products easy to chew and make their texture soft in the mouth.

About:

The product was developed during the project under an EIT Food initiative programme in 2019. The aim was to connect consumers with businesses, start-ups, researchers and students from across Europe, and at the same time transform the nutritional ecosystem. Researchers of the Food Institute of Kaunas University of Technology (Lithuania) together with a group of seniors have developed various concepts of foods that can be adapted for the diet of the elderly and focused not only on their nutrition, but also on their convenience.

The new granola consists of buckwheat, date-paste, rice syrup, dried carrots, dried beets and dried black currants. It is an organic product that is free of allergens and is recommended to be eaten with milk, yoghurt, juice or sprinkled on your favorite dessert or fresh fruit. It is already available in one of the biggest grocery stores in Lithuania.

Challenges:

Relatively few food and drink producers have actively targeted the ageing consumers, which means that this segment of the population represents both a challenge and an opportunity for food and beverage manufacturers. Many manufacturers still do not see senior citizens as a target group. While developing a new product it is very important to involve the target group into the creation process. It provides a valuable feedback on the features of the products and facilitates its acceptance and journey into the market.

Success & transferability:

Ekofrisa as a project member in the Food Initiative Programme, developed a unique grit processing technology allowing the company to achieve high quality standards. During the project, older people worked with professionals to develop personalized foods that promote a healthy lifestyle. Researchers say that personalized products based on a healthy and sustainable diet, contribute not only to the improvement of the quality of life and health of seniors, but also to lower costs. Proper use of nutrition is seen as a foundation for the well-being of seniors. Personalized foods that meet the needs of this target group, by prolonging health and improving well-being, are becoming increasingly relevant. The new products contain more vitamins and ingredients and also satisfy sensory needs.

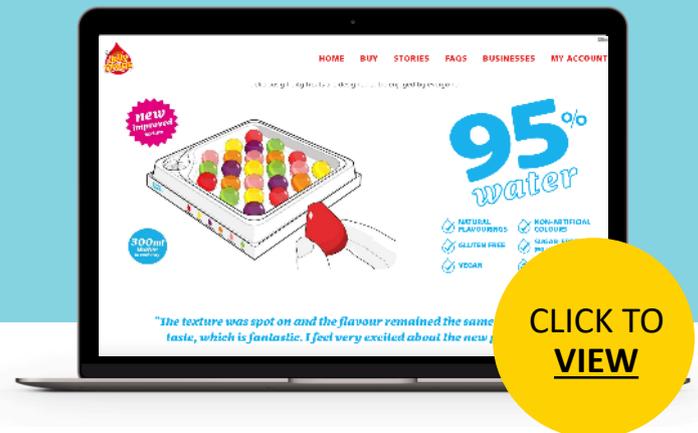
During the project a total of 15 new food concepts were proposed. Because the seniors themselves were involved in the development of the product, it allowed a closer look at many features to be taken together. The aim was to develop products not only easy to chew and to have a soft texture, but also offer good flavours, and functional ingredients (e.g., fruits and vegetables).

Product: Ooho, Skipping Rocks Lab & Jelly Drops Ltd

Region: Essex & London, UK



“ *It is time to eat water instead of drinking it* ”



Why is this a Good Practice:

Skipping Rocks Lab., Edible water balls (small transparent spheres that are filled with water) called 'Ooho' and Pattinson's 'jelly drops' are convenient, safe, tasty and environmentally sustainable products for ageing people. The concept uses sustainable food sources (e.g., natural seaweed extract) to develop edible soft hydrogel coats for the water balls or fruity flavoured drops. This development not only tackles the issue of dehydration in seniors especially those with Dementia but is also acting as a solution to today's plastic packaging waste problem.

About:

Skipping Rocks innovative inspiration led to the use a technique known as 'spherification', to introduce water into a sphere Seaweed extract and calcium chloride form a gel-like structure that acts as an elastic membrane and retains water inside. To protect it, the company has used a second membrane that functions as a hygienic container. This just has to be removed and the remaining sphere is 100% edible. One can pop it in their mouth or bite carefully to drink the liquid it contains.. For this reason, they are also seen to be extremely suitable for marathon runners and other extreme athletes. A similar technique is used by Jelly-drops except with alternative packaging so that they can be presented in a gift-like manner.

Success:

In 2019, Ooho Edible water balls was successfully used & promoted in the London Marathon, and in doing so eliminated the typical sea of single-use plastic waste at the event. The products have now been successfully crowdfunded and launched. Skipping Rocks Lab is part of the Climate KIC start-up acceleration program, founded (EIT) and the Imperial College scientific team.

Skipping Rocks Lab has already several awards, the 2014 Lexus Design Award, the 2014 World Technology Award held in partnership with Fortune and TIME, the 2015 SEA Award and the 2016 UK Energy Globe Award.

Jelly drops also has already helped many elderly people with struggling dehydration, by selling their lovely 'gift like' products. To date, Jelly drops has received over 15 awards within design, innovation and social impact. As a young company, these competitions have brought connections, resources and training that have been vital in making Jelly Drops a reality. They have been successfully building partnerships with social media such as Ted, Skynews, Youtube etc, and with the Alzheimer's Society, and the Royal Academy Engineering

Challenges:

Taste and smell losses occur with ageing, the loss of taste perception in older people can therefore result in reduced food consumption, negatively influencing the nutritional status of elderly people. Developing products like these, with flavour compensation could be an option to combat this issue. It may be challenging for other SMEs, to replicate, but this innovation/good practice has great potential to be applied in other regions globally. It is technically less complex than other new technology and the experimental & development cost would be relatively low due to the low-cost ingredients. It would have a great impact on the consumers (sports lovers/athletes, and elderly). There is great potential due to its convenience, its implications in health and the sustainable approach.

To overcome challenges the strategic partnership with universities enables better access to knowledge, expertise and capacity, facilitating the development and validation of new food products. The COVID pandemic may limit the speed at which to apply the practice.

Product: AINIA- ALTEX, Microencapsulation

Region: Valencia, Spain

“ *Extraction with supercritical CO₂ is safe, cost effective and an environmentally friendly alternative* ”



Why is this a Good Practice:

AINIA has developed a microencapsulation system which gathers nutrients and vitamins together in an easy to consume capsule. This through an innovative method using Carbon Dioxide (CO₂). CO₂ extraction at high pressures is more profitable, natural, and environmentally sustainable than traditional techniques that employ aggressive solvents and affect the properties of the extracted ingredients, either in further refining stages or due to fact that they achieve lower yields. This process offers a profitable and alternative way of obtaining high quality ingredients while removing undesirables or impurities. It aims to help seniors who have difficulties in consuming suitable amounts of nutrients and vitamins due to illness or dysphagia.

About:

Altex is AINIA’s high pressure CO₂ industrial plant. It is a versatile and multi-product facility, specializing in starting toll manufacturing productions, with the objective of providing access to advanced extractions, purifications and specific materials treatments to food, pharmaceutical and cosmetic companies. This 4,000L capacity plant works with CO₂ in subcritical and supercritical conditions and follows Good Manufacturing Practices.

Altex has several applications of interest to the pharmaceutical field, as well as to nutritional supplement companies:

- Selective and natural extraction of active compounds from natural sources
- Supercritical chromatography for the selective separation of molecules for purification
- Elimination of unwanted trace substances present in the product: e.g., monomers, solvents, aromas
- Reduction of microbiological contamination, thermal degradation or oxidation of the product
- Manufacture of microparticles for the protection of the active substance with different purposes: prolonged release, resistance to gastric conditions, improved dosage, dispersibility, masking of aromas.

Each of these applications involves developments and experience from the concept of viability at the laboratory level, to its scaling to market size.

Challenges and transferability:

The process may be costly, and the practice of microencapsulation would require a certain amount of resources. Manufacturers of dietary products, nutraceuticals, food supplements, and food products in general need to provide safe and affordable solutions in line with these trends. CO₂ extraction is a cost-effective and natural alternative process which could be used. Health and nutrition are two important levers of growth in the food and related industries. Microencapsulation has potential to solve certain issues related to food development. It can help to prevent and fight illness such as dysphagia, or malnutrition, and it can lead to a new spectrum of smart food products.

Success:

AINIA has been deepening the knowledge and transfer of this technology for more than 20 years. As an example of developments of interest to this sector, in 2018, microencapsulated naproxen particles were obtained within the framework of the AMICES II project supported by IVACE for the development of advanced encapsulation processes.

[Planta extractiva Altex de ainia - YouTube](#)

Product: HealthCare - Campofrío

Region: Andalucía, Spain



“ We want to help patients eat with enthusiasm and desire to be able to maintain their activities and quality of life ”



Why is this a Good Practice:

The innovative aspect is found in the product's texture and flavour. Campofrío has ensured that these products are adapted to seniors' needs, with suitable textures outstanding flavours, and look appetizing too. Campofrío - Health Care is a new completely varied, and balanced food line, based on the Mediterranean diet. It is specially designed to maintain, improve, and treat the nutritional status of people who have chewing and/or swallowing problems, by maintaining homogeneous textures, with desirable flavours, and aromas. Transport, storage and preparation are easy and convenient. They are a simple heat & serve and so can be prepared and served by professionals or at home with minimal instructions.

About:

The Campofrío Food Group in its line of expansion, is strongly committed to the hospital and geriatric sector, developing specific products and formats for this market. Undisputed leader in the Spanish meat processed market for more than 50 years, it makes its experience of food available to the health sector, with new developments and research in new products and ingredients

Health Care is a retail line launched by Campofrío with the intention of meeting the needs of their elderly consumers. This products range offers gelled waters, fruit desserts, crushed fruit, and fortified breakfasts for the elderly living with dysphagia. The ingredients with which they are made, and the production processes used, are of the highest quality and comply with the strictest hygiene standards. The aim is that these products reach the consumer with all the nutritional content of its origin ingredients and would give a homemade feel, but without the time and effort.

Campofrío strive to maintain the traditional flavours, aromas and colours of the "Mediterranean Diet". The textures facilitate swallowing and therefore digestibility and can be varied according to the needs of each person.

Success:

Campofrío Health Care is a basic part of a healthy and complete diet. For a person with eating problems due to chewing and swallowing disorders, it provides not only the calories and proteins necessary, but all the other principles including water, fiber, minerals, and vitamins necessary to achieve and maintain a correct nutritional state. They are formulated without allergens, comply with the steps of the Food Pyramid, achieve a correct dietary intake, control sugar & salt intake, provide vitamins and minerals, fiber and water that promote the maintenance of adequate hydration status.

The Campofrío group controls the processes and products throughout the production chain. To do this, it qualifies and monitors the suppliers of auxiliary materials and develops total traceability systems, which includes from the origin of the raw material to the distribution and delivery to the customer.

Campofrío has received several quality certificates:

- Certification in environmental management (ISO 14001) since 2002
- IFS International Food Standards
- BRC Global Food Standards

Their website is also very well designed with an abundance of information on various eating disorders or conditions, insight into their research and development and recipe ideas offering a great potential to learn whether in the food industry, in healthcare or a carer.



Those offering unique or helpful services to the senior market

- 10 Chefs Culinar Academy
- 11 Kochen für Senioren
- 12 Senes - Support for Healthcare professionals
- 13 Northern Lincolnshire & Goole NHS Foundation Trust Nursing
- 14 Coviran Supermarket chain

Service: Complete Food Sector support services & training

Region: Germany Nationwide

“ All-round service for you
Real partnership, shaped
by trust ”



Why is this a Good Practice:

The Chefs Culinar Academy is involved in Consulting, software, and training courses on trending food topics. These training courses intend to address and prevent diet related issues in the senior community. Their in-house trade fairs provide a space for exchanging ideas with suppliers and experts on news, trends, and experience. They also display an extensive range of food and non-food items, offering a unique support program that allows the food industry to stay up to date with the needs of older adults and best practices in term of products and logistics.

About:

Chefs Culinar want to contribute to the success of their customers from the catering, hotel, company catering and community catering field, by making the day-to-day work easier for this sector. To do this they not only act as a pure food wholesaler with a comprehensive food and non-food range, (They supply ~25,000 items for the sector) but also see themselves as a service provider. They offer a complete service with regard to professional consulting, training, seminars and intelligent IT solutions. They make it easier for the sector by supplying everything from a single source. With 8 branches and 23 bases, they are on the one hand large across Germany, but also remain regional, so that they are always close by. Each customer receives a personal sales advisor is to work with so that together the best package for the sectors' guests can be obtained.

CHEFS CULINAR also offers state-of-the-art storage technology & knowledge development and are involved in the implementation of systems for planning, organisation, and management of food companies (such as planning your industrial kitchen)

Success:

Active participation of interested people in the training courses offered by Chef Culinar is evidence of their success. More than 1,000 corporations have benefited from its commercial kitchen technology, kitchen and furnishing solutions, and catering services.

Chef Culinar was chosen as the winner of the AHGZ image study "Best mark 2017/2018" in the product group "Purchasing Sources".

Challenges and transferability:

Training in the nutrition requirements of seniors is essential because as age advances, appetite alters or decreases. Hence, it is necessary to impart the proper knowledge to those in the food and catering sector to ensure that seniors receive a balanced diet. Chefs Culinar has discovered that the frequent problem among older adults is often not overweight but instead underweight. People lose weight because they can no longer chew and swallow correctly or they are unable to cook for themselves. Due to the inadequate amount of food consumed, the body lacks enough nutrients to function. A lack of nutrients can weaken the immune system and lead to more frequent infections and illnesses.

The advanced training on "nutrition in senior catering" requires know-how in various topics this company have this knowledge and have been transferring it effectively. There have great potential, by generating a customer database and the trade fairs provide an opportunity for companies to present their best products, exchange ideas, and receive up-to-date product information and latest trends in the food industry (such as allergens, ingredients, or additives relevant to the needs of seniors). Also, incorporation of the technology enables better use of information and more efficient management.

Service: Cooking Seminars & Workshops and Books for Seniors

Region: Riedstadt, Germany

“we want to show that senior citizens can and should be... eating together as a culinary experience and as an emotional pleasure”



CLICK TO [VIEW](#)

Why is this a Good Practice:

Kochen für Senioren or Cooking for seniors is an initiative which offers regular seminars and workshops on the common physical changes among people in old age, including dementia, chewing, swallowing disorders, and malnutrition. The discussions and workshops show how one can integrate senior citizens into enjoyable concepts. It is not about presenting the readily made solutions but co-developing ideas in a joint exchange with senior citizens. Introduction of proven concepts and workshops where adults can cook together, laugh together, and talk together and overall boost their confidence and wellbeing.

About:

The workshops aim to provide senior citizens assistance in:

- Sensory perception – knowing what changes to expect in old age.
- Challenges when trying to connect to various clinical situations
- Food hygiene, occupational safety practices and barriers when cooking with seniors.

The workshops consist of groups of 12 to 15 seniors working/living together in four groups. They offer seniors an opportunity to determine their daily routine and actively participate in everyday life through cooking.

Success:

The workshops and catering ensure both the seniors and the caretakers take the time to pay special attention to the changes of their bodies during ageing. Exercises such as overviews of diet suitable for the elderly, clinical changes, and adaptation opportunities in schools and senior institutions and facilities. Apart from the promotion of nutritional knowledge, it also encourages seniors to live together as independently as possible.

A competition was also organised, last summer, where over 50 senior citizens' facilities from all over Germany submitted their catering concepts as part of the Trans-gourmet competition "From the cost factor to the happiness factor". Events like these promote and encourage acceptance by the seniors in terms of their interest & participation and in relation to them being more willing to make lifestyle changes.

Challenges and transferability:

The projects potential for learning and transferability may be limited as a fee is charged in this case. It can also be challenging to promote, when changes in daily routines among seniors are frequent.

Nowadays, eating in senior facilities is primarily seen as a cost factor. 'Cooking for seniors' want to change that. With innovative and practical enjoyment concepts, kitchens can be turned into image-building factories and create emotional and social enjoyment at the same time. Cooking with seniors contributes to the understanding of their actual dietary needs and preferences, which is the basis for innovation.

Moreover, cooking in groups increases the motivation and raise the awareness of seniors to take better care of themselves and their peers. Such social activity also encourages seniors to be a part of communities and empowers them to be autonomous and follow a healthy diet. Finally, this activity generates fresh ideas and concepts which enables all stakeholders to develop better knowledge and competence of catering for seniors.

Service: Senes - Support for Healthcare professionals

Region: Lyon, France

“*Senes supports professionals to reconcile the pleasure of nutrition and catering*”



Why is this a Good Practice:

Senes is a company that aims to support healthcare professionals in tackling malnutrition among seniors. They do this through trainings, advice, and communication solutions. This company addresses malnutrition in seniors (particularly those in geriatric institutions) by supporting healthcare professionals and food companies in modifying texture practices and developing innovative food products with "high micro-nutritional density". The result is more knowledgeable healthcare staff and in turn happier and healthier seniors within their care.

About:

Born from a deep need to feed humans but also to support them. This French company offers expertise and personalised trainings to healthcare professionals and customers from food industry on culinary skills addressing senior nutritional and catering needs. Senes offers turnkey products with the sale of various texturizers and nutrients. The trainings include production of modified texture dishes, construction of food plans, food engineering and new cooking techniques.

Moreover, it provides know-hows and advice on new food product development. They also help customers keep up with new food trends, adapt products to specific needs of seniors, and create videos for effective communication

Success:

The company has more than 30 partners from the universities, research institutes, associations, companies, and manufacturers in the food industry.

It participates in two research and development programs on the nutrition of seniors and several other programs.

The company has been working on more than 250 projects in the health sector to offer customers nutritional, technical, technological, culinary expertise, and knowledge on new technologies for food sectors. They also offer news for recent development of food innovation related to senior nutrition and health in general.

Challenges and transferability:

The prevalence of malnutrition is high in geriatric institutions, where more than 70-80% of residents are at moderate to severe risk of undernourishment. In 30-61% of them, protein-energy malnutrition is diagnosed. This generates a loss of muscle mass leading to a loss of autonomy in the elderly.

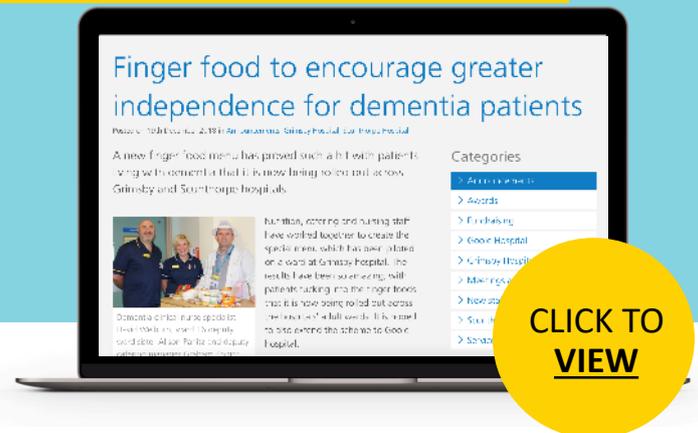
To cope with an increasing ageing population, services are required to support the needs of our senior community.

Senes aim to combine catering, pleasure and health for all elderly people, whatever the texture. While covering nutritional needs, allow seniors to age well and prevent malnutrition and obesity. By actively partnering with diverse institutions in health and food sectors Senes obtain state-of-the-art insights on senior food innovation which they then pass-on. The multidisciplinary team consisting of nutritionists, health experts, food engineers and audio-visual experts offers a variety of expertise in nutrition and food innovation. Having in-house R&D department offers possibilities for the development.

Service: Finger food meal design & menu planning for those with dementia

Region: Northern Lincolnshire, UK

“Finger foods to encourage greater independence for dementia patients”



Why is this a Good Practice:

Northern Lincolnshire and Goole NHS Foundation Trust Nursing, nutrition and catering staff have worked together to create a [picture-based finger-food menu](#) to help patients eat at their own pace without the pressure of having to use a knife and fork and thus encourage independence and well-being of the seniors. Finger foods can be particularly useful for people who forget to eat or find co-ordination difficult, such as those with dementia or following a stroke.

About:

The finger food initiative was piloted at Grimsby hospital, UK and is now being rolled out across three regional hospitals. Staff who have trialled the menu have said it helps patients in their decision-making skills and allows them to enjoy food little and often.

Finger foods can be:

- Served at the table in place of a plated meal
- Offered as snacks between meals
- Left in different places to pick up and eat throughout the day.

The menu features foods such as rice pudding, biscuits, pizza, cheese & crackers, sandwiches, spring rolls, fish fingers, cake and fruit which is all easy to nibble on.

Success:

By introducing this new menu, elderly patients don't have to use cutlery as some may have lost the ability to do so due to the progression of their disease or ageing. It provides an opportunity for elderly patients who like to eat little and often the option of grazing but still meeting their nutritional requirements.

Through the use of picture menus, finger foods are easily selected giving the seniors more autonomy. The finger foods service can be provided by inhouse catering, or via food companies (e.g. Finger Food Co.) that mainly target elderly people.

Nutrition, catering and nursing staff have worked together to create a special menu which after initial piloting has been rolled out across several hospitals. The results according to the trust have been amazing, with patients including elderly people tucking into the finger foods.

Challenges and transferability:

It may be a bit of challenge for SMEs, as relatively few food and drink products have been actively targeting the ageing consumers, which means that this segment of the population represents both a challenge and an opportunity for food and beverage manufacturers. Many manufacturers still do not see senior citizens as a target group.

This partnership among hospitals, nutritionists, organisations and food services, in turn, provides the opportunities for food and drinks businesses, and this model could be applied in many countries/regions, which is expected would benefit more parties and societies.

The concept of Finger foods for supporting older people and older people with dementia, has been established in the last decade, and has helped many senior people and patients in terms of their healthy eating. Since 2011, the practical guide for supporting elderly people with dementia has been published in the UK, [click here for more info on Finger foods practical guide:](#)

Service: COVIRAN supermarket tailoring services for seniors

Region: Granada, Andalusia, Spain.

“Our goal is to offer high-quality services...improving the quality of life of those who choose us on a daily basis”



Why is this a Good Practice:

[Coviran Supermarket](#) chain, undertook a change to its business model, which offers several profitable and sustainable opportunities to the supermarket industry, while at the same time it generates a positive and integrated shopping environment for seniors. Coviran made several noteworthy adaptations to their points of sale in order to meet the needs of a customer with different capacities: consumers with disabilities, as well as the elderly or people with temporary limitations This alternative model of services being provided to older adult customers, allows for a good shopping experience allowing them to make the most of their time in the supermarket.

About:

Coviran is a chain of supermarkets across Spain and Portugal which has adapted and enhanced its services in order to meet the needs of its best customers, older adults. Through simple adaptations to their facilities Coviran enable their senior customers to make the most of their shopping experience. For instance, by extending the opening + closing timing on their gates, setting shopping basket elevators next to cash registers, and introducing a magnetic loop to improve the auditory signal of users with a hearing aid or cochlear implants. In addition, they now offer spaces to sit and rest if they need it during the shopping period. This supermarket also has the shopping "Assist" service, for all those people with special needs who need help during the purchasing procedure.

Success:

Coviran are committed to accessibility, and the adaptations they made to their business model and stores have had a significant impact on seniors shopping experience. This method is being implemented since 2013. Coviran is the first supermarket in Spain to obtain the Universal Accessibility certificate from AENOR this is proof of their dedication to offer a consistently excellent service to all its customers.

These measures have so far been installed in 27 establishments both in Spain and Portugal.

Challenges and transferability:

This model of supermarket may not be suitable for all kind of business model, therefore it must be implemented in specific areas where the main customers are seniors.

Adapting a supermarkets amenities in simple ways to assist a significant and growing sector of the population should not be a issue for any company. However, not only is not a common practice but also, companies seem reluctant to implement this business model. The cost is symbolic, taking into account the potential income which may be produced. To adapt a supermarket to older adult needs is a practice quite easy to introduce for most of the companies.





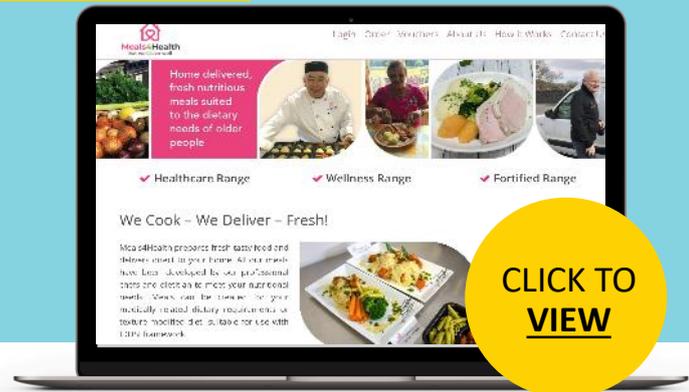
Where a product and service are combined, but are aimed at alleviating problems or challenges the senior market experiences

- 15 Meals4Health
- 16 Bia-at-home
- 17 Biozoon, Smoothfood & 3D Printing
- 18 Country House Cooking - (Land-Haus Küche)
- 19 Fit im Alter
- 20 Wiltshire Farm Foods Company

Product & Service: Meals4Health – meal delivery

Region: Galway, Ireland

“It's about nurturing our older people. Empowering independence...our mission is to enable older people to Eat well, Live well, Age well”



Why this is a Good Practice:

[Meals4Health](#) provides home delivery of fresh nutritious meals, suited to the dietary needs of older people. All meals are cooked fresh at their professional kitchen in Galway and can be delivered nationwide to those requiring the service at home. Meals4health is removing the necessity to shop and cook from those who are struggling to do so and are thus preventing potential malnutrition or other dietary related conditions. They are also enabling seniors to continue living in their own homes in an independent or semi-independent way and are providing a social connection for seniors to look forward to each day.

About:

Their mission is to support older people, “to eat well, to live well & to age well” within their own communities for as long as possible, thus avoiding the need for extra medical care or long-term residential care. Meals4Health prepares fresh tasty food and delivers it directly to one’s home. All their meals have been developed by their professional chefs and dietitian to meet the nutritional and physical needs of their consumers. Meals can be created for medically related dietary requirements or texture modified diet -suitable for use with [IDDSI framework](#).

Success:

Meals4Health is a social enterprise which means their primary objective is to create a social impact –They have been very successful in supporting people to live independently/semi-independently at home and through providing good quality nutritious meals they are supporting their overall health and well-being. In terms of providing an innovative service for the senior community Meals4Health is an ideal case study. They are not just providing meals but are also taking other aspects of ageing into consideration. E.g., the requirement for fortified foods is greater for the senior market and the need for texture-modified meals for those who experience difficulties in swallowing i.e., Dysphagia.

By providing a delivery service direct to peoples’ homes they enable and support independence and restore dignity and safety. They support a proactive approach to good health and wellbeing for seniors, as a lifestyle choice. Meals4Health provides nutritional support for people recovering from illness, surgery or to their carers who simply find it difficult to shop and cook for loved ones.

Challenges & Transferability:

The senior community/population is increasing across Europe. People in general are living longer. As they age, their eating habits change, and their taste receptors alter, resulting in fewer calories. If they are not getting the sustenance that they need at home, they will require additional health services and possibly even full-time care. This means that our economy, health services, care services and lifestyles need to adapt to accommodate these changes.

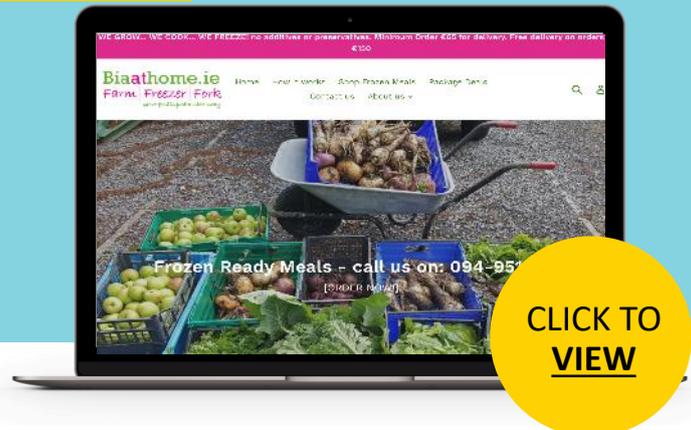
To cope with an increasing ageing population, services are required to support the needs of our senior community. Meals4Health are one such initiative. They are not just feeding the people but are supporting independent living which is very necessary especially in Rural Ireland. This concept has great potential to be replicated in other regions/countries and can be seen as a future proofing method to lessen the burden on the economy. Meals4Health emphasises the essence of good practice on every level while simultaneously helping to make Ireland a great place to grow old! They are also exemplary, in their use of their website...it is easy to navigate and highly informative, but for those lacking the skills they provide customer care via telephone.

The current senior generation is less technophobic, and many have adopted the use of IT, there are potential opportunities here now also as a way of informing and selling to the senior market.

Product & Service: Bia-at-Home, Meal delivery

Region: Mayo, Ireland

“ We grow, we cook, we deliver...because convenience shouldn't mean compromise ”



Why this is a Good Practice:

Bia-at-Home is considered good practice as they are delivering homegrown, quality nutritious products throughout Ireland, to peoples homes. Bia is the Irish word for 'Food'... This small business hand-picks in-season produce from their own garden, so it is bursting with natural flavour and goodness. Their approach enables them to cook balanced nutritious and delicious meals with nothing added but their own blend of fresh herbs and lots of care and consideration for quality.

The meals suit all lifestyles but are particularly useful for the senior market. Each meal arrives frozen in an oven proof biodegradable container. All the diner needs to do is take it from the freezer & put it in the oven for the recommended time. There is no planning, shopping, chopping, or cooking required just heat and eat...what they want...when they want it.

About:

Bia at Home have an extensive, restaurant like menu giving exceptional choice and versatility to those requiring tasty balanced meals in their own homes.

They preserve their food using a blast freezer which retains the nutrients and flavours naturally and avoid all artificial additives and preservatives. The owner and chef Michelle is passionate about food and cooking, she fills every pot with care, attention, and goodness. They deliver directly from their freezer to their customers' freezer, ensuring the food travels safely and reaches its destination in optimal condition for them to enjoy at home.

Success:

Bia-at-Home consider diet and nutrition in everything they cook and avoid artificial additives or preservatives. Although their target market isn't just the senior community it is most beneficial to this segment of the market. Bia-at-Home enables seniors to continue independent living in their own homes and by providing nutritious and balanced meals they are nurturing this community, so their overall well-being is sustained.

Consequently, there will be less demand on full-time residential care or on the other over stretched health services in the state.

The company has many simple approaches to their business that make it very senior friendly, such as

- weekly ordering (less time online or on phone)
- package menu options (choices can be made for you)
- frozen (so no artificial additives and less waste as only use when needed)
- oven proof container (easy heat process – no transferring products)
- phone orders accepted
- menu modifications accommodated

Challenges & Transferability:

Many seniors in Ireland are struggling to live independently mainly because they don't have the capacity to shop and cook nutritious meals for themselves & result in failing health or being under-nourished. Independent living is very necessary in Rural Ireland. Ireland is ageing fast, and our economy, health service and families themselves need to adapt. According to the ESRI, demand in the residential long-term care sector, which covers nursing homes, is projected to increase by up to 54 per cent, "posing challenges for providers, for the regulatory authorities and for the exchequer to ensure that an appropriate standard of care and level of funding for care is provided for these vulnerable residents with intense care needs"

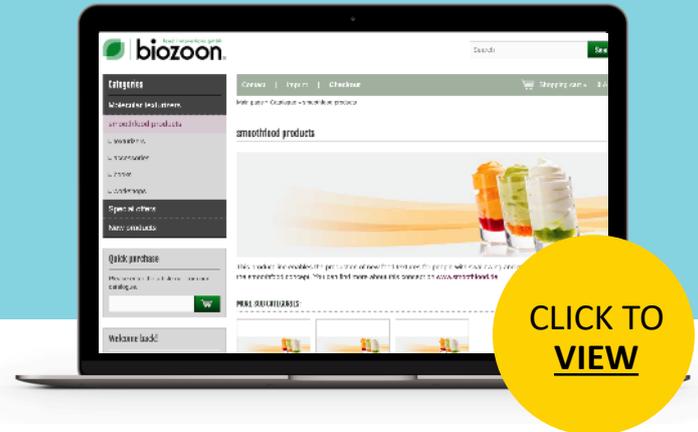
Bia-at-Home through their service is supporting the senior community to live the independent lives they strive to hold onto. The enterprise is also exemplary in its use of their website...it is easy to navigate and highly informative and has easy-select options. For seniors lacking the IT skills they provide customer assistance via telephone. Their delivery service is the final link in the chain. Removing the need for their customers to go shopping or to collect meals.

Product: Biozoon, Smoothfood & 3D printing

Region: Bremerhaven, Germany

smoothfood

“ *The modern nutrition concept for pureed and strained food* ”



Why this is a Good Practice:

The innovative Smoothfood diet offers basal stimulation through foam food, mashed food, and drink thickening. To reduce or prevent the risk of malnutrition, particularly in the case of people with chewing and swallowing disorders. Biozoon created the Smoothfood silicone moulds to enhance the serving of the modified textured food. This ensures that it is as authentic as possible in shape, colour, smell, taste, and composition to the original. This practice leads to a greater acceptance of modified foods among the senior community especially those with swallowing disorders, dysphagia, dementia, or other illnesses and therefore reduces or eliminates the risk of malnutrition or other illnesses.

[Biozoon Silikonformen für die pürierte Kost in Form](#)

[Pürierte Kost mit Gelea Cold](#)

About:

Biozoon acts as a specialist supplier of innovative food products in Europe. Smoothfood was developed by top chefs Markus Biedermann and Herbert Thill on the basis of modern texturizers from Biozoon. From basal stimulation for persons with the severest form of dysphagia to foam food and thickening of beverages to pureed and strained food in moulded shapes. A Smoothfood meal is based on the fresh ingredients you have in your kitchen. These ingredients are pureed or strained, and their structure and texture then modified. Thanks to Biozoon texturizers, these foods can be easily produced in moulded shapes.

Furthermore, Biozoon has developed a 3D printer capable of printing meals targeted at people who have difficulties in chewing. The 3D printer uses a jetting system to extrude various Smoothfoods, which can be mixed with a solidifying agent. Each meal can be precisely tailored to match the individual's needs, both in terms of texture and nutrient content.

Success:

The concept of Smoothfood addresses the need & visual appeal of traditional food, thus creates a higher acceptance of this new form of food. By offering an identical range of meals from the regular menu, consumers are given the same level of culinary appreciation with the Smoothfood standard. The company is the leader of the PERFORMANCE project funded by the European Commission, and has launched already five brands on the market: texturePro®, cocktailPro®, partyPro®, seneoPro®, and myBiosportiv®. The brands are distributed in 18 countries around the world and Specialists acknowledge the range. Smoothfood enables all chefs and family carers to prepare fresh food quickly and easily that matches the needs of the person affected.

Challenges and transferability:

The concept requires a specialist to prepare the meals, so adequate skilled personnel can be a challenge, notably when they target both nursing homes and family carers. Biozoon offer workshops regularly to help with this. The logistic challenge of larger nursing homes limits the ability of food personalisation, and the variety of meals is limited by the range of silicone moulds. But the technology is there to simplify this challenge.

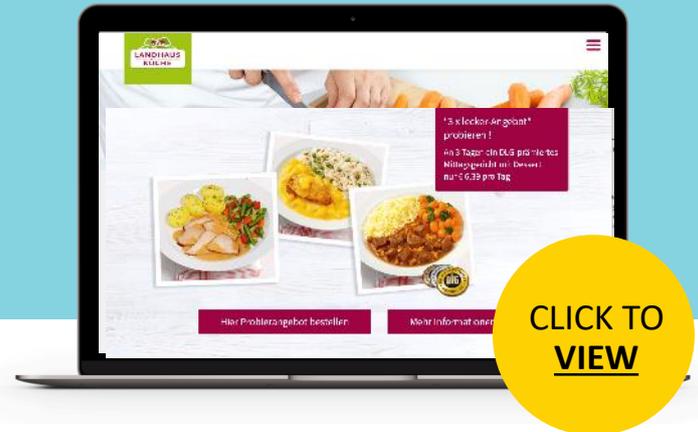
Food printing technology has great potential as a resource and the creation of moulds help preserve food appearance, thus stimulating consumers' appetite and enhancing the degree of acceptance. There is an opportunity for an IT-system, for recording & processing nutritional requirements.

Product / Service: Land-Haus Küche, Meal delivery

Region: Schwaikheim, Germany



“Cooked with love. Brought with joy...from Apetito...”



Why this is a Good Practice:

The Country House Kitchen (Land-Haus Küche) is a concept that allows those who are unable to cook, go shopping or carry bags due to reduced ability & mobility, to enjoy a hot meal 365 days a year. Consumers can enjoy a convenient, online menu service with a click of the mouse. All dietary needs are catered for even a pureed food menu is available. To ensure that the dishes are delivered hot and remarkably fresh to the customers' table, some meal services use delivery vehicles with an integrated oven. The plates are gently cooking throughout the journey. Alternatively, they are transported in individual insulated boxes ensuring they are kept hot right to your table. Having this valuable service enhances the health and well-being of seniors. The online ordering makes it very convenient for relatives to cater to the needs of their loved ones but there are also options for phone ordering or direct from courier service.

About:

A quarter of a century ago, the new "Your mobile restaurant" offer from Apetito was presented to the public. The promise from the very beginning has continued to this day: to bring a high-quality lunch for senior citizens direct to their homes. That is why the service will later also be called "Apetito zuhaus" and from 2011 onwards "Country-kitchen by Apetito". One thing has not changed in all these years: the pursuit of the highest quality through the use of high-quality ingredients, the great variety in the menu with new recipes and reliable delivery directly to the house. The chefs in the country house kitchen not only cook classics of good German cuisine but also popular Mediterranean dishes. There is something for every taste. They put great importance into the natural wealth of flavours and consistently forego all artificial additives such as flavour enhancers, seasonings, yeast extract, colourings, as well as phosphates and salts.

Their ready-cooked and frozen foods are also distributed through local partner providers and welfare associations, such as the German Red Cross, the Johannitern, Diakoniestationen, Caritas, and the Arbeiterwohlfahrt. The colourful selection creates a variety of cuisines on the lunch table and offers seniors a great dining pleasure.

Success:

This company exhibits its success through its sustainability and longevity in meeting their consumer's needs. The everyday life of these people is made easier, their independence is maintained and they have daily social contact. The exceptionally high-quality food can be proven by certifications such as DIN ISO 9001 or they regularly receive DLG's quality inspection awards.

Challenges & Transferability:

It can be difficult to find the right partners but once established these partnerships can be invaluable. The IT ability of seniors to use the platform could pose a challenge but they find that family members tend to do this part. If not they have a dedicated phone line for orders or to simplify it even further senior customers can order directly via their delivery personnel. This can subsequently eliminate the need for a caregiver as a service intermediary between the company and senior citizens. The company offers non-binding trials thus gives flexibility and trust to their customers.

The concept presents how vital partnerships with delivery networks are to supply high-quality food to seniors. They focus on hot delivery food and frozen selected deliveries. The convenient approach plays a vital role in innovative food for seniors; the online platform further responds to the need for food ordering among seniors and their relatives.

Product / Service: Standards & procedures for senior catering

Region: Germany

“ *Fit in old age... Eat healthily, live better* ”



Why this is a Good Practice:

Fit im Alter is a programme under Germany's 'INFORM' initiative for healthy eating and more exercise. The aim of the initiative is to permanently improve people's eating habits and physical activity. Fit im Alter falls under the DGE quality standard for all catering with 'meal on wheels' and in institutions for the elderly. The initiative "Fit in old age - eat healthily, live better" aims to optimize the catering for older people and to update the knowledge of specialists, multipliers and older people about a balanced diet and exercise appropriate for the elderly. The aim is to meet the needs of the elderly and so to maintain the highest possible quality of life, both in facilities for the elderly, at home and during activities in senior groups

About:

On request and in consultation with the Seniors, the programme implements the "Fit in old age, eat healthily, live better" concept with the certification of the Federal Ministry of Food & Agriculture. It creates needs-based solutions on:

- Dietetics and nutrition in old age
- Simple methods to make it easier to eat independently.
- They consider regional, seasonal, and traditional dishes as well as individual preferences.
- Close coordination with nursing management and active involvement of residents.

The aim of the "DGE quality standard for catering with 'meals on wheels' and in facilities for the elderly" is to support those responsible for catering in implementing needs-based, and at the same time sustainable catering so that customers and residents get a corresponding quality standard of service.

Success:

The programme supports the provision of high-quality meals for older adults in line with nutritional and physiological recommendations. The meals are presented attractively with carefully harmonised flavours. Fit im Alter encourages & motivates seniors to eat healthily and ensures that they are supplied with the right vitamins and nutrients. The programme also meets a wide range of requirements in terms of food and drinks for seniors, such as seniors with swallowing problems, dementia and other difficulties, through close collaboration with all stakeholders.

Challenges & Transferability:

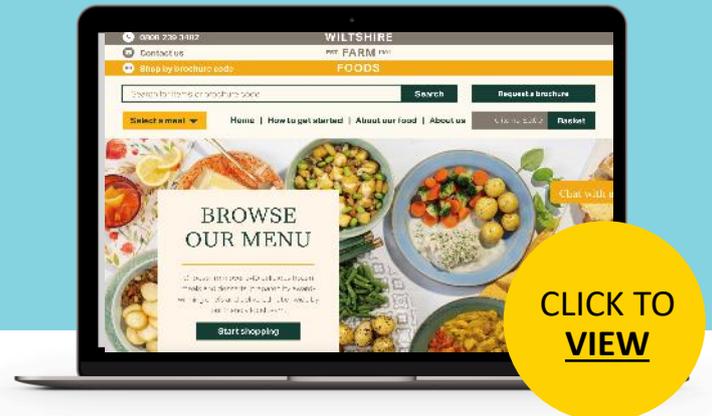
This concept requires trained and competent personnel and the constant collaboration with seniors, carers / staff / caterers in residential settings and those involved with meals-on-wheels. Dining should be seen as an experience. Focusing on the peripheral needs and external factors affecting seniors' dining process (e.g., cutlery, seasonal difference) offers new opportunities for food service and product innovation.

The programme shows exemplary use of their website in reaching all stakeholders. They offer webinars, practical examples, recipes and background information on all aspects of the programme and on the quality standard process. In doing so they are creating a standardised approach to feeding and movement promotion and thus support the health of the ageing population of Germany. This is a very easily transferable approach.

Product/Service: Wiltshire Farm Foods, Meal delivery

Region: Nottingham, UK

“ stay safe and warm at home and let us deliver sunshine in every meal ”



Why this is a Good Practice:

Wiltshire Farm foods company provides a meal delivery service that is aimed at the elderly market and provides ready meals that are nutritionally balanced for senior consumers across the UK and Ireland. This helps meet the demand for tasty, healthy, balanced, and convenient food products in the elderly market and contributes significantly to their overall health & wellbeing. The company now is also developing a new strategy since July 2021 in which they are initiating a new collect and recycle scheme, to allow them become more sustainable. For example, by collecting the consumers empties just like the milkman did. It's a truly trailblazing scheme and the first of its kind, anywhere in the world.

About:

Wiltshire Farm foods company was founded in 1991. Since then they have been developing great menus (with their Head chef & Dietitian) cooking the meals and delivering them frozen to the consumers doors, using their local teams. They target the senior market, selling traditional favourites for breakfast, lunch, dinner & dessert. Their offerings are nutritionally balanced, and even pureed or textured meals if required to suit all dietary needs. Their products and service benefit a lot of consumers but especially the elderly group.

They have a range of more than 300 dishes to choose from which can be ordered online, via their new App or by phone. These food products are not only delicious, but also nutritional balanced and can be conveniently cooked straight from frozen in the microwave or oven. They offer non-contact deliveries on consumers' request. The delivery is free to any address in mainland UK, as they use local drivers from local teams.

Success:

Wiltshire Farm foods company have 30 years' experience and won several awards (including two Queens's Awards for Enterprise). They provide a solution

to today's consumer needs (especially vulnerable groups, the elderly) by tracking their daily intake to monitor their diet and health. The company also successfully used local media (e.g. a Christmas magazine) to interact with their elderly market. They ran a competition for the customers to select the meal recipes that bring them 'sunshine'. The winner had their dish made by the company head chef. This idea was very successful in gaining the engagement of their target group and brought ideas to the team for developing more delicious and healthy food products. It also enhanced their high-quality service with 'joy' that they have become known for.

The company's website is easy to use and for convenience you can save your favourite meals and repeat your past orders. Orders are also accepted by phone for seniors without the ability to use Apps or computers.

Challenges & Transferability:

In today's market, there is an increasing demand for tasty, convenient, healthy food products for the elderly group as an expanding market. There is still a wide gap in this market which food producers need to address so that the silver economy can have more healthy food options and services to ensure their ageing is supported in a suitable manner. It might be a challenge to get experienced chefs that can consciously & consistently create delicious and nutritious foods for targeted consumers.

In the Covid situation, it may need more contact-less delivery service, therefore need more local drivers (delivery teams) to provide this high quality service. For new start up having high-quality local delivery teams might be challenge at the beginning. This model however, would be have a great potential to disseminate other regions in the world to help more elderly consumers.

07

Conclusion



Conclusion

The Good Practices Guide provides in detail, information about how The Silver economy and the contemporary food market could be fostered by innovations in project partner regions. From the good practices collected, it can be seen that the food market for seniors is highly multidimensional, ranging from innovative food supplements, food development for people with specific health problems to food delivery services and food preparation courses.

As a result, 20 different GPs were identified, which indicates how important the food market for silver economy sector is. Good practices are one of the key principles to share experience among project regions. By analysing what other regions have and do in order to foster development of the food market for seniors, VET in project regions will be able to use these examples as an inspiration to understand how their local issues and gaps in food market ecosystem could be solved.



**innovating
food** for seniors