

## Business model characteristics across industries

Industry	Household Care	Food & Beverages	Bioenergy	Agriculture & Feed	Technical & Pharma
<b>Solutions</b>	Enzymes	Enzymes	Enzymes and micro-organisms	Enzymes and micro-organisms	Enzymes and micro-organisms
<b>Selected product areas</b>	Laundry detergents, hand and automatic dishwashing soaps, professional cleaning products	Baking (freshness, product appearance, dough improvement, etc.), brewing (fermentation control, separation and filtration, etc.), food & nutrition (lactose-free dairy, removal of trans fats, etc.)	Cellulosic ethanol, starch-based ethanol, enzymatic biodiesel, sugarcane ethanol	Animal feed (feed enzymes), animal health (probiotics), aquaculture (microbials), plant health and crop yields	Textile processing, pulp & paper production, leather preparation, pharmaceuticals (pharma enzymes), wastewater treatment solutions
<b>Innovation model</b>	Novozymes' R&D teams work very closely with customers' R&D teams	Novozymes' R&D teams work very closely with customers' R&D teams	Novozymes' R&D teams get input from customers and develop solutions independently of customers' R&D teams	Novozymes' R&D teams work very closely with partners' R&D teams	Novozymes' R&D teams get input from customers and develop solutions independently of customers' R&D teams

## Innovation pipeline update

Novozymes' innovation pipeline contains more than 100 research projects across the business. In 2016, Novozymes launched eight new products. The chart on the right shows some of the major innovation areas in which Novozymes is investing. All these eight innovation programs represent significant market-expanding growth opportunities in terms of sales, and most also have the potential to impact sustainability positively. In 2016, progress was made in all programs, including two product launches. Four of the seven existing programs progressed to the next phase, and one new program – grain milling – was added in Food & Beverages.

In Household Care, hygiene solutions build on the functionality of stain removal and target consumers' clothes having a more complete feel of cleanliness and freshness. Tailored enzyme solutions for emerging markets is another area of research, as these geographies require special solutions and innovative approaches at low cost. Both programs remain in the "Development" phase, and the first products are on track to be launched in 2017.

We have made significant progress in Food & Beverages with our technology for improving yields in vegetable oil processing, and the status for the platform has been moved from "Discovery" to "Development." A new track for grain milling has also been added, as this is a new area where we are looking into the feasibility of using enzymes to increase efficiency in the milling step of grain-processing facilities.

In Agriculture & Feed, all three tracks progressed, with the new corn inoculant Acceleron® B-300 SAT being launched with Monsanto, and the new animal probiotic Alterion® being launched together with Adisseo. The development of new transformative microbes for corn, soybeans and wheat, together with Monsanto, also progressed. These new BioAg products will further add to the division's growth potential.

In Bioenergy, our partners have seen increasingly stable production of biomass-based ethanol and higher utilization rates throughout 2016, and further improvements are expected in 2017.



\* Arrows denote advancement to the next phase over the past 12 months.