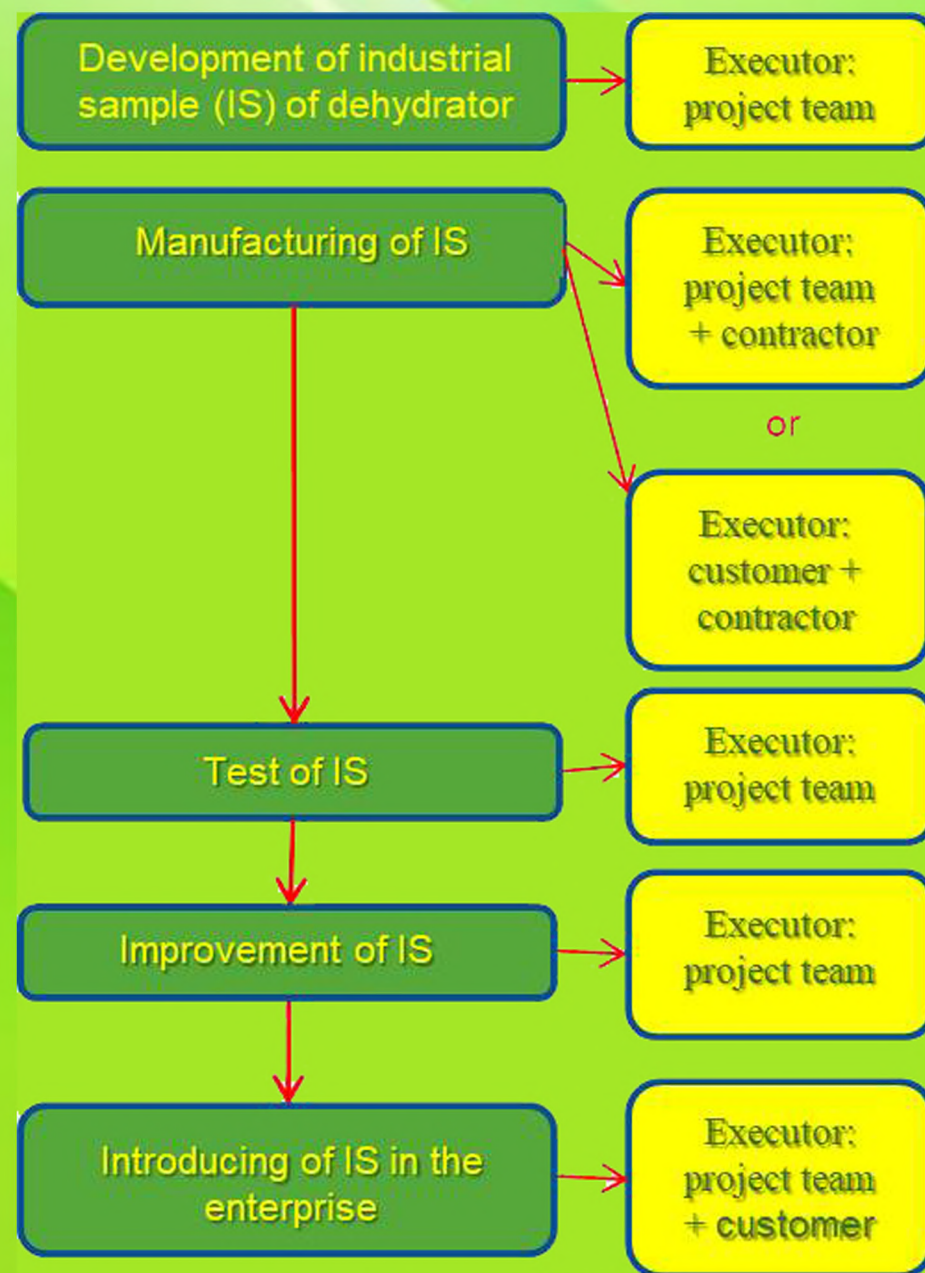


BUSINESS MODEL



In the process of implementing the project, the following tasks will be realized:

1. Development of the design documentation for the proposed dehydrator (assembly and work drawings, specifications), implementation of the design and verification calculations.
2. Creation of an industrial sample of the dehydrator.
3. Testing of the dehydrator, development of its prototype.
4. Implementation of introducing the dehydrator at the enterprise or at a number of enterprises of the food or processing industry of Ukraine.

Parameters of introducing of the dehydrator in the coffee factory "Galka LTD": the economic effect is 40.8 million UAH /year, the payback period is 14 months, profitability level is 48 %.

MARKETS

Enterprises of the food and processing industry



The results of the project may be interesting for domestic food companies, whose secondary product is wet dispersed waste and that have not yet solved the problem of their utilization. Such enterprises include distilleries, breweries and sugar mills, coffee and confectionery factories, vegetable processing and juice production companies. At the same time, the implementation of the proposed installation is a universal solution for the described problem for both large food companies and small businesses, that are just starting out in the market. In the case of creation of attractive conditions for such enterprises, their number will increase, due to the excellent conditions for agriculture and the food industry in Ukraine. However, demand for the proposed installation will increase.

COMPETITORS



Equipment manufactured by our competitors is expensive, cumbersome, energy-intensive and used only in complex.



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*Vinnytsia National
Agrarian University*

DEHYDRATOR FOR PROCESSING OF FOOD INDUSTRY WASTES



*CLEAN ECOLOGY
AND VALUABLE*

PROJECT TEAM



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WHAT HAS BEEN DONE?

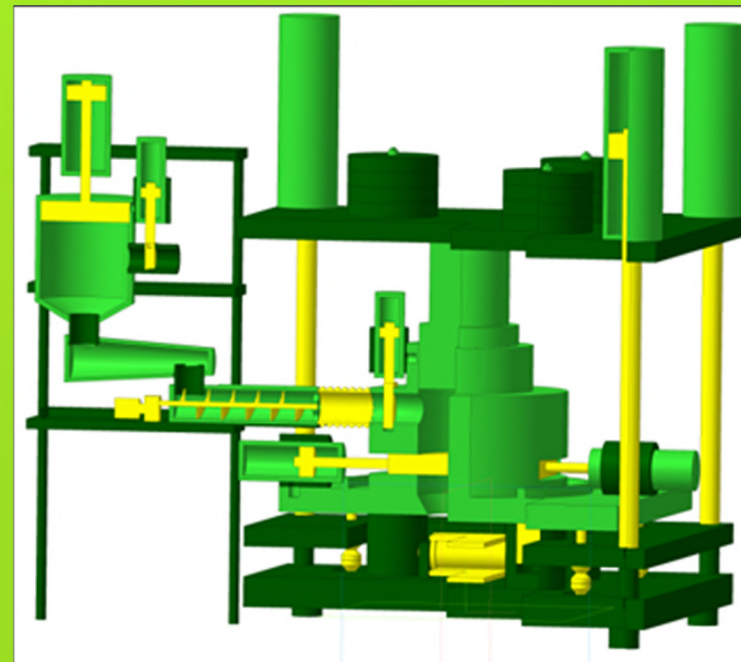


The results were implemented on: Lviv LP "Galka Ltd.", Lviv Scientific-Production Association "Terminal", Obukhovsky LLC "Yugov".

DESCRIPTION OF PROJECT

The dehydrator consists of a static press, diffuser, screw press and inertial vibration press with hydro-impulse drive, which carry out four consecutive stages of dehydration of food waste with increasing from stage to stage of intensity of loading of waste and sequential elimination of free-flowing, capillary-connected and adsorbing-connected fluid. The work of the dehydrator is carried out continuously in fully automatic mode.

At the last stage of dehydration due to the vibration shock load of the waste in a closed press-form with a low expense of energy and time provides high mobility of solid particles of waste, their periodic uniform redistribution in the volume of the press-form with increasingly dense stacking and removal of gaps between them. As a result, the final moisture content of the waste at the outlet of the dehydrator is in 2, 5-3 times lower than under using of any other method of mechanical dehydration.



INNOVATION OF OUR PRODUCT

- Rational energy distribution in the stages of dehydration.
- Increase of the speed of energy transfer in 3 - 4 times compared to waste particles, with a decrease in 40 - 50 times the total value of this energy.

THE IDEA OF THE START-UP

At a large number of food processing enterprises in Ukraine, wet disperse wastes such as alcohol bard, beer crumbs, beet pellet, coffee sludge are utilized by of dumping onto special land plots or in natural little rivers, that leads to environmental pollution. But more rational is the dehydration of this waste to a moisture content of 20 - 25% and their use as additives to agricultural feed or as fuel.

Thus, at the same time, problems of efficient utilization of waste, the reduction of negative impacts on the environment and reception of fuels or additional profits by the enterprises will be solved.

Our solution is technological complex for multistage vibro-blowing dehydration of waste at one workplace (dehydrator).



OUR ADVANTAGES

1. Reduction of energy expenses in 60 - 70 times.
2. Increase of productivity in 1,1 - 1,6 times.
3. Reduction of the final moisture content of waste in 3.6 - 3.7 times.
4. Reduction of capital expenses in 5 - 10 times.
5. Fully automated work cycle.
6. Compact dimensions and a vertical layout of the equipment.