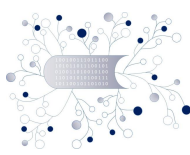


*Digi-VET*  
*Fostering Digitization and Industry 4.0 in vocational education*  
*2018-1-DE02-KA202-005145*

## **Criteria for the Online Observatory of Digi-VET**

*April 2019*  
*UPB – Marc Beutner*

<i>Project Title</i>	<i>DiGI-VET</i>
<i>Reference Number</i>	<i>2018-1-DE02-KA202-005145</i>

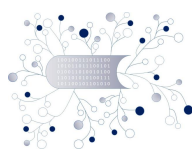


# Online Observatory

## Introduction

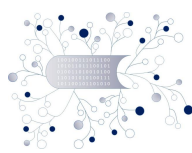
The purpose of this document is to provide an overview of five enterprises in Cyprus, who work with industry 4.0 and digitization as part of the DiGI-VET project. The two aims of the online observatory will be to present role models for teachers and learners to inspire them to work with real information on enterprises who are working in the field of digitization and Industry 4.0 and to also provide an instant access library of information and resources identified by the consortium that could prove useful to teachers and learners.

The five profiles of the enterprises should provide teachers and learners with advice and guidance and a clear pathway to reflect on enterprise situations, changes in the field of digitization and industry 4.0 and to enhance their own experiences on the basis of best practice examples for businesses.

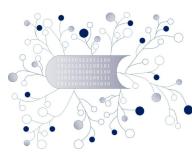


## Enterprise 1

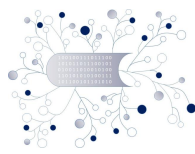
Business Profile	
1. Name of the business	<b>Vesta Solar Heaters Ltd</b>
2. Years in business	Vesta Solar was founded in 1983, the first factory was built in 1987 in Nicosia, Engomi and in 2008 a new factory was built in Ergates (36 years).
3. Category of business	Industry: Renewable Energy, Eco-Construction
4. Description of business and digitisation	<p>Vesta Solar Heaters Ltd manufactures and installs solar collectors, hot water cylinders, solar systems and plastic water tanks.</p> <p>The solar collectors are constructed with ultrasonic welding machines. This machine creates a high-frequency ultrasonic acoustic vibration which is applied to the connecting points of the of the solar collector and then held together under a lot of pressure to create a solid-state weld. It is mainly used to join dissimilar materials such as is the structure of the solar collector (Glazing, aluminium casing, absorber plate, insulation including glass and wool).</p> <p>The hot water cylinders are manufactured with a high pressure machine. The cylinder is then welded and then insulated with polyurethane so as to have the exact same results every time. All cylinders are tested under high pressure for leakage and are made from Copper sheets to ensure longevity. Solar water heaters are a common sight in Cyprus, where over 90 % of all households use sunlight to meet their heating needs. The stop-go cycle of the incentive programme which supports the replacement of solar water heaters and collectors had little impact on growth.</p> <p>The plastic containers are manufactured using rotational moulding technology. The material used for the production of the plastic tanks is polyethylene powder suitable for rotational moulding with good mechanical properties.</p> <p>The company considers themselves semi-digitised as there is not enough demand in order in the market, to invest in machinery which is that costly. If the demand rises or the machinery is more affordable then yes, they would be more than happy to fully convert to Industry 4.0.</p>
5. Size of your business	<p>The total number of staff at the company are 10 (including management)</p> <p>Annual turnover is about 1 million euros</p>



<p>6. Supports to set up your business and digitisation</p>	<p>The company was founded in 1983 and the first factory built was in 1987, were old machines and a lot of manual labor was needed in order to produce the solar collectors, whereas today (since their new factory was built in 2008) all machines have been upgraded and most of the work has been automated. The company's personal, all existing staff members are trained on how to use and perform light maintenance for every new machine that enters the factory. All in all, automation has helped the company improve their performance, keep their standards and quality high and the staff uses a lot less manual labor.</p>
<p>7. Pitfalls and challenges</p>	<p>The biggest challenge until now has been the financial crisis, which hit Cyprus in 2013. The factory had to lay off some staff, but in the last 2 years, since work has picked up, they were able to invest in better machinery and increase their work. Another challenge mentioned was the lack of knowledge of the public, regarding the benefits of solar collectors and green energy in general. The company is very happy with the steps it has taken so far, as they are carefully calculated and moving forward towards the future. They make sure they collaborate with the right suppliers for their raw materials.</p>
<p>8. Opportunities and plans for the future</p>	<p>Plans for the future include more connections in and outside of Cyprus, so as to increase and expand the business in the hopes that they will be able to invest in robotic arms in order to automate and optimise the work within the factory. They also wish to be a one-stop shop and create their site in Engomi as a distribution point, rather than just storage.</p>
<p>Logo of business Maybe: enterprise film</p>	<p><a href="http://www.vestasolar.com/">http://www.vestasolar.com/</a> <a href="https://www.facebook.com/vestasolar/">https://www.facebook.com/vestasolar/</a> <a href="https://www.youtube.com/watch?v=QX_CNFU9KL0">https://www.youtube.com/watch?v=QX_CNFU9KL0</a> Contact: info@vestasolar.com</p> 



The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



## Enterprise 2

Business Profile	
1. Name of the business	<b>Alkis H. Hadjikyriacos (Froufrou Biscuits) Public Ltd</b>
2. Years in business	The company has been operating since 1964 (55 years)
3. Category of business	Food Production
4. Description of business and digitisation	<p>Alkis H Hadjikyriacos Frou Frou Biscuits Public Ltd is a Cyprus-based company engaged in the food sector. It is the parent company of the Frou Frou Group of Companies and is mainly active in the manufacturing of biscuits and snack foods. Other companies of the Group are Frou Frou Cereals Ltd, which is active in the manufacture of breakfast cereals; Spinneys Cyprus Ltd, which imports and distributes foodstuffs, and personal care and household products; Frou Frou Investments Ltd, an investment portfolio company; Athalassa Farm Ltd, which is engaged in the property sector, and Haris M. Hadjikyriacos (Holdings &amp; Management) Ltd, which provides investment and asset management services. The Company operates in both domestic and foreign markets. It conducts its activities through its manufacturing division, imports division and property investment division. On August 1, 2011, it acquired Handy Snacks Ltd and on September 30, 2013, it acquired an industrial facility and the brand Mon Ami.</p> <p>It was established as a manufacturing company, producing an extensive range of biscuits (plain, hard cut and moulded, cream filled, crackers, snack crackers, wafers and chocolate coated biscuits and wafers). These products were distributed in the local market by the company's privately-owned distribution fleet. Within a number of years, the company was established as a market leader in the Cyprus biscuit market and it also expanded by exporting its products to Europe, Middle East, Far East and Africa. At the same time the company diversified into other markets by importing and distributing products, in the beginning related to the range of its own manufactured goods, with main emphasis on confectionery products and foodstuffs.</p> <p>As all manufacturing has been automated and every year more machines are introduced to automate and optimise the procedures, the company considers themselves as an Industry 4.0 enterprise. The procedure was more manual when the factory began, but now each product has its own machine for production.</p>
5. Size of your business	<p><i>Frou-Frou employs about 200 staff members (70 of which are in the factory)</i></p> <p><a href="file:///C:/Users/User/Desktop/HADJIKYRIACOS%20-%20Announcement%20April%202018.pdf">file:///C:/Users/User/Desktop/HADJIKYRIACOS%20-%20Announcement%20April%202018.pdf</a></p>

"This project has been funded with support from the European Commission.

This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein."



## 6. Supports to set up your business and digitisation

The company is now expanding its production facilities at their premises in Kokkinotrimithia industrial area. S.K. Euromarket Ltd was awarded the design, installation, testing & commissioning as well the maintenance of the new wastewater treatment facility that will be constructed to serve present requirements.

To cope with the increased organic loads the new system will incorporate anaerobic pre-treatment stage followed by aerobic post treatment with Moving Bed Biofilm Reactor and a polishing stage with pressure sand filtration. Treated effluent will be used for irrigation of the green area within the existing premises.

The company has a strong marketing team, for branding and promoting all products via digital advertising, TV spots (such as recipes with their products).

TV Spot videos to promote new products:

<https://www.youtube.com/watch?v=dKzWNQmkWQ>

<https://www.youtube.com/watch?v=3zsa9mhaTzE>

<https://www.youtube.com/watch?v=1HI-ORg8Xa0>

## 7. Pitfalls and challenges

The company has a big team of advisors, so every move is carefully calculated. The main objective is to collaborate with good distributors and clients, that can provide the right equipment for all sectors and stages of the production and later on in distribution. All machines in the factory need to be up to standard, so if a mistake in an order has been made, then it is returned or replaced. Almost all machines are physically checked by the management and advisors, so there are as less mistakes as possible, but they happy with the steps they have taken and would not have done anything differently. The only challenged faced was when the company first started and did not have the Network they have today.

## 8. Opportunities and plans for the future

The company is always looking to creating new products, so ideas/brainstorming is a very important factor. Depending on demand, the cost, then the new equipment is brought. Everything is tested thoroughly before being automated. Each machine that is bought needs less and less people, so as everything is as automated as possible.

Logo of business  
Maybe: enterprise film

Promotional video:

[https://www.youtube.com/watch?time\\_continue=2&v=fsNGLbq9Xil](https://www.youtube.com/watch?time_continue=2&v=fsNGLbq9Xil)

P.O.BOX: 15029 Kokkinotrimithia, Nicosia 2666, Cyprus

Tel: 00357 22835090 | Fax: 00357 22835950

E-mail: [info@froufrou.com.cy](mailto:info@froufrou.com.cy) | Web Site: [www.froufrou.com.cy](http://www.froufrou.com.cy)

(+357) 22 353 793

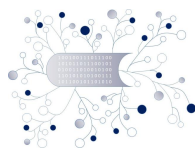


\*Stills from promotional video – photos are not permitted.



“This project has been funded with support from the European Commission.  
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.”





## Enterprise 3

Business Profile	
1. Name of the business	<b>A. Zorbas and Sons Ltd</b>
2. Years in business	A. Zorbas and Sons Ltd was founded in Athienou on the 1st of October 1975 by Mr. Andreas Zorbas. In 22/11/1979 it was established as a Limited Company – (44 years)
3. Category of business	<i>Food Production, Catering</i>
4. Description of business and digitisation	<p>The company's founder started baking in a traditional oven in the garden of his house in Athienou. Today, there are 67 outlets throughout Cyprus and three production units in the Aradippou and Nisou Industrial areas. The group also has two shops in New York. Further, the group offers meals as well as catering services (Zorbas Catering). Also available is coffee under the name Coffee Berry as well as catering services. As regards the patisserie, the group has added Pralina Confectionaries. The coffee shop chain Pralina Experience and the Asian restaurant AKAI, are also part of the group. A. Zorbas and Sons Ltd.'s main activity is the production and sales of bakery products. Over the years, the Company grew and transformed into a Group of Companies. In 1988 after a continuous success and the positive response from the consuming public the company extended in the province of Nicosia. On 9th of March 2000 Zorbas Bakeries went public. From the 27th of December 2000 until the 31st of October 2012 the company was listed on the Cyprus Stock Market.</p> <p>The production unit in Aradippou has a total area of 1,306 sq.m. (The building) of which 198 sq.m. is an office space of 935 sq.m. is a production area and 173 sq.m. exterior metal construction. The factory also has 2,440 sq.m. unoccupied space.</p> <p>Being one of the biggest production lines in Cyprus, it operates with the highest factory specifications with state-of-the-art machinery and equipment, and has succeeded in reducing production costs and upgrading the quality of its products.</p> <p>Seven Efaflex doors were also installed at the Zorbas factory to aid in lowering energy consumption.</p> <p>As a company who is always looking into upgrading and improving all aspects of its area including its manufacturing, it is considered an Industry 4.0 enterprise.</p>
5. Size of your business	<p>Zorbas Bakeries has about 67 shops all around Cyprus and employs more than 2100 people. It has an annual turnover of over 100 million Euro.</p> <p>Additionally, the long experience in producing and selling high quality products following strict quality standards has been honoured with all relevant certifications BRC Grade A, IFS Higher Level, ISO 22000, ISO 9001 and SQMS</p> <p>The company has experience in exporting products in Europe,</p>

"This project has been funded with support from the European Commission.

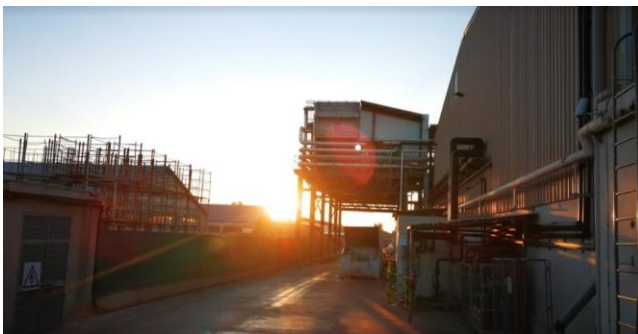
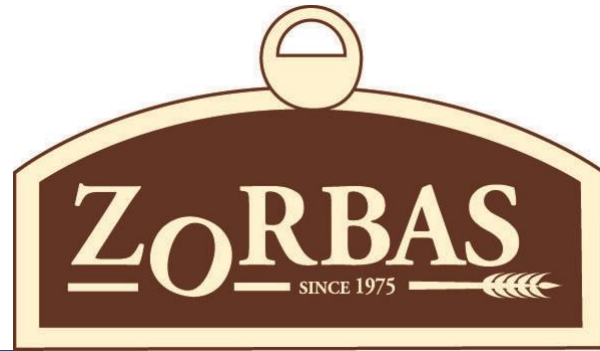
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein."



<p>6. Supports to set up your business and digitisation</p>	<p>Canada, America, Asia, Australia and Middle East countries.</p> <p><a href="http://www.companyaccountscheck.com/06427991-zorbas-bakeries-limited">http://www.companyaccountscheck.com/06427991-zorbas-bakeries-limited</a></p> <p>As Cyprus was predominantly a farming-based economy in the 1970s, the founder of Zorbas had started the business by baking bread in the oven of his garden at a very young age and would produce up to 200 loafs of bread per day for the community. Not everyone was able to pay him in money, so he would get paid in life stock, which meant he would start producing dairy products also. As it was a family business all family members were able to work for the bakery, that would soon expand as there was a gap in the market for a franchise like this.</p> <p>The company now has a team of financial advisors, technicians who can advise on all aspects including machinery for the factories and their marketing team, who constantly promote their bakeries and new products. The marketing team is responsible for branding and promoting all products via digital advertising, TV spots, radio etc.</p> <p>TV Spot videos to promote new products:  <a href="https://www.youtube.com/watch?v=40ZM4B2pzl4">https://www.youtube.com/watch?v=40ZM4B2pzl4</a>  <a href="https://www.youtube.com/watch?v=bLb2bFAnhYM">https://www.youtube.com/watch?v=bLb2bFAnhYM</a>  <a href="https://www.youtube.com/watch?v=IOpdUgVoUbk">https://www.youtube.com/watch?v=IOpdUgVoUbk</a>  Videos through social media:  <a href="https://www.facebook.com/zorbascy/videos/">https://www.facebook.com/zorbascy/videos/</a></p>
<p>7. Pitfalls and challenges</p>	<p>As mentioned previously, the company was officially founded in 1975, but the founder had started baking bread in the oven of his garden at a very young age and would produce up to 200 loafs of bread per day for the community. Not everyone was able to pay him in money, so he would get paid in life stock, which meant he would start producing dairy products also. Just as it was going to become a company, the Turkish invasion of Cyprus happened in 1974 and he lost most of the life stock and many damages to his property, which slowed down the development drastically. Other restrictions to the growth of the firm include the fact that Cyprus has a small market and a small Industry context. Another challenge was finding the right equipment for all the new products that were being developed. Zorbas Industries was a pioneer and introduced the Cyprus market in the areas of cooling systems and trading. Until the company found the right equipment and suppliers, there were a few setbacks in production.</p>
<p>8. Opportunities and plans for the future</p>	<p>As an innovative company, Zorbas Ltd is always researching and looking for ways to optimise its production without compromising the quality of their products. So far, the factory has new state of the art equipment in order to facilitate the markets needs and help optimise their workers work-load. New products are always being discussed and of course the production of these products need the equivalent machinery.</p>
<p>Logo of business Maybe: enterprise film</p>	<p>A. Zorbas &amp; Sons Ltd Armenias 51, 2006 Strovolos, Nicosia, Cyprus PO BOX 20575, 1660 Nicosia, Cyprus</p> <p>Tel: + (357) 22 871700 <a href="mailto:info@zorbas.com.cy">info@zorbas.com.cy</a></p>

“This project has been funded with support from the European Commission.

This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.”



“This project has been funded with support from the European Commission.  
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be  
made of the information contained therein.”

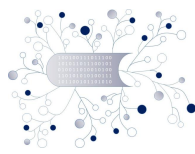


## Enterprise 4

Business Profile	
1. Name of the business	<b>Roha Premium Potato Ltd</b>
2. Years in business	Roha Premium Potato Ltd was established in October 2005.
3. Category of business	Industry: Agricultural, Food Production, Tourism Services, etc.
4. Description of business and digitisation	<p>Main activity of the company is the planning, production, packaging, storing and export of Cyprus potatoes, winter and spring crop.</p> <p>Roha has many options for packing choices depending on customer request. These packaging solutions are used mostly by supermarkets which have direct access to the consumer. A more convenient approach to wholesalers can be our variety of polypropylene bags which they come in 10kg, 15kg, 20kg and 25kg. Also Roha provides industrial packaging of 1250kg (Jumbo Bags) for customers who want to repack in their own packaging solutions or for customers who want to process the potatoes in different ways.</p> <p>Roha also provides a service called Private Label/Branding which we can pack potatoes for other companies with their own diacritics and logos.</p> <p>The company also exports Cyprus potatoes. European Union countries are our main destinations like Greece, UK, Belgium, Holland, Germany, Poland and Austria. Also export to third countries like Croatia and Moldova, UAE, Bahrain, Qatar and other.</p>
5. Size of your business	The total number of staff at the company is 10-20 (including the management team- excluding the producers).
6. Supports to set up your business and digitisation	<p>Family business</p> <p>Certified with international standards (ISO) &amp; GlobalGAP Standards</p> <p>Facilities: Picking/packing automated lines 900m2 Cold rooms space, 800m2 Dry room space Forklift Containers</p>

“This project has been funded with support from the European Commission.

This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.”



## 7. Pitfalls and challenges

Delivery: Online tracking options

Marketing: Website, FB page, youtube channel, Linked in

Exhibitions: Fruit Logistica Berlin, Gulfood Dubai

The biggest challenge faced so far is the monitoring of the tasks and the procedures related to picking the potatoes.

Although the products (potatoes) are growing and cultivating in red soils area using latest technology equipment on the guidelines of GlobalGAP with certified Seeds, they are distributed in the machinery/picking lines, where Roha's staff should pick the high-quality potatoes to be packed and distributed.

Another challenge is monitoring the distribution procedure.

## 8. Opportunities and plans for the future

Robotic arms are used to automate and optimize the procedure of picking potatoes

Ensure on-time delivery: a custom-made system to automate the tracking delivery system, rather than just send a tracking number to the customer.

To increase the packing lines, to meet the high demand

Increase and expand the business in and outside Europe

Become a green company (environmentally friendly), by replacing all plastic packaging with an eco-friendly material (the material is still under discussion)

Logo of business  
Maybe: enterprise film



Website: <http://www.roha.com.cy>

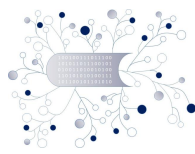
FB: <https://www.facebook.com/RohaPremiumPotato/>

Youtube channel:

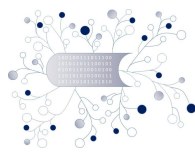
<https://www.youtube.com/channel/UCs7ISGV9P89sl6YOOZyoQFA>

"This project has been funded with support from the European Commission.

This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein."



“This project has been funded with support from the European Commission.  
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be  
made of the information contained therein.”

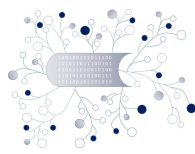


## Enterprise 5

Business Profile	
1. Name of the business	<b>Orthodoxos &amp; Misos Warehouse Ltd</b>
2. Years in business	Since September 2016, the company ORTHODOXOS & MISOS Warehouse LTD supplies fresh –washed-cut fruits and vegetables throughout Cyprus.
3. Category of business	Industry: Agricultural, Food, Tourism Services, etc.
4. Description of business and digitisation	<p>The company is located in the Kokkinochoria (red earth area), the heart of Cyprus garden, where the highest quality local products are growing.</p> <p>ORTHODOXOS &amp; MISOS Warehouse LTD is a processing and packing company where the best quality of fruits and vegetables are picked, washed, cut and vacuum packing (suitable method to store fresh food as it inhibits bacterial growth) such as potatoes, carrots, onions, beet roots and garlic.</p> <p>The company also supplies its products to different restaurants and hotels throughout Cyprus.</p>
5. Size of your business	The total number of staff at the company is 10-15 (including management and depending on the season)
6. Supports to set up your business and digitisation	<p>Family business</p> <p>Certified with international standards (ISO)</p> <p>Facilities: Washing/cutting/packing automated lines (potatoes, onions and carrots) Dry &amp; Cold rooms space Forklift Trucks Containers</p> <p>Marketing: Website, FB page, Instagram</p>

“This project has been funded with support from the European Commission.

This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.”



## 7. Pitfalls and challenges

Due to the fact that the company works with perishable products (products with short life time), the biggest challenge is the prevention of food waste. Nowadays, it is very important to reduce (or even better to eliminate) food waste. This keeps the company from expanding its business and supply supermarkets directly.

Thus, the company used vacuum packing which extends the shelf life of foods and reduces the column of the package.

However, concerning the environment, vacuum sealer and plastic rolls are used for food sealing. Instead of plastic, the company will prefer to use any other environmentally friendly material for the packing.

## 8. Opportunities and plans for the future

More production lines suitable for picking-washing-cutting a wider variety of fruit and vegetables.

Increase and expand the business in and outside Cyprus, if possible

Become a green company (environmentally friendly), by replacing all plastic packaging with an eco-friendly material (the material is still under discussion).

Logo of business  
Maybe: enterprise film



Website: <https://orthodoxos-misos.com>

FB: <https://www.facebook.com/orthodoxosmisos/>

Instagram: orthodoxosmisos



