



PKN ORLEN Investor and Analyst Days

DOWNSTREAM
Refining, Retail, Petrochemicals

May 16-17, 2013



ORLEN

Agenda

➤ **Refining - Production**

Refining - Sales & Logistic

Retail

Petrochemicals



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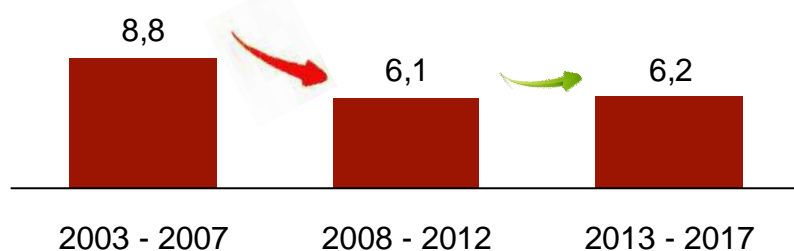
Competitive advantages

High-class refining assets ...

- **Refinery in Plock classified as a super-site** (acc. to WoodMackenzie) considering the volume and depth of processing, integration with petrochemical operations
- **Modernized refining assets in Lithuania and in Litvinov**
- **Prepared for regulatory and market trends changes** thanks to investment projects execution

... allows to achieve good results at maintained stable macro situation.

Average model refining margin and Brent-Ural differential in total USD/bbl

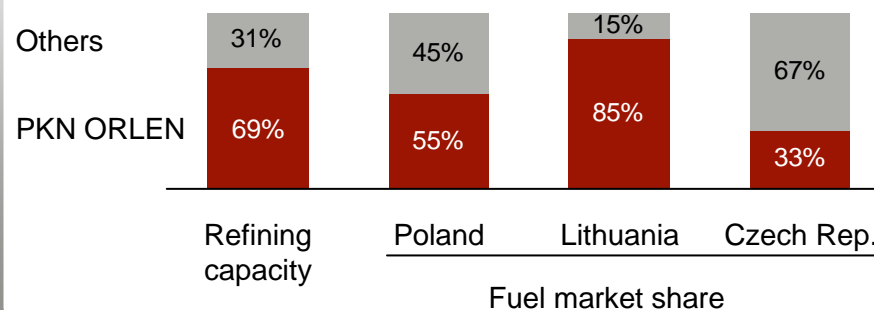


* Poland, Lithuania, the Czech Republic
Source: PKN Orlen

... and strong position on competitive market ...

- **Leader on the fuel market in the Central Europe***

%, 2012



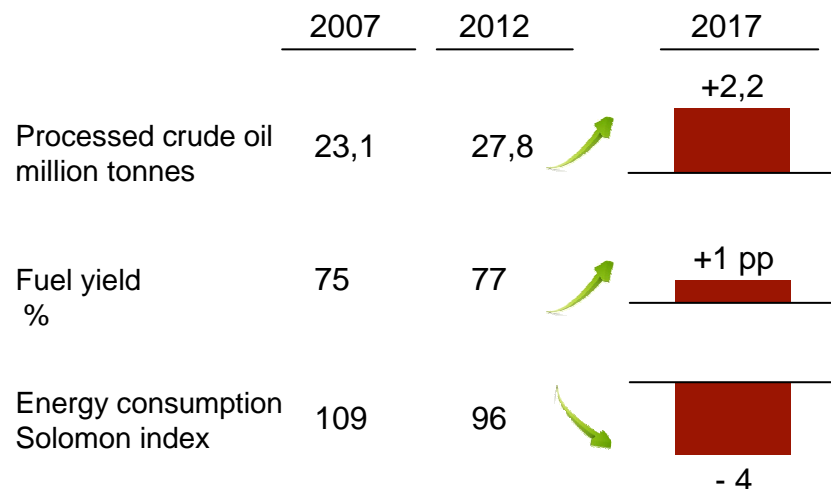
Integrated, high-class assets and strong position on competitive market



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Value creation levers

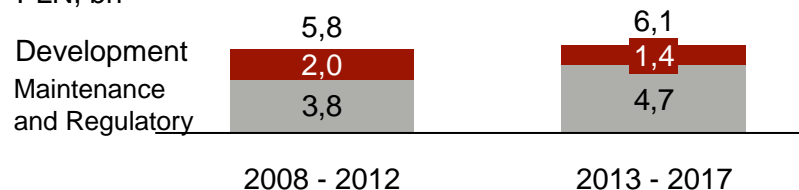
Focus on operational excellence ...



... and strengthening high-class assets ...

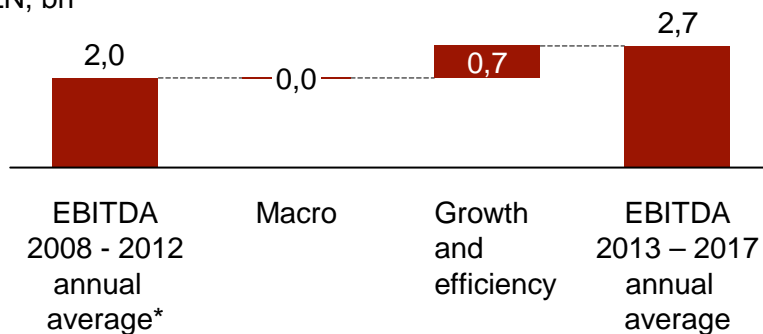
- **Optimal** maintenance and obligatory capex
- Growth through **high ROI projects**

CAPEX in Refinery
PLN, bn



... to maximise EBITDA and cash flow.

Average EBITDA acc. to LIFO
PLN, bn



Operational excellence and strengthening high-class assets

*yearly average EBITDA 2008-2012 adjusted by impairments from fixed assets revaluation (PLN +0,55 bn) and impact of repurchase of obligatory inventories (PLN -0,15 bn). Macro effect calculated based on model refining margin and differential taking into account exchange rate
Source: PKN Orlen



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Despite challenges expected in the Refinery segment, PKN ORLEN is focused on risk mitigation

Slow down of fuel demand increase in the region

Regulatory and environment protection pressure increase

Refining margins are under pressure and unpredictable

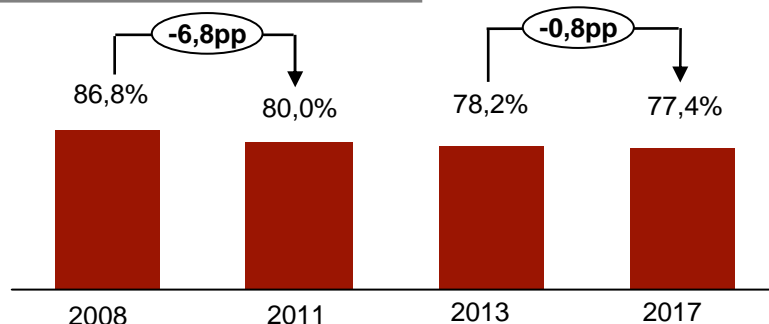
Consequences

- Decreased production in Europe and falling utilization
- Slow-down on the fuel market in 2013, expected to recover further
- Adaptation to environmental requirements
- New regulations on HFO / bunker fuel
- Climatic regulations connected with the Climate Package 20/20/20
- Medium-term prospects for refining margins remain unstable
- Next 5 years expected to be average flat vs last 5 years average
- Growing speculation on the raw material markets

Risk mitigation

- Consolidation with the Petrochemical and Energy Segment
- Strengthening of cooperation between Refineries of the Capital Group
- Reduction of energy consumption of technological processes
- Optimisation of management of heavy vacuum residue
- Construction of the Flue Gas Desulphurisation Installation, Selective Catalytic Reduction
- Optimization of types of processed crude oil
- Increase in the yield of high-margin white products
- Extension of value chains of products

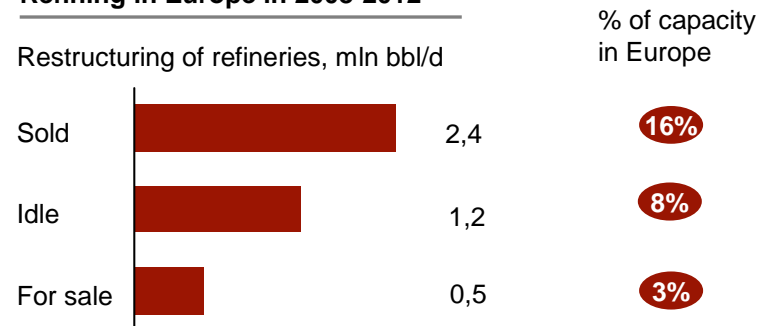
Refinery utilization rate in Europe*, %



*Average utilization rate in 2008-2011 was 82.5%

Source: BP Statistical Review of World Energy; „A Cinderella Story?“ Restructuring of The European Refining Sector Clingendael Energy Paper

Refining in Europe in 2008-2012



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PKN ORLEN maintains secure and efficient supply of main feedstocks

Crude oil

- First direct contract with a Russian producer (Rosneft) for crude oil purchase, securing 6 mt/y delivery until early 2016
- Relying on a flexible spot market for remaining volumes not secured under long term contracts
- Alternative routes of supply are available
- Price risk exposure is being managed systematically

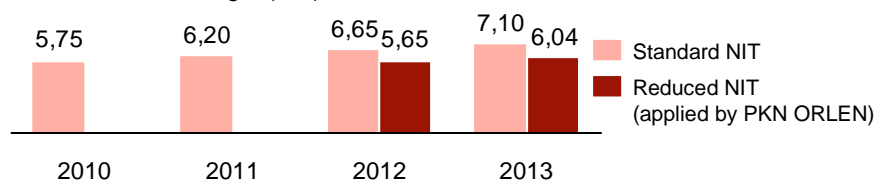
Long term contracts for crude oil delivery to Plock



Biocomponents

- Efficient procurement within PKN ORLEN – 2013 volumes are secured
- Costs optimization – reduced NIT approach is applied
- Sales of ether-ethanol petroils – efficient NIT execution by means of maximizing ethanol share

National Index Target (NIT), %

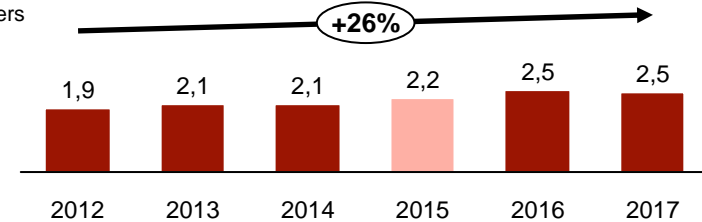


Source: PKN Orlen

Gas

- High bargaining power with gas suppliers
- Active procurement of gas on international markets (EEX, TGE, top gas producers, prospectively LNG)
- Gas portfolio optimization – adjustment of gas portfolio to fit the producing units needs and flexibility
- Key gas infrastructure secured

Gas consumption in PKN ORLEN Group, billion sq. meters



Gas market development provides upside potential



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By 2017 energy consumption rate of PKN ORLEN Group will decline by 4pp

Optimization of energy consumption ...

Key challenges to address

Importance

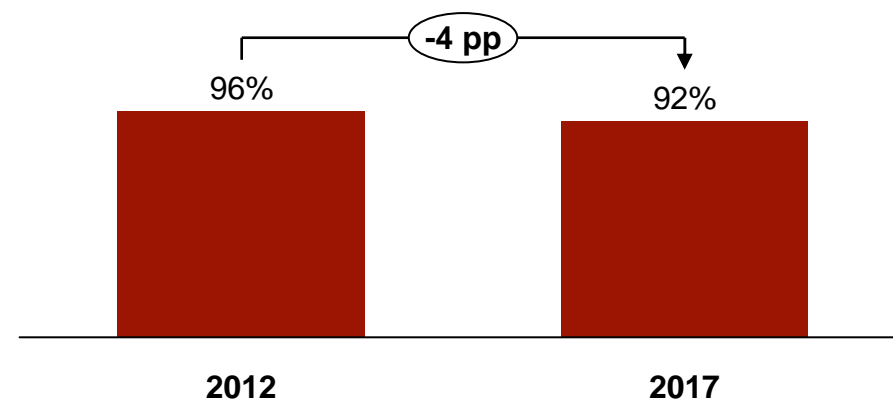
- Reduction of heat losses
- Reduction of hydrocarbon losses and own consumption
- Reduction of energy consumption in technological processes



...through ...

- modernization of steam networks, condensate and thermal insulations
- modernization of flares' burners (Płock Plant, ORLEN Lietuva)
- increase hydrogen recovery in Płock
- change of use of fuel gas, process gases and hydrogen to nitrogen in Płock
- enhancement of efficiency of process kilns, heaters, electric motors, compressors

... will lower energy use (EI) by 4pp



Best in class energy effectiveness



Source: PKN Orlen; calculation based on Solomon methodology

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PKN ORLEN will benefit from white product yield improvement by 1pp

Improvement of white products yield ...

Key challenges to address

- Introduction of new production technologies
- Construction of new refining units
- Modernization of process parameters (including modernization of existing installations)

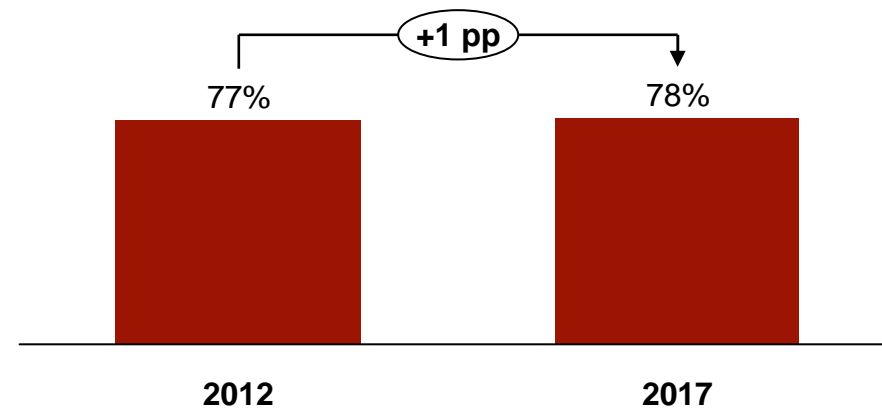
Importance



...through ...

- introduction of MSAR technology and new generation catalysts for conversion processes
- construction of VVF installation in ORLEN Lietuva
- increasing sharpness of the regime in oligomerization unit in ORLEN Lietuva
- increasing conversion in visbreaker unit in CR
- implementation of an APC system on production units
- modernization of distillation column internals
- modernization of vacuum systems in vacuum processes

... will lead to a higher and stable yield rate



Higher and stable white product yield improves EBIT



Source: PKN Orlen

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Current assets optimization will enable to keep higher utilization rate without unnecessary assets overdevelopment

Optimisation of the use of assets ...

Key challenges to address

➤ Extension of overhaul intervals

➤ Recertification of refinery units

➤ Modifications to the existing processes

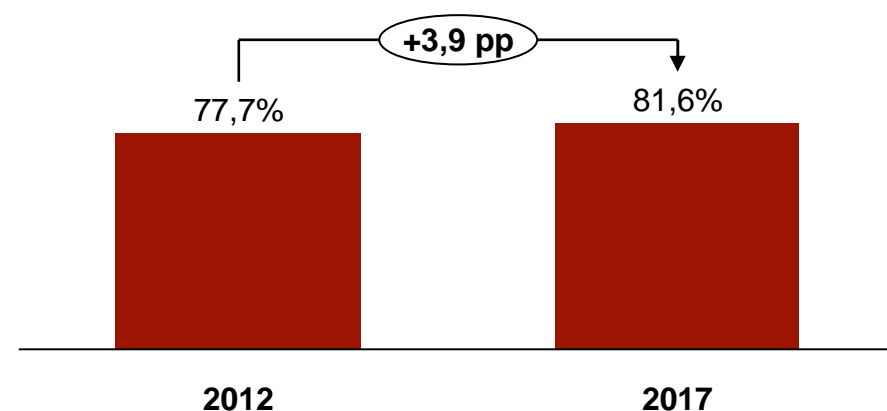
Importance



...through ...

- extension of working hours FCC, HCR, Reforming and diesel HDS units in Plock
- extension of overhaul intervals in Lithuania and the CR
- Recertification of FCC, Oligomerisation in ORLEN Lietuva
- increase production capacity of HDS in Plock
- increase in capacity of ORLEN Lietuva to 11 mm T/year
- construction of Degumming installation (Trzebinia)
- increasing the capacity of the unloading of LPG in Litvinov

... will increase utilization rate by ~4pp



Keeping high utilization rate



Source: Internal data of PKN Orlen Midterm Plan 2013-2017

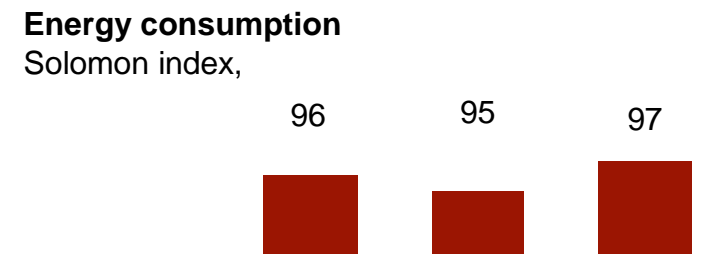
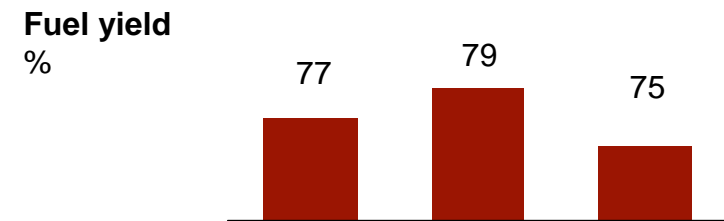
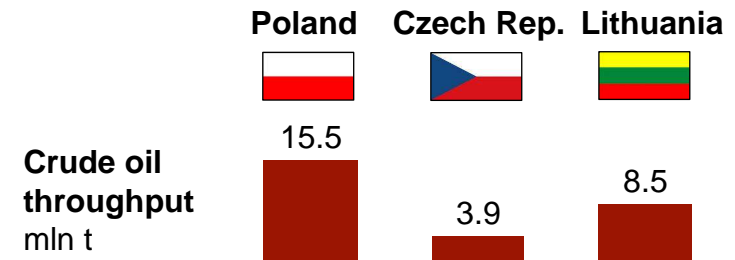
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PKN ORLEN is owner of high class refining assets in Central Europe

Refining assets of PKN ORLEN, 2012



- Refinery in Plock classified as a super-site
- Modernized refining assets in Lithuania and in Litvinov
- Prepared for regulatory and market trends changes thanks to investment projects execution



* due to performed shutdown
Source: PKN Orlen, calculation based on Solomon methodology



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Integrated high-class assets of Plock are located in stable region with attractive market opportunities

High-class assets of Plock refinery

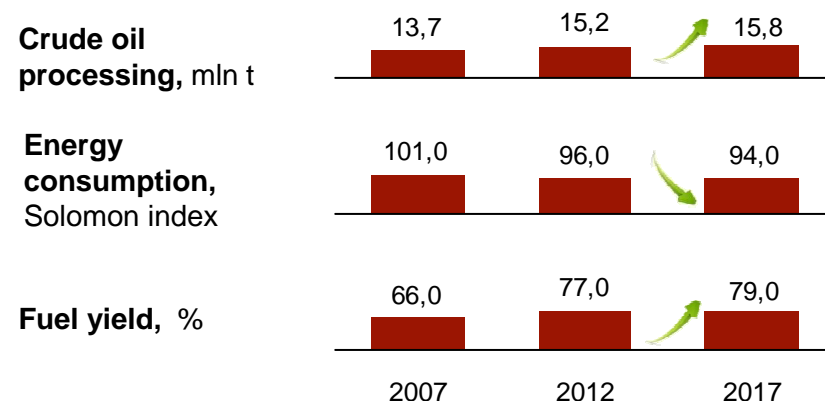
- **Plock refinery is classified as supersite due to high Nelson index, white product yields and petrochemical integration**
- **Nr 5th largest refinery in Europe**
- **Very strong competitive position and favorable localization at very attractive market**

Strengthening of PKN ORLEN's position in Poland through impressive investment program

Key investments of PKN ORLEN in Poland in 2007-12, mln USD

HON VII	158	➤ Diesel hydro desulfurization unit with 260 t/h capacity
OOG-420	95	➤ New boiler with 420 t/h of steam capacity to meet growing demand for heat and electricity
Hydrogen plant II	63	➤ New hydrogen plant with 130 t/day capacity
Other	96	➤ Claus column, cracking modernization, alkaline installation ramp-up and others
Total	412	

Stable operational results despite tough market conditions

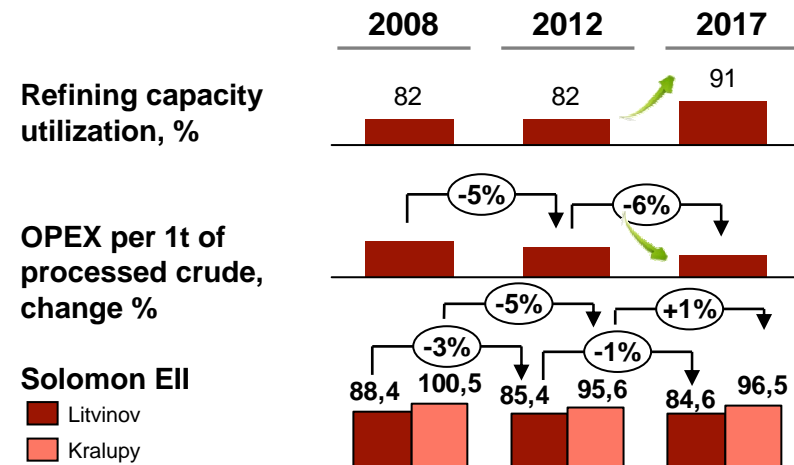


Completed investments improve efficiency and support EBITDA growth

Source: PKN Orlen; calculation based on Solomon methodology

Unipetrol refinery segment to focus on further efficiency improvements

Focus on improvement of effectiveness...

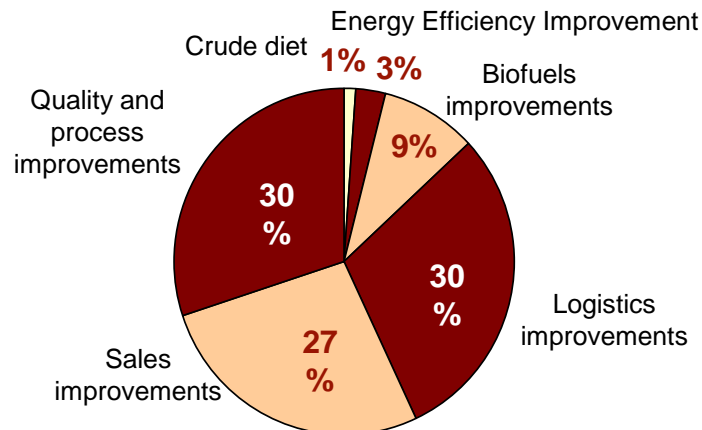


...plus leveraging unique advantages against the difficult environment...

- **Unique** geographic and operational **integration** of refinery with **petchem** and **retail** assets
- **Adverse macro** and **crude differential** development
- Burden of **renewable surcharges** increasing **energy costs**
- **Above market tariffs** for crude oil transportation and product distribution
- **Grey zone** at the level of **15-20%** of the market

... will bring operational profitability

Planned effects distribution in years 2013-2017



Excellence in operations



Source: Unipetrol

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ORLEN Lietuva success story: from modest entrant towards the top performer among the PKN ORLEN Group

Key actions taken in 2008-12...

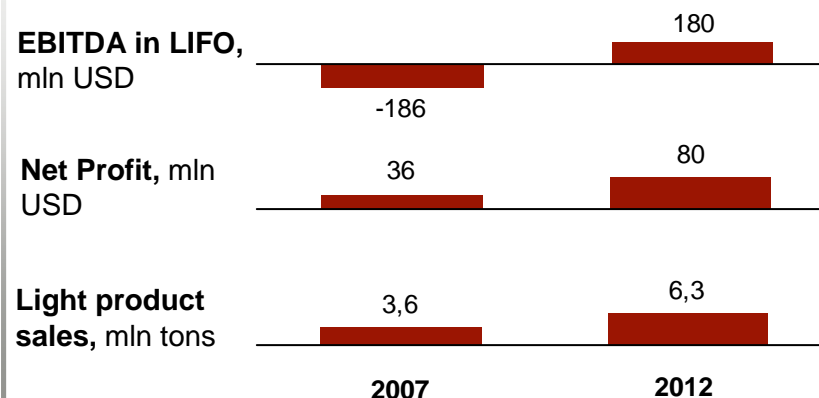
Operational levers

- USD 1 bn worth modernization program with focus on:
 - light product yield increase
 - increase of utilization rate
 - energy efficiency improvement
- Headcount restructuring

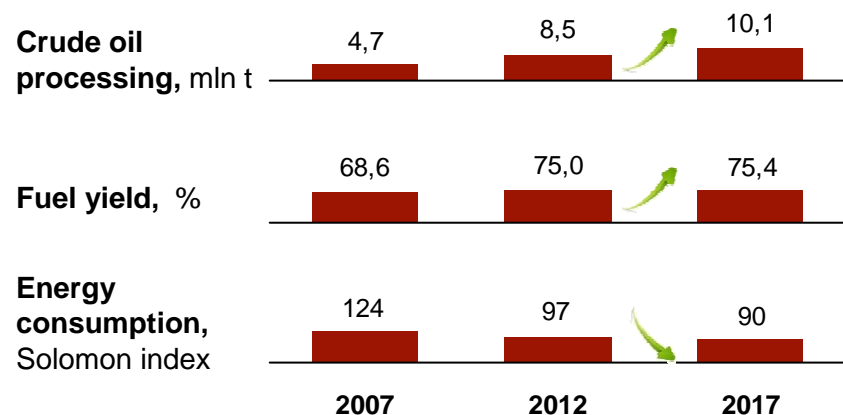
Financial levers

- Debt restructuring
- Sales channels efficiency increase

...resulted in improvement of financials...



...as well as operational results



Critical actions to be taken will strength ORLEN Lietuva's positions in the Baltic region

Further fuel sales increase

- Baltic market share increase
- Improvement of Seaborne sales margins

Value creating investments

- Product pipeline to seaport to improve fuel sales efficiency
- Visbreaker Vacuum Flasher project

Further improvement of operational excellence

- Upgrade the processing capacity up to 11 mln tones/year
- Reduction of the Personnel index by 40%

Source: ORLEN Lietuva; calculation based on Solomon methodology



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Refining at PKN ORLEN – key fundamentals of our balanced approach

Risk awareness boost up the adaptability for future changes

- Adaptation to environmental requirements
- Increase in the yield of high-margin white products to secure refining margins
- Strengthening of Refineries cooperation to mitigate slow down of market in 2013
- Secured the efficient supplies of main raw processing materials

Maximization the operational excellence strengthens the leading position of PKN ORLEN in future

- Reduction the energy consumption rate (EII) by 4pp
- White product yield improvement by 1pp
- Increase of utilization rate by ~4pp
- Optimal capex expenditure without unnecessary overdevelopment

Strong position on refinery markets results as vital component in multi-utility concept

- Progressive integration of refinery with petchem and retail assets
- Strong and stable cash flow for development of new segments,
- Unique knowledge of highly qualified technicians and management support new business opportunities



Source: PKN Orlen

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Agenda

Refining - Production

➤ Refining - Sales & Logistic

Retail

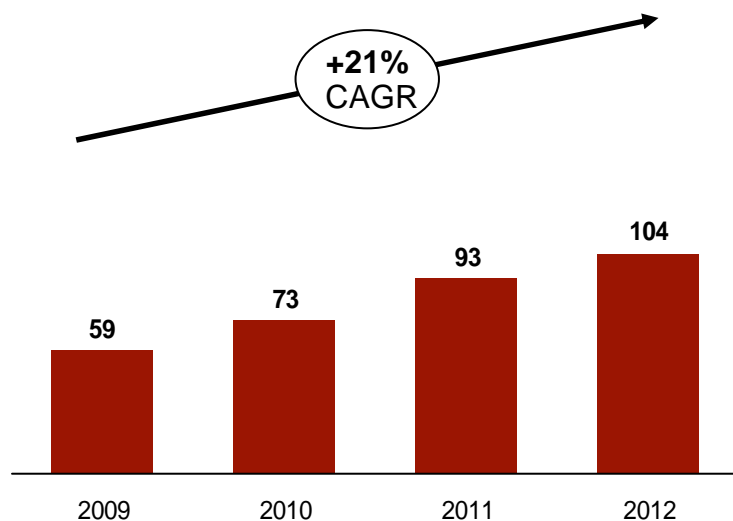
Petrochemicals



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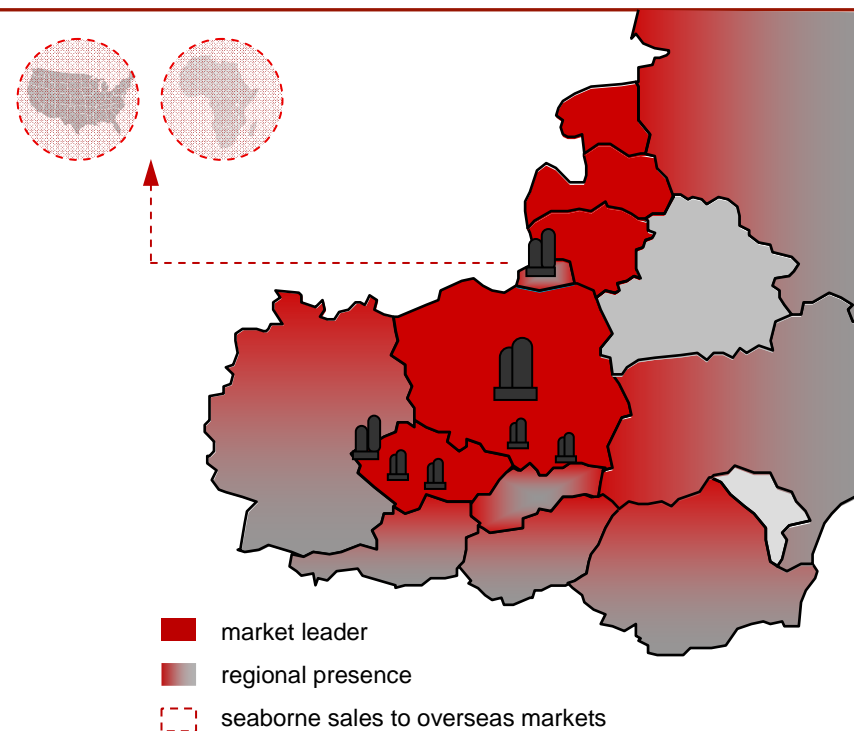
PKN ORLEN - strong position on competitive markets

ORLEN Group revenues: refinery & retail billion PLN



- The only Polish company in Fortune Global 500 List
- More than 30 mln tonnes of sales with over 22 mln tonnes of white products

ORLEN Group market presence



- Leadership position on all home markets
- Strong presence in Germany
- Further growth opportunities on all markets
- Wide export alternatives both inland and seaborne

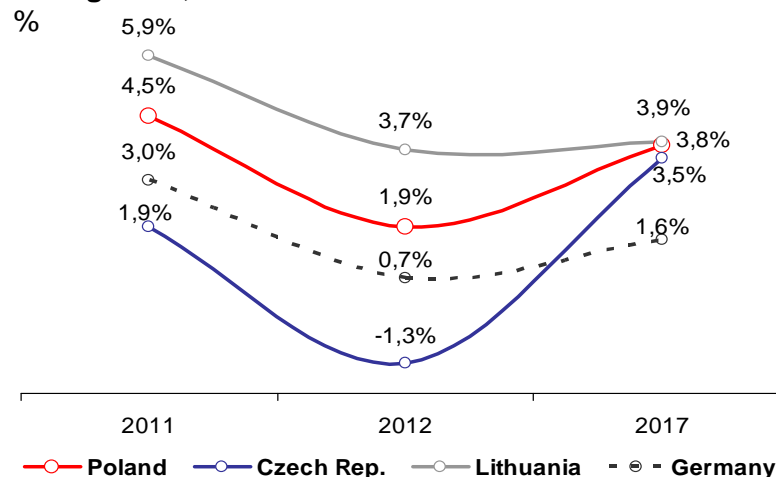


Source: PKN Orlen

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MARKET DEVELOPMENT - high sales potential in Central Europe

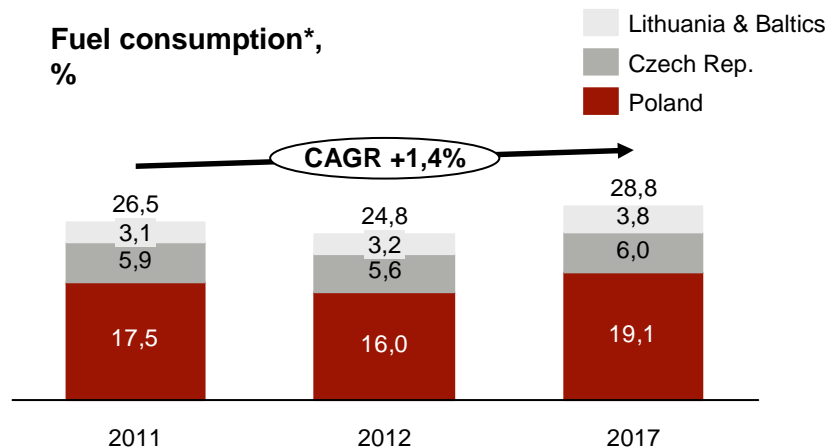
GDP growth,



Higher average market growth vs. Germany thanks to:

- Higher forecasted GDP growth
- High positive correlation between GDP and fuel consumption
- 50% gap in fuel consumption per capita between CE and Germany

Fuel consumption*,



Fuel sales gravity center located on the fastest growing markets in Europe

* Gasoline, Diesel, LHO;













Source: Eurostat, PKN Orlen, Poland - Energy Agency, Czech Rep. - Český statistický úřad (Czech Statistical Office), Baltics - Lietuvos Statistikos Departamentas (Statistics Lithuania), Valsts ieņēmumu dienests (Latvian State Revenue Service), Maksu- ja Tolliamet (Estonian Tax and Customs Board) and PKN ORELN 2017 assumptions



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WHOLESALE & LOGISTICS - highly integrated regional player

Critical KPI's for Wholesale & Logistics

	2011	2012	2017
Share in home markets, %	53	55 	+3pp 
Inland sales volume, index, 2012=100	102	100 	+17 
Sales/production ratio, %	114	114 	+4 pp 
Share of pipeline expedition, %	70	72 	+8pp 
Caverns capacity, mln cbm	5,3	5,3 	+0,6 
Normalized total unit logistics cost*, index, 2012=100	101	100 	-3 

➤ Strengthened **coordination and further enhancement** of ORLEN Capital Group synergies

➤ Development of **long-term relationships with inland clients**

➤ **Secure demand** for refined products that **enables refinery optimization**

➤ Enhancement of inland competitive advantages:

- **increasing pipeline** expedition vs railway
- increasing **low-cost own storage** capacity
- higher **utilization of own logistics assets**



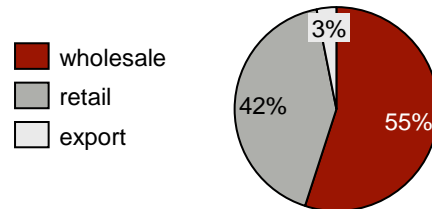
* without future unknown tariff changes
Source: PKN Orlen

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WHOLESALE & LOGISTICS – key strategic directions

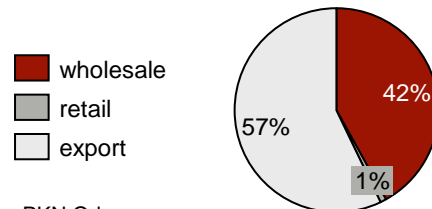
PKN ORLEN

- Increase of **domestic sales** including own retail
- **Strengthening relationships** with clients
- **Enhancing operational excellence** and flexibility in logistics
- **Fight against grey zones** development



ORLEN Lietuva

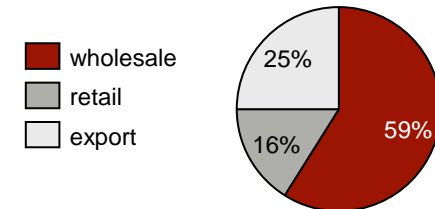
- Increase of **inland sales**
- Further development of **trading competences**
- Active search for **solutions to logistics constraints** in Lithuania (eg. product pipeline)



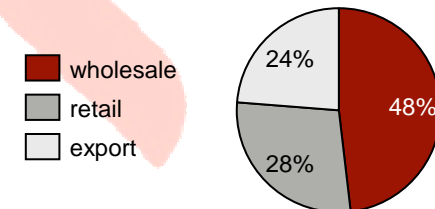
Source: PKN Orlen

Unipetrol

- **Increase of wholesale and retail** fuel sales
- **Development of exports** including supply to own retail network in Germany
- Active search for **solutions** to market disturbances such as **grey zone** or abuse of **CEPRO/MERO monopolistic position**



Emphasis on relationships with inland clients and building on competitive advantages in logistics



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WHOLESALE & LOGISTICS – summary

Strategic focus

- Strengthening relationships with inland clients
- Support for fight against grey zones
- Focus on competitive advantages in logistics:
 - increase of pipeline deliveries
 - maximization of own fuel depots utilization

Strong competences

- Highly integrated businesses
- Well balanced channels of trade
- Lowest logistics cost to demand centers



Source: PKN Orlen

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Agenda

Refining - Production

Refining - Sales & Logistic

➤ **Retail**

Petrochemicals



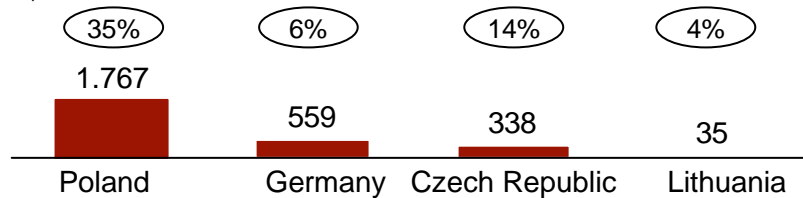
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RETAIL - competitive advantages

Unquestionable leader on the fuel market in the region ...

- **The largest retail network** ~2 700 of fuel stations in Central Europe
- **Leader on the retail market in Poland, strong position in the Czech Republic and regionally in Germany**

No of fuel stations and market shares, 2012
#, %



... with modern retail network and strong brand ...

- **ORLEN brand** – strong, recognizable and the most valuable in Poland (PLN 3,8 bn)
- Implementation of modern concept of **Stop Cafe and Bistro Cafe**
- **Successful rebranding** of fuel stations strengthening increase of market share



... and the largest group of loyal customers in Poland.

- Confirmed by consumer research **the highest quality of service** among fuel stations customers in Poland in 2012
- The largest **group of loyal customers** in Poland, confirmed by success of VITAY and FLOTA programs (2,5 m of active customers)

VITAY

* Poland, Lithuania, the Czech Republic
Source: PKN Orlen



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Modern and the largest sales network in the region with strong and recognizable brand



RETAIL - value creation levers

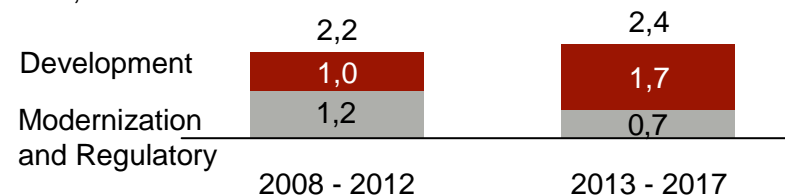
Increase of market shares and development of non-fuel sales ...



... in connection with investments seizing market opportunities ...

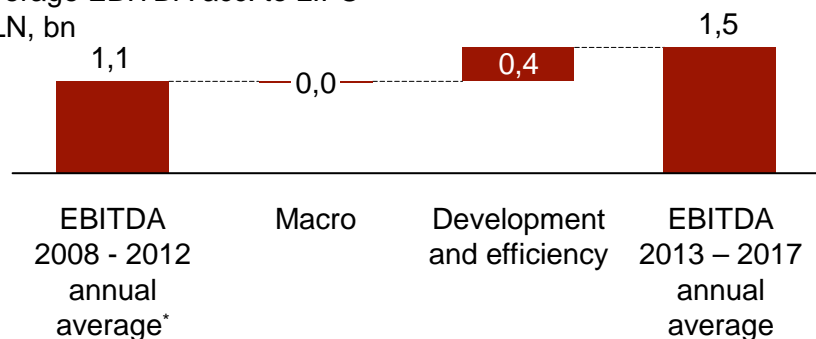
- Increasing of expenditures on **retail network development**, including highway fuel stations
- **Intensification of non-fuel offer**

CAPEX in retail
PLN, bn



... will bring significant increase of EBITDA and cash flow.

Average EBITDA acc. to LIFO
PLN, bn



Market share increase and development of non-fuel sales supported by strong and recognizable brand

* average EBITDA 2008-2012 adjusted by value of impairments from fixed assets revaluation on the level of PLN 15m
Source: PKN Orlen



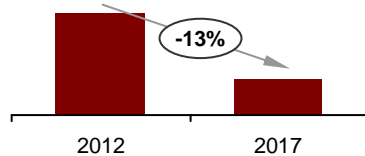
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RETAIL - key strategic directions

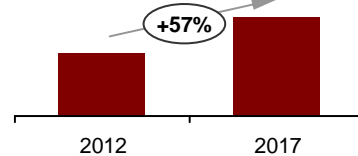
Poland

- **Network development** based on ORLEN brand
- Implementation of **new convenience concept**
- Further development of **food & beverage offer**
- **Concentration on operational excellence** (cost optimization, franchise offer, customer service, operational standards)

Retail unit cost, index, 2012=100



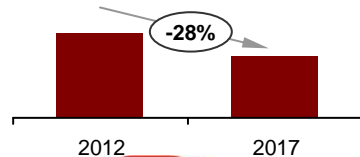
Non-fuel margin, index, 2012=100



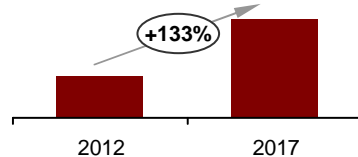
Czech Republic

- Strong support for regulatory **solutions against grey zone**
- Active **participation in the market consolidation** once grey zone is defeated
- Tests of **unmanned concept**
- **Concentration on operational excellence** (cost optimization, mode of operation, customer service)

Retail unit cost, index, 2012=100



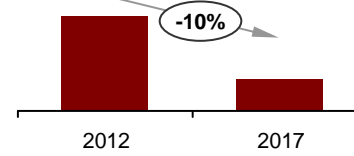
Non-fuel margin, index, 2012=100



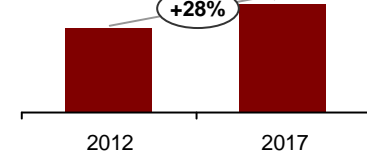
Germany

- One of the **strongest B-brands**
- Ambition to build a **country-wide network**
- Possible **further acquisitions** on the largest, relatively stable market in Europe
- **Solid financial performance**

Retail unit cost, index, 2012=100

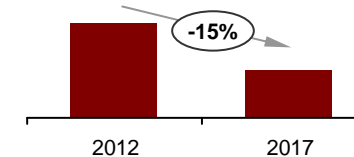


Non-fuel margin, index, 2012=100

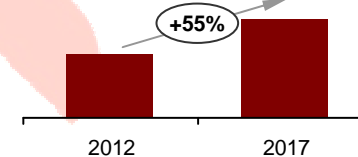


Well positioned for further development in Poland and Germany while actively involved in combat against grey zone in the Czech Republic

Retail unit cost, index, 2012=100



Non-fuel margin, index, 2012=100



Source: PKN Orlen



ORLEN

RETAIL - fuel sales development on Rest & Service Areas

Map of Rest & Service infrastructure in Poland



- **PKN ORLEN with 42% share in RSAs is a market leader in Poland**
- **Finalized tenders for 72 RSAs (30 won by PKN ORLEN)**
- **Currently 41 RSAs in operation (19 ORLEN)**
- **PKN ORLEN plans to add app. 15 out of 55 potentially available RSAs till 2017**
- **In 2014 closure of up to 1000 sites on the Polish market due to environmental requirements**

Source: GDDKiA and PKN Orlen



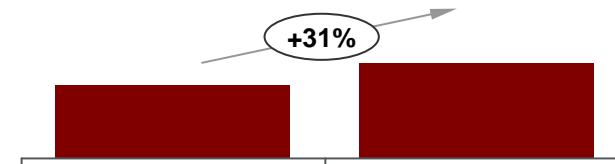
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RETAIL – drivers for convenience and QSR development in Europe

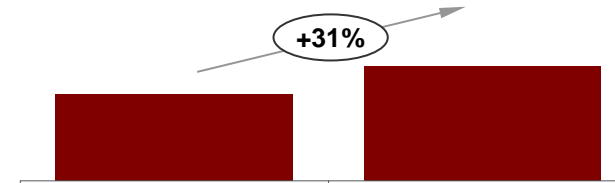
Factors driving growth in the convenience & QSR market:

- **Aging population** reducing the attractiveness of the large hypermarkets shop
- **Increasing female employment** resulting in less time for traditional supermarket shopping
- **Longer working and commuting hours** resulting in fewer opportunities to shop during traditional shop opening hours
- **Changes in traditional family structures** resulting in fewer households with a housewife taking care of cooking/shopping
- **Changes in eating habits** and more popular acceptance of fast food

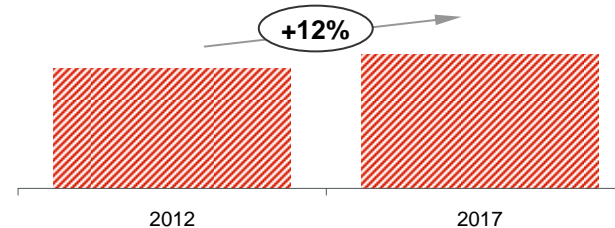
Convenience store sales, index, 2012=100



Quick Serve Restaurants



Traditional and big box retailers

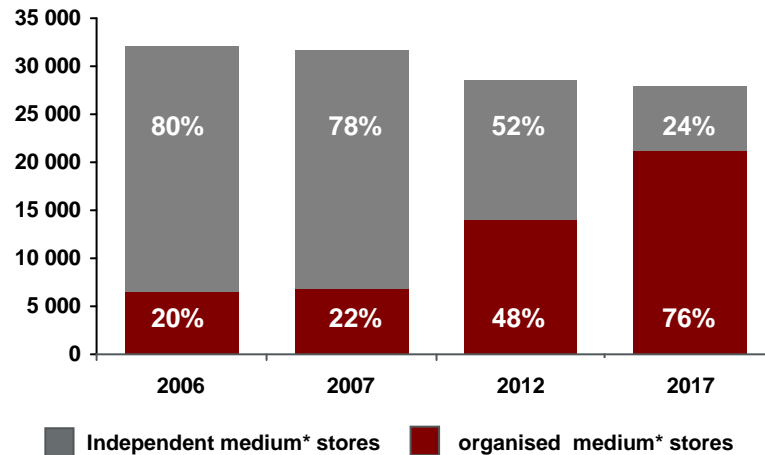


Source: PKN Orlen

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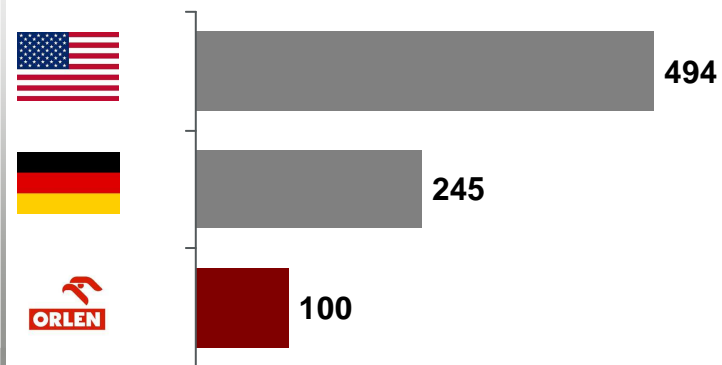
RETAIL – convenience sales potential for growth

Building on opportunities...

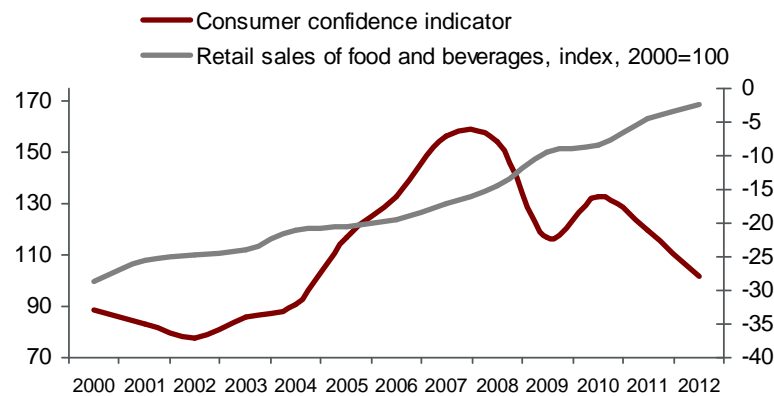


...offered by market with further growth potential...

Non-fuel Gross Margin per store, (index, PKN=100)



...that is immune to economic downturns.



**Building on opportunities
offered by market with
further growth potential that
is immune to economic
downturns**



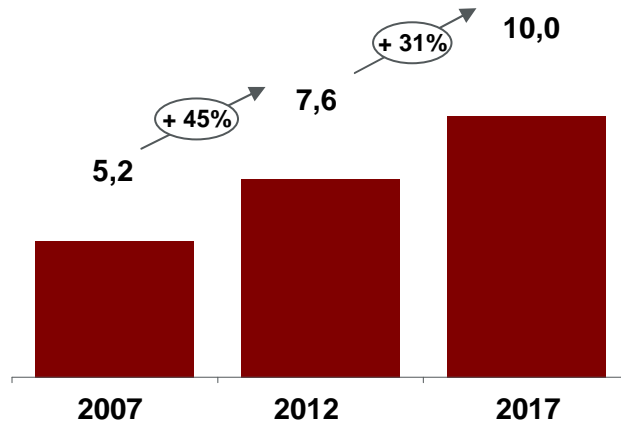
*40 – 100 sqm
Source: PKN Orlen, BCG

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RETAIL – growing importance of food offer

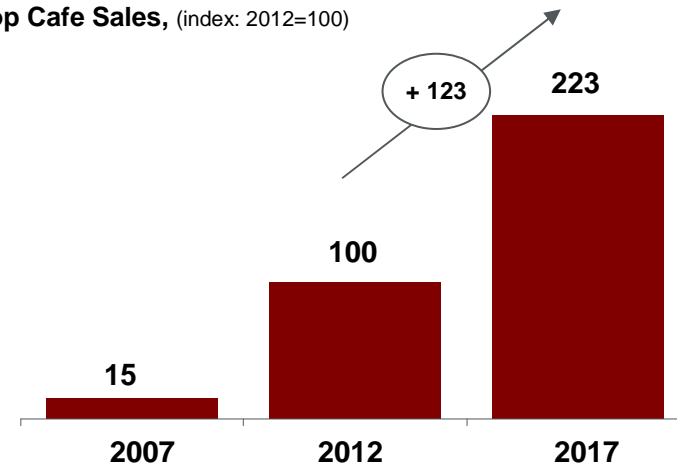
Expected strong growth of QSR channel...

QSR Revenues in Poland, bn PLN



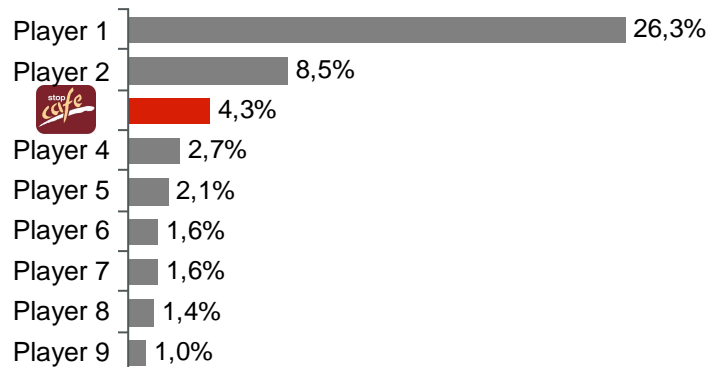
... and development of PKN ORLEN offer...

Stop Cafe Sales, (index: 2012=100)



... will help to improve already strong position on the Polish market.

Top players on the Polish QSR market, (market share %)



Expected strong growth of QSR channel and development of PKN ORLEN offer will help to improve already strong position on the Polish market



Source: PKN Orlen

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RETAIL at PKN ORLEN – summary

Cash generation

- Average annual EBITDA 2013 – 2017 at PLN 1,5 bn (improvement by +400 mln vs previous period)
- Capex 2013 – 2017 at PLN 2,4 bn while EBITDA at PLN 7,5 bn
- Strong and stable cash contribution over PLN 5 bn till 2017

Strategic focus

- Strong support for regulatory solutions against grey zone
- Further network development
- Improvement of market effectiveness
- Development of convenience and food offer
- Concentration on quality and cost discipline

Strong competences

- 2012 Award for Best Fuel Station in Poland
- 2013 Award for Best Food & Beverage Offer at fuel stations
- 2013 Best in class by independent surveys in terms of customer service quality at retail stores
- 2013 Golden Statue for the most trustworthy brand from the European Trusted Brands
- 2013 Fleet Award for Open Drive – International Fleet Card
- Largest loyalty programme with nearly 2,5 mln active customers
- Largest fleet card programme with 0,5 mln active fleet cards



Agenda

Refining - Production

Refining - Sales & Logistic

Retail

➤ **Petrochemicals**



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Competitive advantages

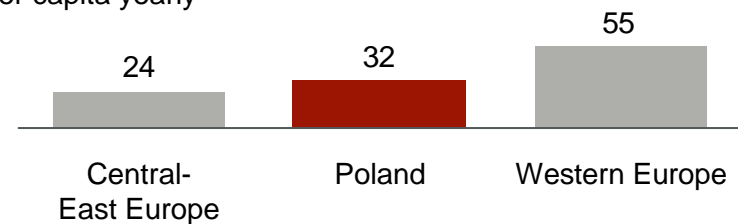
Integrated petrochemical producer ...

- **The largest petrochemical company** in Central Europe*
- **New units**, including PX/ PTA, polyolefin, butadiene
- **Integration** with refinery giving a good position on the cost curve

... with a strong position on growing market ...

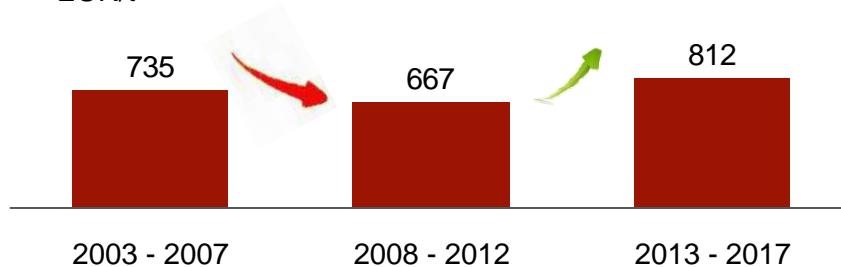
- **Growing market** of Central Europe
- **Strategic regional supplier** for chemical industry
- Attractive **portfolio of products**

Consumption of polyolefin per capita in Europe, 2011
Kg per capita yearly



... creates potential for value increase, taking also advantage of business cycle.

Average model petrochemical margin
EUR/t



New units and attractive portfolio of product allocated on developing markets

*Poland, Lithuania, the Czech Republic
Source: PKN Orlen



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Value creation levers

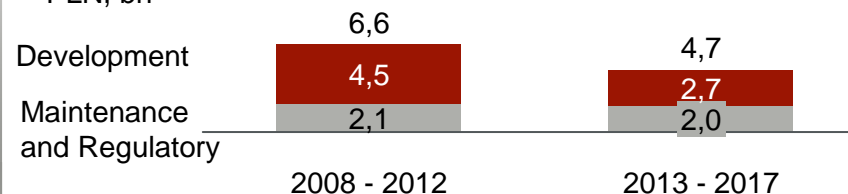
Utilization of units and sales increase ...



... and realization of growth projects ...

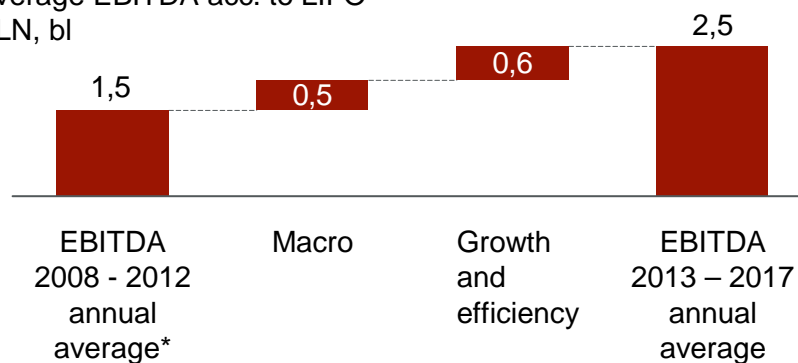
- Due to finalization of PTA project, **lower but still significant expenditures** on segment development
- **Growth projects** broadening offer of high-margin products

CAPEX in Petrochemicals
PLN, bn



...will lead to significant increase of EBITDA and cash flows.

Average EBITDA acc. to LIFO
PLN, bl



Sales increase and widening of the high-margin products portfolio

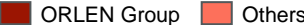
*average EBITDA 2008-2012 adjusted by impairments from fixed assets revaluation (PLN + 0,3 bn). Macro effect calculated based on model petrochemical margin including exchange rate.

Source: PKN Orlen



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ORLEN Group – largest petrochemical company in CEE located close to markets protected by inland premium

ORLEN Group's market share in production, %	Relevant market definition*	Our advantages
		
PTA	Europe and Turkey	➤ Benefits from integration with refinery assets
Ethylene	Central Europe	➤ Good location in growing region
Propylene	Central Europe	➤ Natural logistic protection against import from other continents
Benzene	Central Europe	➤ Relatively new PE and PP Units
Butadiene	Central Europe	➤ Motivated, open for changes and target oriented team
Polyethylene (HDPE)	Central Europe	➤ Third position among PTA producers in Europe with 14% of market share
Polypropylene	Central Europe	➤ Significant market share in all petrochemical products in the region
Phenol	Central Europe	➤ No announcements on new investment project competitive to ORLEN Group in CE
PVC	Central Europe	➤ Located in the CE market with a strong and stable demand growth - CAGR 2012-2025: butadiene +5,5%; benzene +4,5%, polyethylene HDPE +3,5%, polypropylene +3,6%, ethylene +1,1%, propylene 3,1%
Fertilizers	Poland	

*Central Europe: Albania, Bosnia & Herzegovina, Bulgaria, Montenegro, Czech Republic, Estonia, Croatia, Kosovo, Lithuania, Latvia, Hungary, Macedonia, Poland, Romania, Slovakia, Slovenia, Serbia
Source: ICIS, PKN Orlen



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Petrochemical market will rebound after the recession. Margins and capacity utilization will improve worldwide



- Petrochemical market is cyclical with an average duration of cycle about 6 years



- Currently market is still suffering from recession however we expect to see a growth from around 2014



- In 2015 – 2016 we expect that petrochemical cracks for monomers and polymers will grow to highest level in the cycle due to rebound of the global demand (especially in both Americas and Asia)



- Cracks for aromatics will continue its growing trend, with maximum in 2015. Development of ethane based crackers will create additional pressure on ethylene, however naphtha crackers will benefit from byproducts i.e. propylene, aromatics and C4



- CEE region will develop in faster pace to close consumption gap in almost all petrochemical products



- Reports from recognized advisors confirm that margins and capacity utilization will improve in the next 5 years



- There is a trend to develop alternative production technologies of olefins due to shortages (excluding ethylene) and relatively high prices of crude oil



Source: PKN Orlen

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Range of petrochemical markets in Central Europe offers different growth perspectives (1/2)

Market trends of selected products in Central Europe, 2013- 2017

Polymers	Poliolefins		➤ Central and Eastern Europe will face stable demand growth, due to expected GDP growth rates as well as closing the gap to Western European level of consumption per capita
	PVC		➤ Weak growth of demand in Central and Eastern Europe with planned expansion of production capacities leading to minor unbalance on the market
PTA	PX/PTA		<p>➤ Europe will continue to be long PTA market due to production capacities growth (Eastern Europe) that is not accompanied by demand growth</p> <p>➤ PTA producers will be forced to place part of their production outside Europe, while we focus on inland sales (inland premium)</p>
Fertilizers	Nitrogen fertilizers		➤ Demand in Western Europe as well as in Central and Eastern Europe will remain stable, while pressure from Eastern European producers will grow (Russia, Ukraine) – expected EU decision on customs in Q3 2013







Source: Tecnon; Global Insight; CMAI

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Range of petrochemical markets in Central Europe offers different growth perspectives (2/2)

Market trends of selected products in Central Europe, 2013- 2017

Monomers and aromatics	Olefins		<ul style="list-style-type: none">➤ Central Europe remains a net importer of propylene from CIS and MEA and that's why we consider metathesis project (additional propylene)➤ Western Europe is directly exposed to import of ethylene and its derivatives (polyethylene, glycols)
	Benzene		<ul style="list-style-type: none">➤ Strong and stable demand growth (4.5% CAGR) with possibility to place volumes on short Western European market
	Butadiene		<ul style="list-style-type: none">➤ Adoption of the EU's restrictive law on compulsory marking of tires with respect to fuel efficiency fosters growth for SSBR. As a result, Europe is a growing demand for green tires reducing CO2 emissions and fuel consumption
	Phenol		<ul style="list-style-type: none">➤ Modest demand growth in Europe as well as in Central and Eastern Europe due to additional demand that have been declared by Polish chemical companies and potential closures of assets in region allow us to consider construction of new modern phenol plant



Source: Tecnon; Global Insight; CMAI

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Our strategy will improve EBITDA and cash position to secure further growth



Sales strategy focusing on most attractive segments and regions:

- Taking advantage of Central Europe markets potential for growth
- Maximizing sales and margins of key products (polymers, PTA, aromatics)



Analysis of possibilities for petrochemical segment value chain extension:

- Implementation of investment projects (phenol, metathesis, PE3, DCPD)
- Total CAPEX is 2,7 PLN bln of which 1,5 PLN bln is a base scenario and 1,2 PLN bln is accelerated (PE3, DCPD, Fertilizers intensification project)



Full utilization of production plant capacities

- Increasing utilization of plants by implementation of investment projects (metathesis, nitrogen fertilizers revamp)



Reducing production costs by decreasing energy consumption of production units

- Several optimization projects in main production facilities in Poland and Czech Republic



Increasing the availability of plants by extending the cycles between shutdowns



We successfully concluded large investment project worth PLN 4 bn – PX/PTA. This project contributes annually on average PLN 400 mln in 2013-2017 segment EBITDA



Source: PKN Orlen

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PTA – EUR 1 bn investment / 600kt PTA per year



Source: PKN Orlen

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Development plans in Petrochemical Segment capturing market potential in Central and Eastern Europe (1/3)

**PKN
Petrochemicals**

Anwil

**Unipetrol Group-
Unipetrol RPA**

- **Development:** Increasing production capacity in order to take advantage of market potential for Phenol by building new Phenol production unit (CAPEX PLN 800m)
- **Development/Efficiency:** Increasing utilization of plants e.g. by construction of Metathesis unit, i.e. production of additional volumes of propylene using ethylene and C4 fraction (CAPEX PLN 310 m)
- **Efficiency:** Reducing energy consumption through implementation of projects pipeline (mainly in steam cracker plant)



Source: PKN Orlen

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Development plans in Petrochemical Segment capturing market potential in Central and Eastern Europe (2/3)

Anwil

- **Development:** Intensification of nitrogen fertilizers production - additional 350 kt (CAPEX PLN 350 m) in order to exploit market potential for nitrogen fertilizers in Poland
- **Efficiency:** Energy consumption reduction – set of several projects to reduce energy consumption and increase availability of production capacity

Unipetrol Group-
Unipetrol RPA

PKN
Petrochemicals



Source: PKN Orlen

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Development plans in Petrochemical Segment capturing market potential in Central and Eastern Europe (3/3)

Unipetrol Group-
Unipetrol RPA

PKN
Petrochemicals

Anwil

- **Development:** Construction of DCPD production unit in order to extend value chain and expand product portfolio (CAPEX PLN 75 m)
- **Development/Efficiency:** Construction of HDPE production unit replacing existing assets and expanding capacity (CAPEX PLN 800 m)
- **Efficiency:** Utilization of existing capacity – completion of the project of cleaning the refinery-quality propylene for the production of polypropylene (Propylene Cleaning Unit) and several projects aiming at lowering energy consumption



Source: PKN Orlen

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Petrochemicals – fundamentals of our approach



The petrochemical market in CEE has potential to grow: substantially lower consumption of petrochemicals per capita, our strong market position



Strong integration with refinery that secures our feedstock and supports further grow in petrochemical business



Development plans are tailored to the market growth scenarios which will drive level of cash to meet financial KPIs announced in the Strategy



Focus on generating value from existing assets with the segment (sales strategy, reduction of energy consumption, utilization of assets)



Petrochemical segment is significant contributor to PKN ORLEN cash flow in Strategy (target EBITDA 2013-2017 PLN 12,5 bn)



Source: PKN Orlen

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www.orken.pl

For further information please contact PKN ORLEN's Investors Relation Office:

telephone: + 48 24 256 81 80

fax: + 48 24 367 77 11

e-mail: ir@orken.pl

