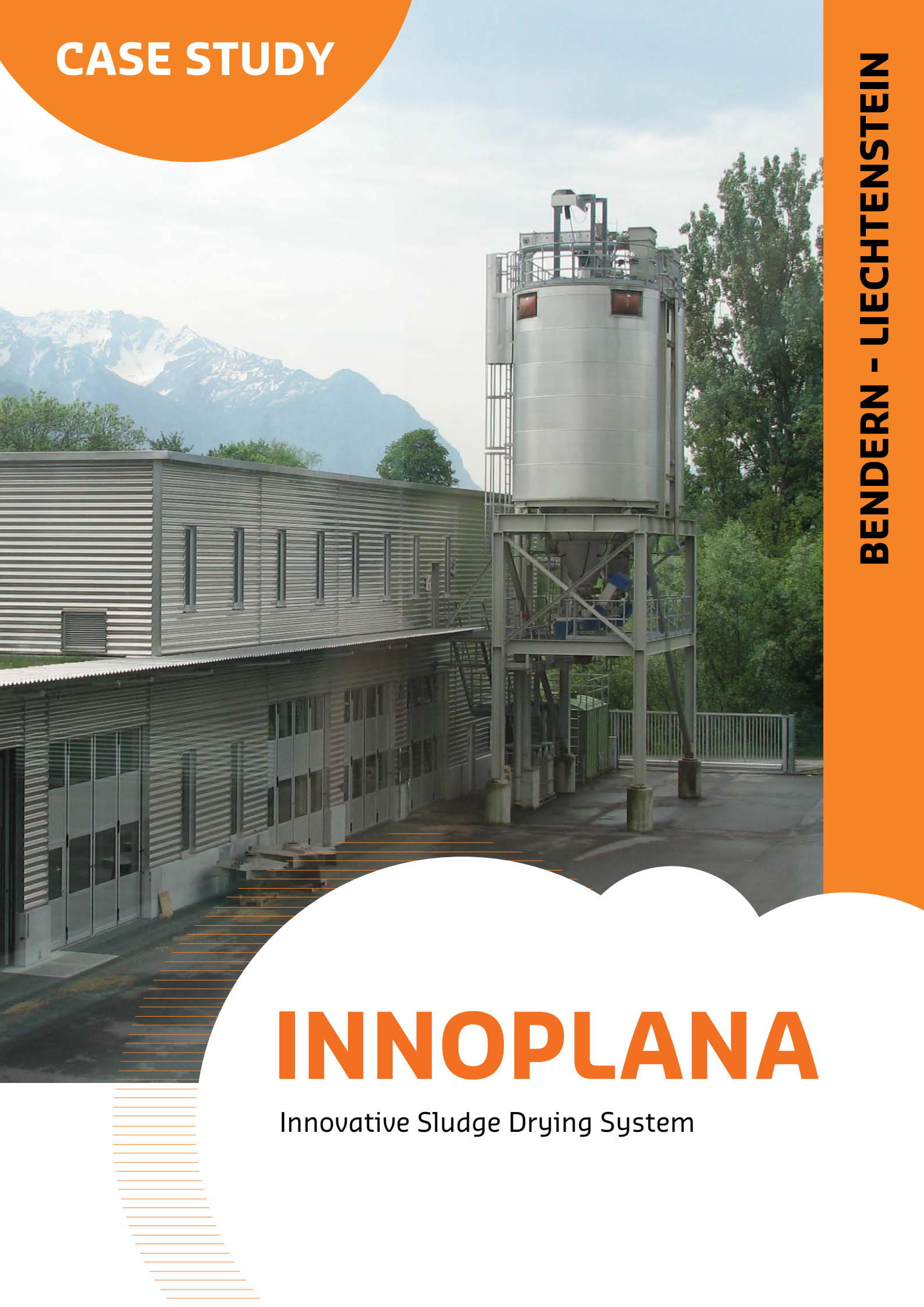


**CASE STUDY**

**BENDERN - LIECHTENSTEIN**



# **INNOPLANA**

Innovative Sludge Drying System

## A low energy consumption and flexible solution

### BENDERN

Back in 1997, Bendern (Liechtenstein) was looking for a safe technology for sludge treatment and disposal. Since the main concern of the municipality was the protection of the environment and operator safety, they were looking for an innovative technology which did not produce dangerous levels of dust. After a long and detailed evaluation of the available technologies, INNODRY® 2E was selected.

Because of the excellent collaboration between Bendern and **INNOPLANA**, it was possible to realize the project, despite the very tight schedule, in only 12 months from kick-off to take-over.

### WHY INNOPLANA?

With the lowest energy consumption available on the market, the INNODRY® 2E offers the optimal energy balance at partial and full load. One line were selected, offering a water evaporation capacity of 620 kg<sub>H<sub>2</sub>O</sub>/h which produce dust free granules at 90% DS. The integrated heat recovery system offers a substantial reduction of investment and operation costs. And the waste air treatment plant from the INNODRY® 2E is 5 to 8 times lower than conventional drying technology.

### SAFETY FIRST

The level of dust in the dried pellets is extremely low, as little as 2.5% of the end product with a size of less than 1 mm. There is no need for any further dust treatment such as filtering, cooling, sieving, separating, pelletizing, recycling, etc.. With dust handling equipment there would always be a risk of fire or explosion which, in Bendern or in any other plant where an INNODRY® 2E dryer is installed, does not exist.



TREATMENT STAGE	DIGESTION (Primary & secondary mix)	DEWATERING	DRYING
SLUDGE DRYNESS*	6% <sub>MS</sub>	28% <sub>MS</sub>	90% <sub>MS</sub>
SLUDGE VOLUME*	2'081 kg/h	900 kg/h	221 kg/h

(\*at the outlet)

## INNOPLANA

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