## LIFE/FIT FOR REACH aims

at preparing small and medium size enterprises (SMEs) to face the future challenges for chemicals management. It means for them, to understand the restrictions of tomorrow already today. The project offers them a full "chemicals management package" including: capacity building on CLP/MSDS literacy, information about an inventory of chemicals and general management practices, proposals on how to implement substitution as a core action to reduce environmental impacts.

## LIFE/FIT FOR REACH team Experts

- Baltic Environmental Forum Latvia
- Ecodesign Competence Centre, Latvia
- Baltic Environmental Forum Estonia
- Hendriksons&Ko Ltd, Estonia
- Baltic Environmental Forum Lithuania
- Institute of Environmental Engineering, Kaunas
- University of Technology, Lithuania
- Centre of Environmental Policy, Lithuania
- REACH help desks of Estonia, Latvia, and Lithuania (associated)

## Partner companies

### Construction chemicals

- Tenachem, Ltd.
- JSC Henkel Makroflex
- Epokate, Ltd.

### Consumer chemicals

- JSC Mayeri Industries

### Ship construction and repair

- JSC Vakaru Metalgama

### Food production

- JSC Marijampoles Pieno Konservai

# LIFE / FIT FOR REACH

**Baltic pilot cases on reduction of emissions by substitution of hazardous chemicals and resource efficiency**

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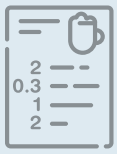
# Substituting hazardous chemicals to make businesses safer

## By changing the recipe




### CASE of Mayeri Industries AS Estonia

Mayeri Industries is the largest manufacturer of washing and cleaning products In the Baltic States. To improve the washing efficiency and remove colourful stains more efficiently, laundry detergents included chemical bleachers peroxide salts, e.g. sodium perborate and sodium percarbonate. Sodium perborate may damage fertility or the unborn child, is toxic if inhaled, causes serious eye damage, is harmful if swallowed and may cause respiratory irritation. Sodium percarbonate is harmful if swallowed, causes serious eye damage and may intensify fire (oxidiser). The company aims to continuously improve their products by using components which are less harmful for the environment and human health. They succeeded in replacing the sodium perborate and reducing the content of sodium percarbonate in washing powders and gels Mayeri Sensitive, Mayeri Sensitive Color and Mayeri White.

### CASE of Tenachem Latvia

Tenachem is one of the leading producers of professional construction chemicals in Latvia. One of its products – Oksiplasts – contained a substance which is toxic for reproduction- dibutyltin dilaurate- that also is a strong skin sensitizer. An alternative for this hazardous substance was found amid the same class of substances – tin compounds. The substitute – dioctyltin dilaurate – is potentially hazardous if swallowed, but it is not carcinogenic, mutagenic or reprotoxic (CMR) and poses significantly lower hazard. The substitution reduced turnover of hazardous substances in the company and their occurrence in products, minimized work place health hazards, made chemicals management simpler and made it easier for preparation of documentation, e.g. for export purposes all the while maintaining customer satisfaction.

## By making an alteration in the product line

### CASE of KnK Mefab, Ltd. Latvia

KNK Mefab is a metalworking company in Latvia providing a wide range of services such as laser cutting, welding, powder coating etc. Until recently the operator of the company's grinding machine had to handle the problems caused by the lubricant-cooler of the outdated facility. This emulsion contained a well-known carcinogen formaldehyde and a strong skin and respiratory irritant aminoethanol, which is also harmful for the environment. The old grinder has now been replaced with a new one that doesn't need any hazardous lubricant-coolant. The system regulates the grinding speed itself; therefore, the metal elements do not heat up and the operator doesn't need to worry about details damaging.

### CASE of UpSteam Estonia

UpSteam is a mobile car wash service that comes to the customer instead of the customer going to a car wash. Steam is used to wash the cars. In order to remove calc from the steam generator hazardous chemicals were used frequently. However, the company has found a solution to reduce the use of chemicals in their activities, by installing a water softening filter, thus avoiding the need for frequent calc removal. The use of water softening filter in the steam generator is likely to result in better energy efficiency of the process as well.

### CASE Biovela Group, Ltd. Lithuania

Biovela Group is a meat processing and preserving company that wanted to find an alternative to traditional cleaning and disinfection chemicals that are hazardous to human health and environment. The company searched for an alternative that would comply with both requirements to not only satisfy consumers but also to improve working conditions for the personnel. After trying out several alternatives a modern change in a product line was chosen – cold plasma disinfection turned out to be suitable for air and surface decontamination. The use of chemicals with environmental and health hazards, among them biocidal substances, was abandoned. The equipment does not use any consumables and does not harm workers or the environment.

## By changing mixtures used by auxiliaries

### CASE of Naujoji Ringuva, Ltd. Lithuania

Naujoji Ringuva is the largest manufacturers of hygiene and cleaning products in Lithuania. Company renewed several lines that contained some aggressive preservatives, fragrances and other unwanted components. The lines that were remade consisted of children shampoo and soap and also dishwashing and laundry detergents. After trying out several alternatives safer ingredient options were chosen and, in some cases, unwanted components were entirely removed. For detergents and dishwashing liquids, the compositions were renewed according to biodegradation and critical dilution volume criteria, set by the EU Eco label scheme, thus avoiding hazardous substance use.