



Genius -Young Entrepreneurs in European Schools



Team Slovakia



Gymnázium Myjava



CGS-Tech Ltd.

(Compost Garden System - Technologies)



CGS-Tech Ltd.

- Our company CGS-Tech Ltd. (Compost Garden System Technologies) offers effective use of heat created during the process of changing biological waste into compost.
- By using the heat from this process, which is practically free but usually not used, we will help our customers to contribute to the effective use of energy.

Our product - garden heating system



Our company will supply you with the following technology:

- a heat exchanger
- a water tank
- a circulation pump
- a solar panel
- an electric valve





CGS-Tech Ltd.

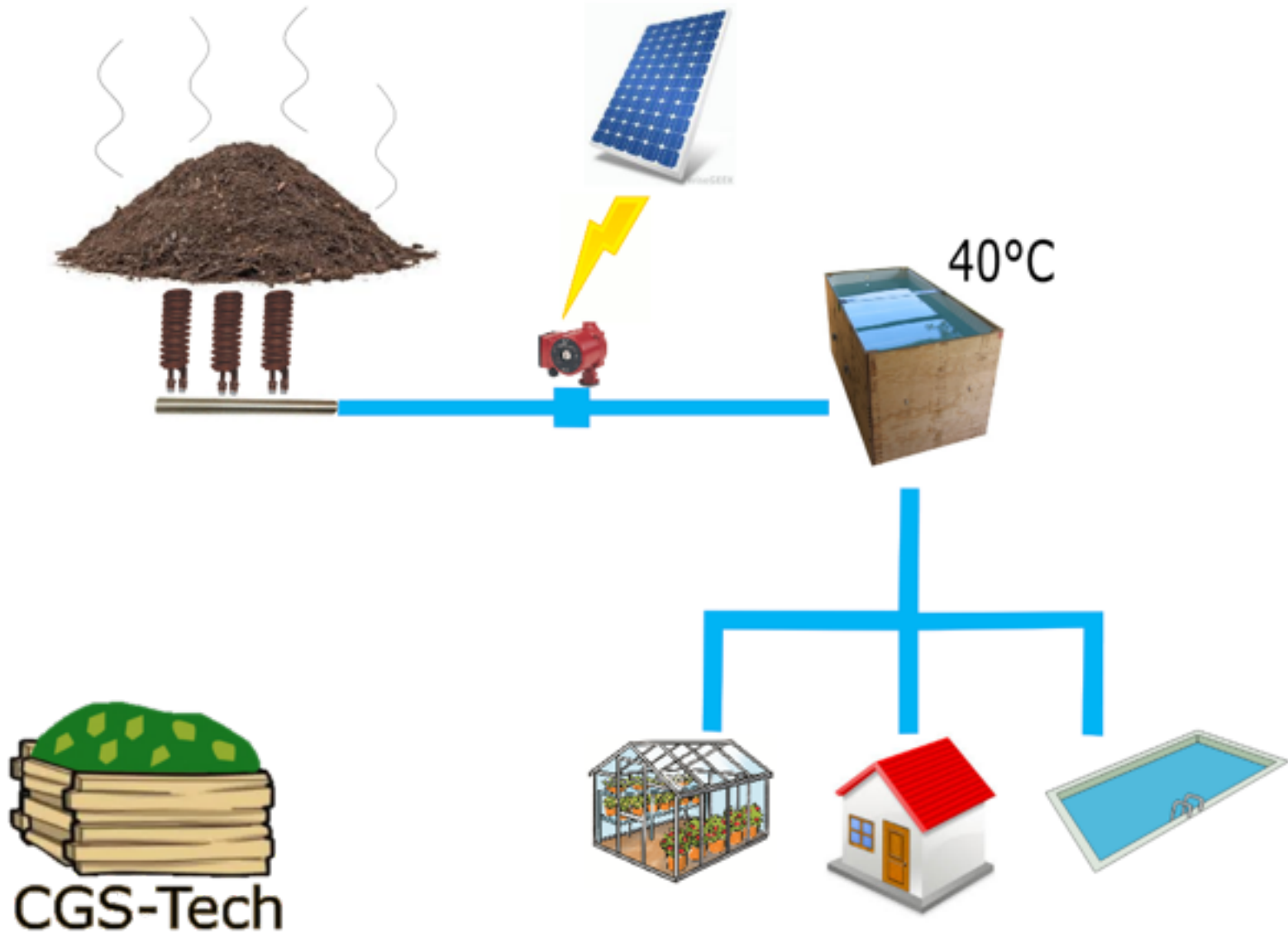
- Our employees place a heat exchanger into a desired position - and pile biological waste over the heat exchanger.
- Therefore, our customers will have opportunity to use the main factor = heat which is generated during the process of changing biological waste into compost.
- During this process heat is generated and temperature can rise up as high as 80 °C.



CGS-Tech Ltd.

- Then our technicians connect the heat exchanger with a water tank.
- A circulation pump drives water from the water tank through the heat exchanger, where water is heated and goes back to the water tank.
- Water is gradually heated until the needed temperature is reached.
- After reaching the needed temperature an electric valve opens and distributes hot water to required places such as: a swimming pool, to heat a greenhouse, or into under floor heating of a house.

Our product – garden heating system





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- Through this simple circulation it is possible to heat a greenhouse during the period of 1, 5 year without the need to change compost.
- In addition, the circulation pump can be powered by a solar panel, which would enable you to be 100% ecological.



**CGS-Tech Ltd. team in
action**



**Our office personnel do not hesitate to help
our technicians**



CGS-Tech Ltd.

- Maybe you are asking yourself why you should choose our product.
- But here are some reasons:
- 1. saving energy thanks to the usage of energy of compost
- 2. help to decrease global warming
- 3. possibility to grow your own subtropical plants
- 4. planting trees for further use in energy production = as a by-product is oxygen
- 5. acquired compost can be used as fertiliser



Our customers

- This product is and will be available for wide spectrum of users thanks to its low acquisition price.
- It is mainly intended for owners of houses, preferably also with at least a small garden which is a potential and free source of biological waste.



Markets

- This business idea is intended for the market of European Union, but mainly for countries of V4 - Poland, Hungary, Slovakia, and the Czech Republic.
- The reason is that Slovakia is very closely linked to these countries, because as our neighbours we have similar cultural background, what is the great advantage for us.

Personnel

- The CGS - Tech Company Ltd. has six employees:
 - executive director
 - economist
 - secretary
 - 3 technicians



Personnel



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Our office team



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**Executive director
Jakub Rybníkář**



CGS-Tech



Jakub Rybníkář

- **Executive director of CGS–Tech Ltd.**
- He is a responsible and reliable administrator of CGS – Tech Ltd. He has a lot of experience in leading and organising people. His language skills are outstanding - he is fluent in English, and speaks well German and Spanish.
- Jakub Rybníkář's knowledge in the field of physics and engineering is impressive.
- His duties in the company cover not only areas such as finding new customers and orders, but also promoting CGS – Tech Ltd. on the Slovak and foreign markets, and maintaining friendly relations with our clients and suppliers of material.



Economist

Nina Mockovčiaková





CGS-Tech

Nina Mockovčiaková

- **Economist of CGS-Tech Ltd.**
- She is a hard-working employee, amazing co-worker and very optimistic person.
- Her language skills include English and German.
- She was chosen for the position of economist due to her amazing skills in mathematics.
- Her main priorities in CGS – Tech Ltd. are ordering material from providers and calculating our profit and charges.
- Also she is in charge of salaries, payments of rental fees, and buying of new equipment.



**Secretary /
customer line
Alica Hudecová**





Alica Hudecová

- **Secretary / customer line of CGS–Tech Ltd.**
- Alica works as a secretary; what more, she takes care of the customer line and employees.
- With her great language skills and friendly behavior, she is more than qualified for her post. She has also perfect computer skills and knowledge of IT.
- The job duties include: informing clients about our services and products; and also booking orders and helping the executive director to organise employees.
- If needed, Alica is responsible for hiring new workers for installing our heating garden system.



Our garden team





**Technician
Michal Ďurčík**





Michal Ďurčík

- **Technician of CGS-Tech Ltd.**
- Michal is a responsible and hard-working employee of the company. He speaks English fluently, and his IT skills are impressive.
- His main work duties include: installing of the heating garden system at customer's home, and occasionally transporting our products to their gardens.
- Due to his perfect language and computer skills, he also helps the executive director with advertising and promoting the good name of CGS-Tech Ltd.

Technician Tomáš Žilínek





Tomáš Žilínek

- **Technician of CGS–Tech Ltd.**
- Tomáš is a respectable and helpful colleague. He speaks many languages, and has extensive skills and knowledge in IT and engineering. He has a lot of experience with installing of our product.
- His responsibility is installing of our heating garden system at customer's home.
- Moreover, he is also qualified to inform our clients about our product and its process of installation in great detail.



**Technician
Bronislava Bendová**



CGS-Tech





Bronislava Bendová

- **Technician of CGS-Tech Ltd.**
- Broňa is hard-working and very responsible, and speaks English and German.
- She is very skilful in manual work and experienced in the field of Physic, Chemistry and Biology.
- Her duties include transporting of our garden system to customers' houses and its installation. Moreover, she helps other employees with their work.
- Due to her scientific abilities she also does research of innovations in compost garden systems, and studies useful bacteria in compost.

The example of very good relations between our office staff and technicians





Economy

- We decided to found a Ltd. company, because according to Slovak legislature, to found this type of a company just 1 € is needed.
- However, we will still need initial capital of 26 000 € at the beginning of our undertaking. We decided to take a loan from a bank.
- We visited two big banks VÚB bank and UNICREDIT bank and considered their offers. We chose to borrow the sum of 20 000 € from VÚB bank with 7, 50% interest and with time of paying back 5 years.
- The rest of the needed sum of money we would have to obtain through a loan from the state for young entrepreneurs – but this depends on the contemporary legislation and the state policy.



**The ladies of
CGS-Tech Ltd.
visiting
UniCredit Bank
to discuss the
possibilities
of taking a loan**



Economy

- As you can see the selling price of our compost garden system is meant to be 1450 Euro.
- We also have assumed an amount of products sold by our company which can be seen in the table.
- The numbers of sold products are meant to rise every year thanks to advertising of CGS-Tech, and expansion of our company in 2018.



Economy

PLAN OF INCOME

Plan of income	2016	2017	2018	2019	2020
Inflation of customer price		3%	3%	3%	3%
Cumulated inflation rate of prices	1,000	1,030	1,061	1,093	1,126
Average selling price of the product /€/					
Selling price of the product	1450	1450	1450	1450	1450
Planned amount of sales					
Product	210	280	350	390	420
Planned profit considering actual prices	304500	418180	538458	618092	685734



Economy

- Our selling price for customers covers material and labour at client's garden.
- The material needed for the heating garden system costs altogether 1040 €.
- The needed material consists of pipes, heat exchangers, circulation pump, crushed wood, a solar panel, electric valve and water tank.
- We suppose that our customers will have their own compost in the garden.



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Material

1040

Economy

Items /material/	Price €
Pipes	200
Heat exchanger	150
Circulation pump	140
Crushed wood	50
Electric valve	100
Water tank	150
Solar panel	250
Total	1040

Economy

- The CGS - Tech Company Ltd. will have six employees at the beginning:
 - 1 executive director
 - 1 economist
 - 1 secretary
 - 3 technicians
- Due to planned expansion of our business in 2018 we will need to employ one more technician.





Economy

PLAN OF OF EMPLOYEES

Work position	2016	2017	2018	2019	2020
Executive director of the company	1	1	1	1	1
Economist	1	1	1	1	1
Secretary - customer line	1	1	1	1	1
Technician	3	3	4	4	4
Total	6	6	7	7	7

Economy

- This table displays personnel charges for each work position. Their salaries are showed in the table and these salaries are meant to grow 4% per a year.
- You can also see a yearly amount of money that are our salaries and personnel charges calcuted to cost.
- In the end, there are showed our total charges considered various fees and payments and profit based on our salles. Together they make our annual economic result.

<u>PLAN OF PERSONAL CHARGES</u>					
Plan of personal charges	2016	2017	2018	2019	2020
Annual growth of salaries in percents		4%	4%	4%	4%
Cumulated growth of salaries	1,000	1,040	1,082	1,125	1,170
Rate of levies of employer	35,2%	35,2%	35,2%	35,2%	35,2%
Gross earnings according a work position					
Executive director of the company	900	900	900	900	900
Economist	700	700	700	700	700
Secretary - customer line	650	650	650	650	650
Technician	700	700	700	700	700
Yearly plan of charges and salaries for employees					
Executive director of the company	14601,60	15185,66	15798,93	16426,80	17083,87
Economist	11356,80	11811,07	12288,06	12776,40	13287,46
Secretary - customer line	10545,60	10967,42	11410,34	11863,80	12338,35
Technician	34070,40	35433,22	49152,23	51105,60	53149,82
Total	70574,40	73397,38	88649,56	92172,60	95859,50
	2016	2017	2018	2019	2020
Total charges	310383,40	385006,38	483068,56	528181,60	557728,50
Profit	304500,00	418180,00	538457,50	618091,50	685734,00
Economic results	-5883,40	33173,62	55388,94	89909,90	128005,50
	2016	2017	2018	2019	2020
Economic results after paying taxes	-5883,40	26870,64	44865,043	72827,019	103684,45



Economy

- This is our plan of investment and depretiation of tangible fixed assets which cover our long- term property.
- At the beginning, we will need one van - purchased for 20 000 € - which will be used to transport material.
- We are also planning to expand our company in 2018, which will result in the need to buy the second van.
- For our work we also have to buy two computers.



Economy

1. Plan of investment and depreciation of tangible fixed assets

Type of investment	Cost of acquisition /€/	Number of years	Year of acquisition	Plan of depreciation /€/				
				2016	2017	2018	2019	2020
Vehicle 1	20000	4	2016	5000	5000	5000	5000	0
Computer 1	800	4	2016	200	200	200	200	0
Computer 2	800	4	2016	200	200	200	200	0
Vehicle 2	20000	4	2018	0	0	5000	5000	5000
Annual depreciation of tangible fixed assets				5400	5400	10400	10400	5000
Total planned hight of investment to tangible fixed assets				21600	0	20000	0	0

Economy

- The following table displays the development of remaining price of depreciation of tangible fixed assets considering acquisition price and accumulated depreciation.
- The total number of remaining price of depreciation of tangible fixed is calculated at the bottom.



Economy

2. Development of remainig price of depreciation of tangible fixed assets

Iten of tangible fixed assets per a year	2016	2017	2018	2019	2020
Acquisition price of depreciation of tangible fixed assets from the last year	0	21600	21600	33600	33600
+ new investments	21600	0	12000	0	0
- deletion of property	0	0	0	0	21600
= Acquisition price of depreciation of tangible fixed assets of actual year	21600	21600	33600	33600	12000
Accumulated depreciation from the last year	0	5400	10800	19200	27600
+ depreciation according the plan	5400	5400	8400	8400	3000
- accumulated depreciation of eliminated property	0	0	0	0	21600
= Accumulated depreciation of actual year	5400	10800	19200	27600	9000
Remainig price of depreciation of tangible fixed assets actual year	16200	10800	14400	6000	3000



Economy

- Here are calculated our annual charges.
- We need to pay for the material, the rent, energies, marketing campaign, depreciation and other items shown in the table.
- We will rent a store building close to the capital city Bratislava which cost us 4500 € a year. Later when we will count with two store buildings we will pay twice as much for the rent.
- We also took into consideration the depreciation of tangible fixed assets of having 2 vans and 2 computers, and development of remaining price of depreciation of tangible fixed assets visualised in the tables.



Economy

Item	2016	2017	2018	2019	2020
Consumption of material	0	0	0	0	0
Consumption of energy	600	600	820	820	820
Repairing and maintenance	500	500	500	500	500
Bussiness trips	1500	1500	1600	1600	1600
Rental	4500	4500	9000	9000	9000
Marketing campaign	3000	2000	2000	2000	2000
Internet + phone	1560	1560	1560	1560	1560
Charges for employees	10545,60	10967,42	11410,34	11863,80	12338,35
Taxes and fees	295	295	475	475	475
Depreciation of tengible and intengible fixed assets	200	200	200	200	0
Paymant of loan	4054	4054	4064	4054	4114
Total charges	26754,6	26176,4	31629,34	32072,8	32407,352



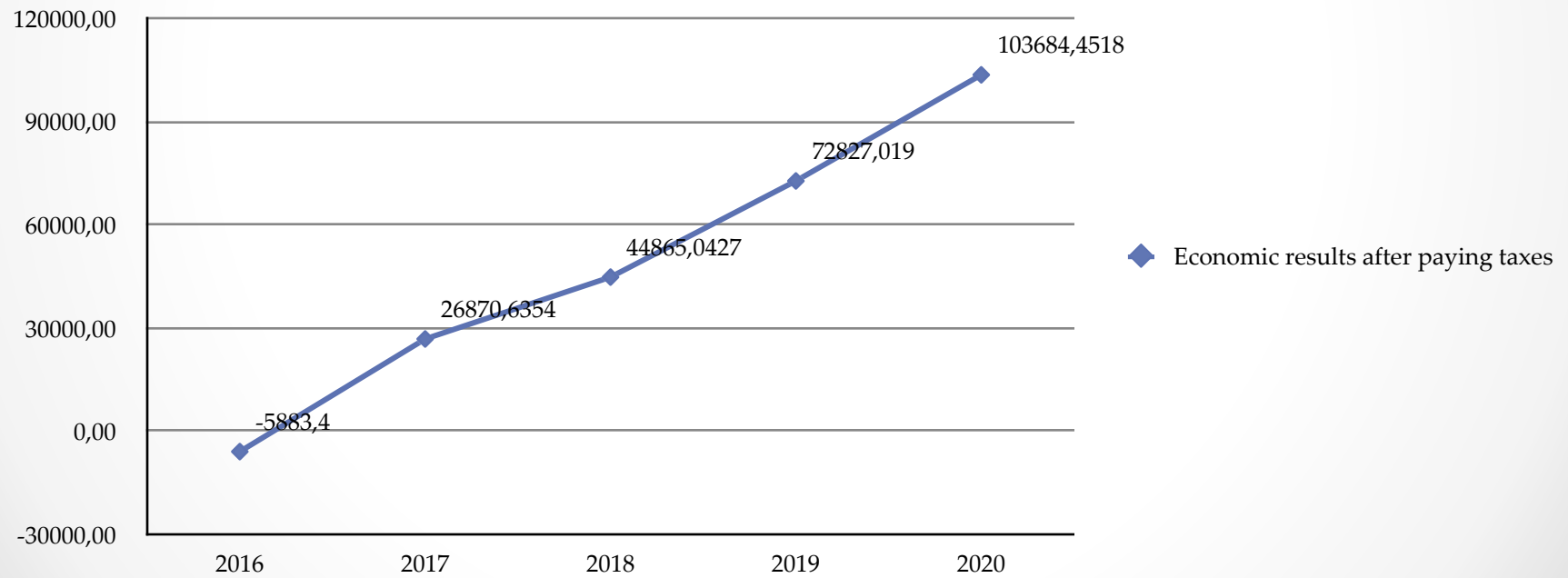
Economy

- Finally, you can see the complete annual economical result considered the annual charges and profit. It is also displayed in the following graph.
- The first year of business our economic result will be represented in negative numbers, which is normal for a beginner at the market.
- However, we assume that after two years our company will earn approximately 27000 euro a year; and according to economic prognosis we can expect this number to rise every year.



Economy

Economic results after paying taxes





SWOT analyses

	Strengths	Weaknesses
<i>Internal</i>	<ul style="list-style-type: none">- <i>easy use of our internet website</i>- <i>high and quick return of investment</i>- <i>fast and reliable transport of goods to clients</i>- <i>fitting and assembling of devices at client's</i>- <i>free customer service</i>- <i>reliable customer line during work days from 6:00 to 18:00</i>- <i>the main office of our company in Bratislava, or in its suburbs</i>- <i>qualified personnel with fluent language skills</i>- <i>relatively low initial</i>	<ul style="list-style-type: none">- <i>no permanent shops, just online shops and service</i>- <i>dependence on contractors</i>- <i>fitting and assembling can be influenced by bad weather or season – too cold, winter etc.</i>- <i>need for taking a loan</i>



SWOT analyses

	Opportunities	Threats
<i>External</i>	<ul style="list-style-type: none">- a low competition on the domestic market- selling of the product to EU countries- perspective future of using compost for water	<ul style="list-style-type: none">- beginners on the market- international competition- product only for owners of houses



The future

- We personally think that our idea has great potential, because of its low cost and high profitability.
- Moreover, you will do something for our planet, alongside with saving money and energy.
- So we hope that CGS-Tech Ltd. will be your choice.

YOUR CHOICE FOR THE FUTURE - CGS-Tech Ltd.!!!



The leaflet and the logo of our company



CGS-Tech.