



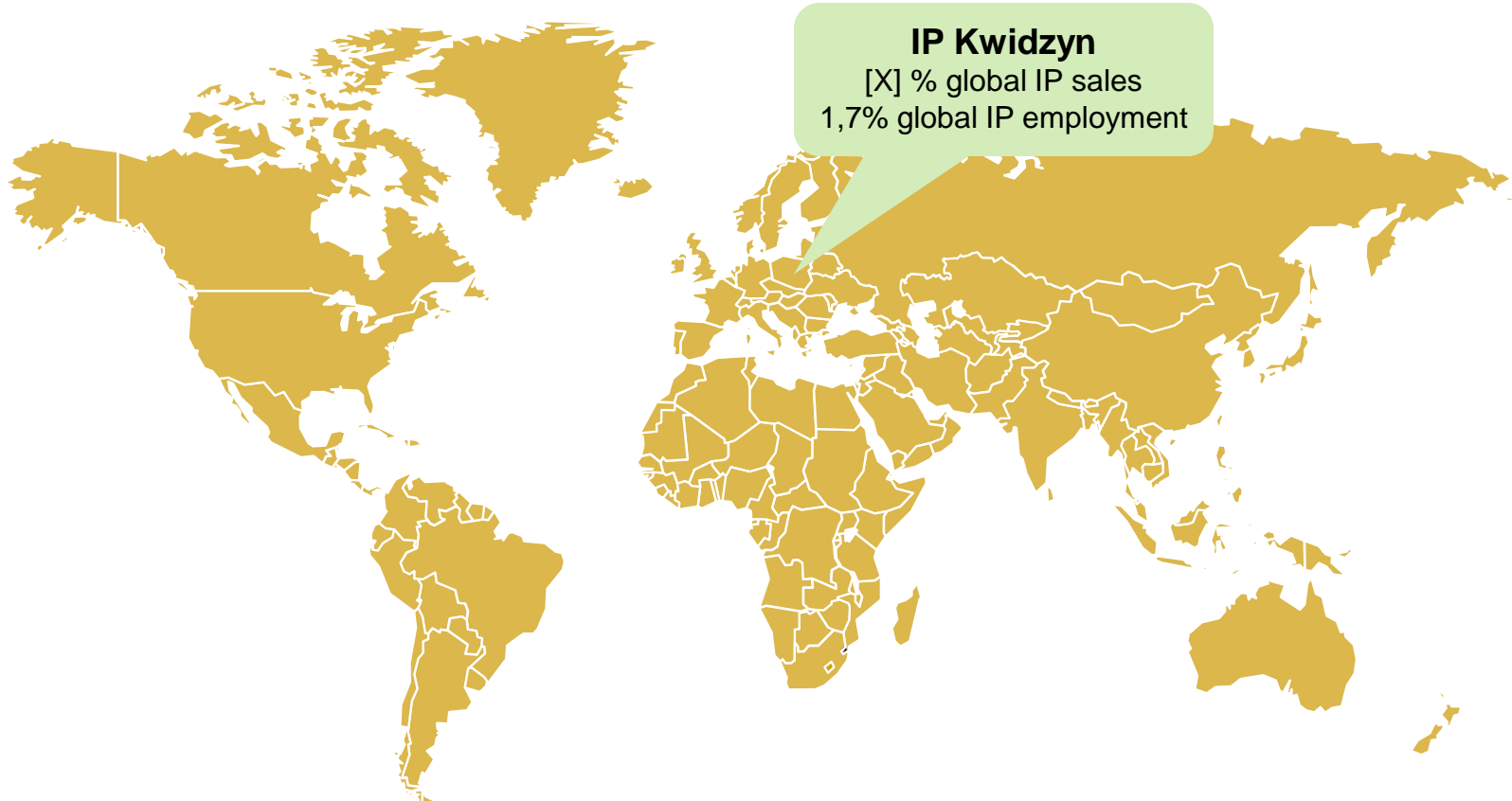
New Business Model of Innovation in the Green Economy: Paper Production - Bioenergy - Social Responsibility

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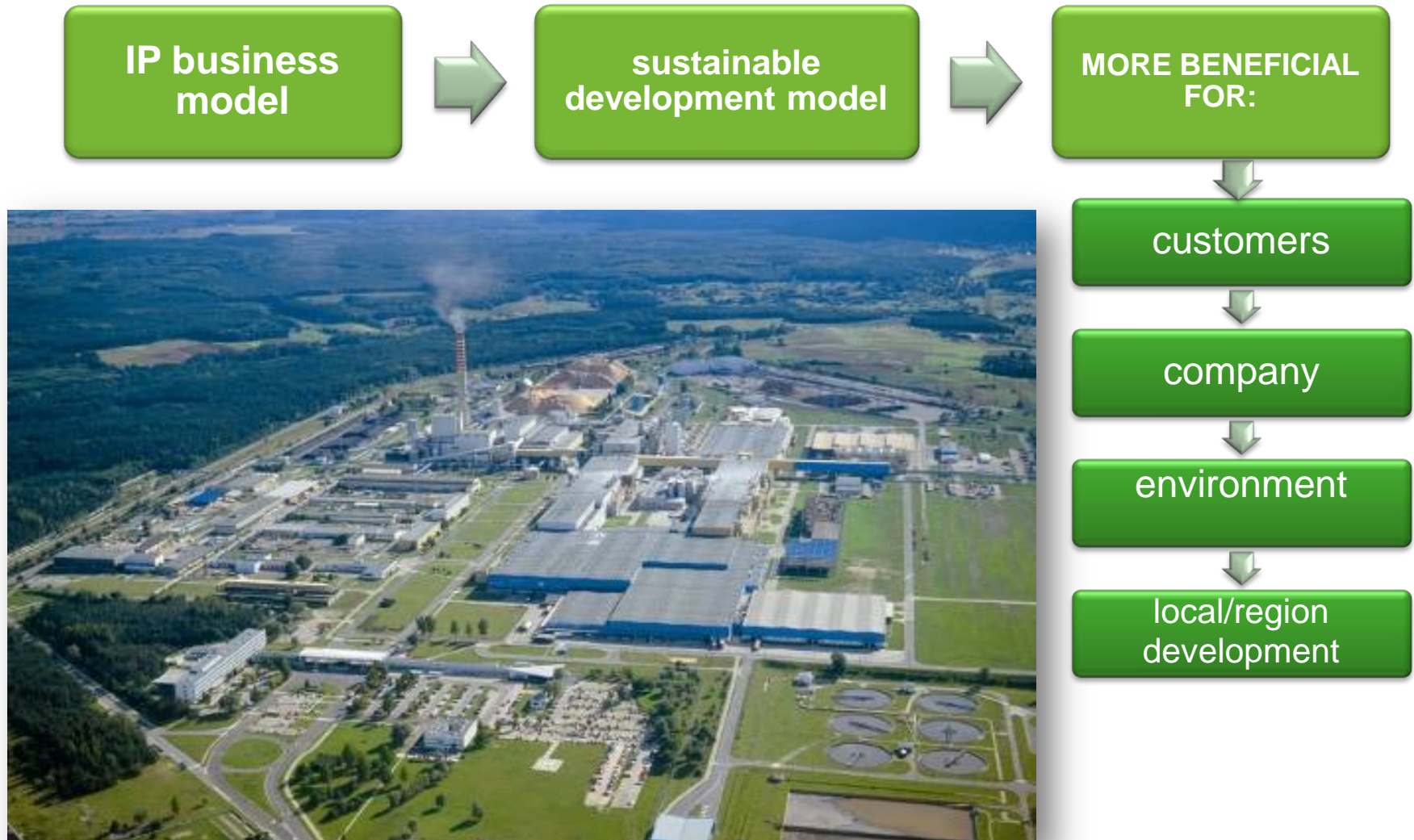
General overview of IP Kwidzyn business

Since 1992 as a part of International Paper – the biggest global paper and packaging manufacturing company

GLOBAL COMPANY – OPERATES GLOBALLY AND LOCALLY!



General overview of IP Kwidzyn business model



General overview of IP Kwidzyn business model

- IP Mission:

„To improve the world, today and for generations to come, by using renewable resources to make products people depend on every day”

- Model → towards „green economy”:

- innovative and ecological technology processes and production
- bioenergy
- social responsibility



Today, more than 70% of the energy IP uses at our mills comes from renewable biomass, such as bark and wood residuals, burned in our energy efficient combined heat and power (CHP) plants.

International Paper in Poland – innovative and eco-friendly production and products

- All IP-Kwidzyn products manufactured from primary fibers are FSC certified
- Manufacturing, EHS and all operating processes are managed according to Integrated Management System including ISO 9001, 14001 and PN EN 18001
- Production of:
 - ✓ Poland's best known UFS – **POL** copy papers
 - ✓ offset papers
 - ✓ multilayer coated boards **Arktika & Alaska** used in pharmaceutical, cosmetics and food industries
 - ✓ eco-friendly newsprint **Presso** 100% made of wastepaper



Why IP Kwidzyn decided to start Short Rotation Hardwood Plantation Project?

1. Environmental responsibility and UE regulations
 - ✓ CO₂, SO₂ emission reduction – Poland's energy production primarily based on coal
 - ✓ renewable energy target for Poland - 15% in 2020
 - ✓ plantations developed close to the mill have a lower carbon footprint
2. Unbalanced wood market and increasing biomass demand
3. Increasing costs of production (energy, wood biomass)
4. Social responsibility
 - ✓ IP has a long tradition of providing green jobs



Challenges and needs for development Europe's biggest poplar plantation

IP-K - a pioneer investor in Poland to develop large biomass program

- IP-K biomass demand for dedicated boiler
- ✓ Estimated biomass demand of 300 000 green metric tons annually
- ✓ 9 000 ha plantations within 4 years need to be established
- ✓ Currently in Poland there are 12 000 ha biomass plantations
- ✓ IP-K has now 940 ha own, and 1200 ha established by IP-K's contractor



Challenges and needs for development Europe's biggest poplar plantation

- The national support program for biomass plantations has not been developed yet
 - ✓ Researches
 - ✓ Management guideline
 - ✓ Law regulations
- Technical resources requirements
 - ✓ Lack of specialized contractors
 - ✓ Not developed market for biomass equipment
- Social challenges
 - ✓ Convince community to a new project



Development model for biomass and pulpwood production

- Researches and trials since 2007
- ✓ Main goal is to select clones with the best growth and yield for Polish climate and soil conditions
- ✓ IP own trials: 60 clones in 2007 and 70 new ones in 2012
- ✓ Trial with the State Forest and Forest Research Institute - 10 poplar and 37 aspen clones
- ✓ Trial tests with planting material suppliers - more than 1500 clones
- ✓ Willow tests with University of Olsztyn, Poland
- ✓ First harvesting and burning trial in 2013



Development model for biomass and pulpwood production

- Cooperation with the State Forest, governmental agencies, international universities, research institutes and partners
 - ✓ The State Forests, Poland
 - ✓ The Forest Research Institute (IBL), Poland
 - ✓ University of Olsztyn, Poland
 - ✓ University of Minnesota, USA
 - ✓ The Federal Research Institute for Rural Areas, Forestry and Fisheries, Germany
 - ✓ The Thuringen Institute and Eberswalde University for Sustainable Development , Germany
 - ✓ Institutes: INBO Belgium, INRA and FCBA France, CRA Italy



- Main key success factors:
- ✓ Innovation in industry
- ✓ Environmental and social responsibility
- ✓ Eco - friendly production

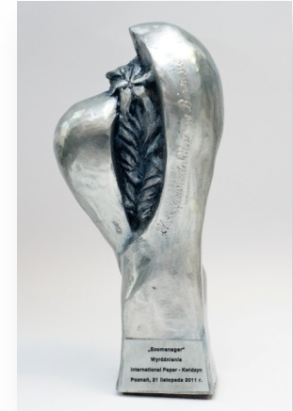
Why is worth to invest in sustainable development model in business ?

- ✓ Better recognition the company on the market
- ✓ Better eco- aware of customers
- ✓ Support the global challenges in goods production market



Benefits from „green model of business”

- **Environment protection**
 - ✓ Greenhouse gases accumulation
 - ✓ Protection of existing forests
 - ✓ Strengthening biodiversity
- **Opportunity for development of the region**
 - ✓ Better prosperity for the local community
 - ✓ New jobs
- **Supporting for:**
 - ✓ EU target to achieve renewable energy goal
 - ✓ Polish economy



Eco-responsible in Business



Pillars of the Polish Economy