

LIFE COGENERATION.PL

Project presentation



Arkadiusz Primus
Project coordinator

Budapest,
20th of March 2018

INVESTTEKO S.A. is an environmental consulting and designing company which specializes in all aspects of Environmental Protection, Waste Management and Waste2Energy. Company is listed in the Warsaw Stock Exchange - Newconnect



Environmental expertise



- Environmental impact assessments
- Integrated permits
- Water legal proceedings
- Ecological surveys
- Wildlife studies
- Waste management

Designing



- Building and execution projects for waste incineration plants and wastewater management
- Land reclamation, including the reduction of the negative environmental impact
- Infrastructure and environmental protection.

Outsourcing



- Auditing,
- Monitoring the environment use fees
- Consultancy on waste management
- Monitoring the legal and formal status of the facilities in terms of the environmental protection

Research and development



- Development of innovative environmental technologies
- Consulting on the commercialization of innovative solutions
- Find and raise finances for on-going investment
- Support the process of implementation of environmental technologies

Title of the project: Demo installation for electricity/heat cogeneration with gasification of fuel based on municipal waste and sewage sludge.

Acronym: LIFEcogeneration.pl

Commence date: 2013

End date: 2018

The main objective of Lifecogeneration.pl project is to demonstrate the operation of an innovative technology for the energy recovery of the over-sieve fraction of municipal waste and sewage sludge. The technology consists of a unique gasification process and a highly efficient system for the production of electricity and heat.



1

To construct a pilot-scale prototype demonstration plant that integrates five technological units: fuel preparation, gasification, syngas purification, syngas combustion and production of energy, and exhaust gases purification

2

To test and validate the technology at the demonstration scale in order to verify assumed specifications and functionality

3

To conduct information activities to promote the project and technology

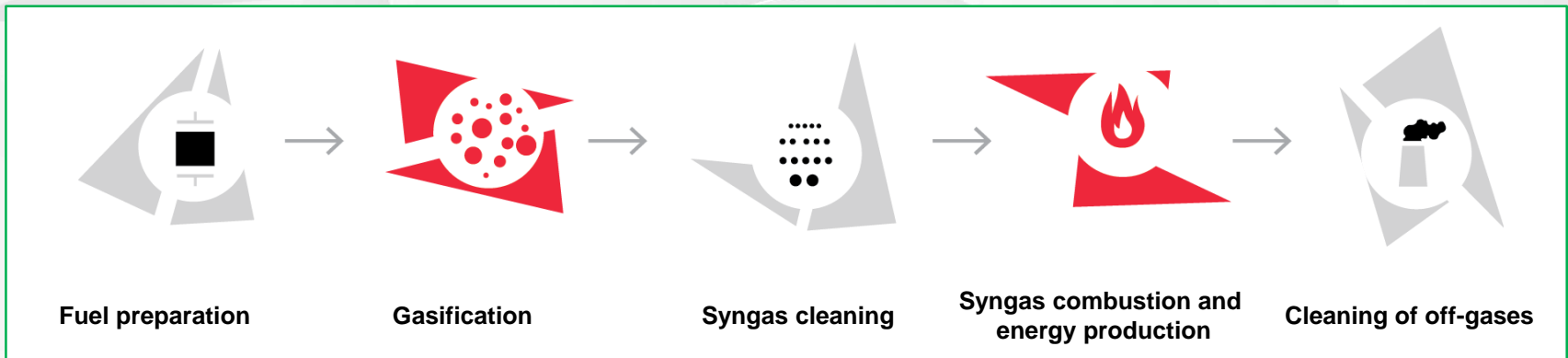
4

To demonstrate and widely present newly developed technology

5

To increase public awareness on the issue of novel methods in thermal treatment of waste.

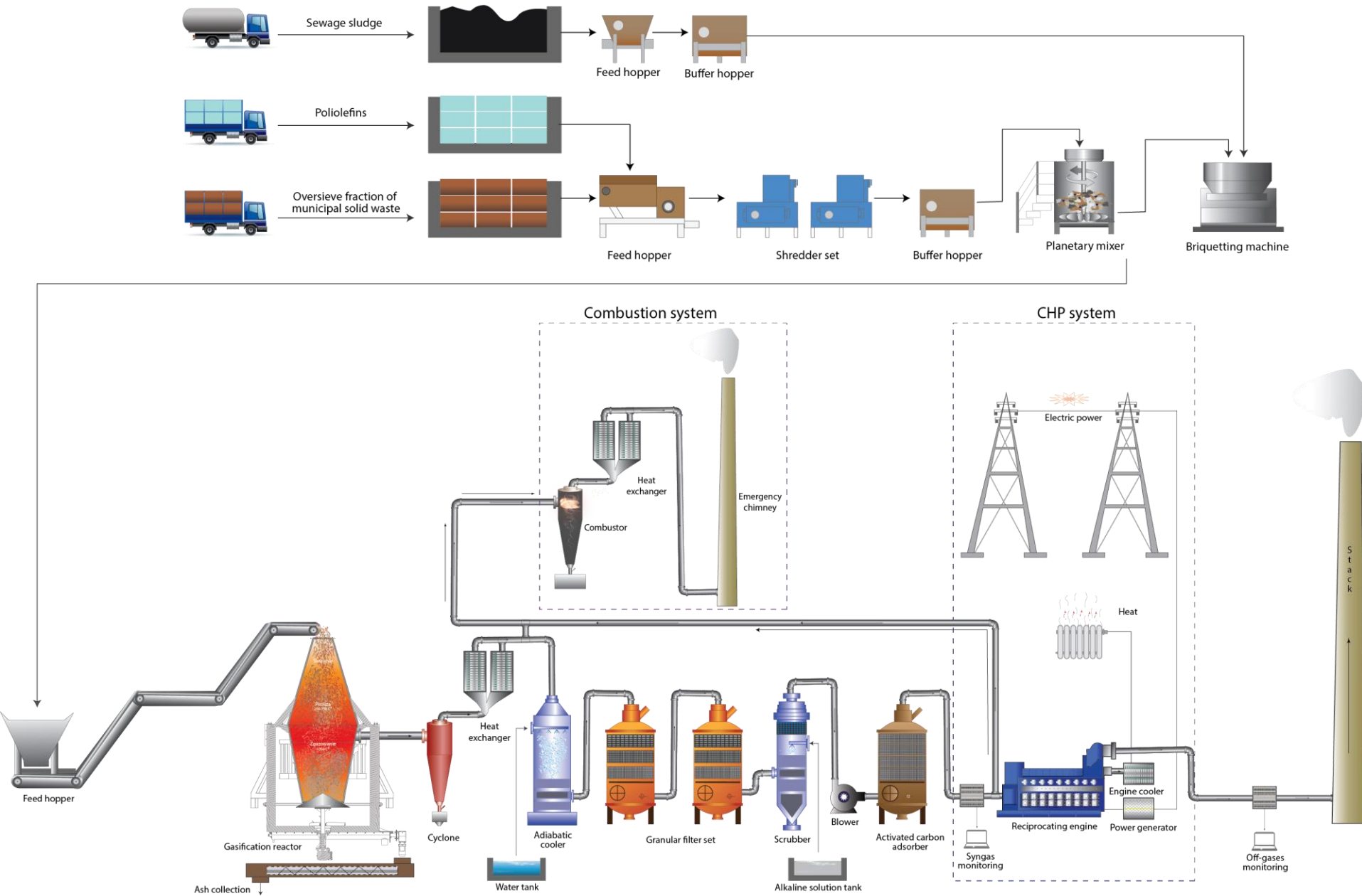
Lifecogeneration.pl, the prototype demo installation for the management of energetic fraction of MSW and sewage sludge with alternative fuel forming, gasification proces and highly efficient cogeneration in a single process line.



The prototype installation will reach the following parameters:

- power in the fuel: **1,3 MW**
- electric power in cogeneration: **180 kW**
- gross thermal power: **500 kW**
- maximum capacity: **300 kg/h**

Schematic flow diagram of Life Cogeneration technology



Difficulties encountered during project implementation

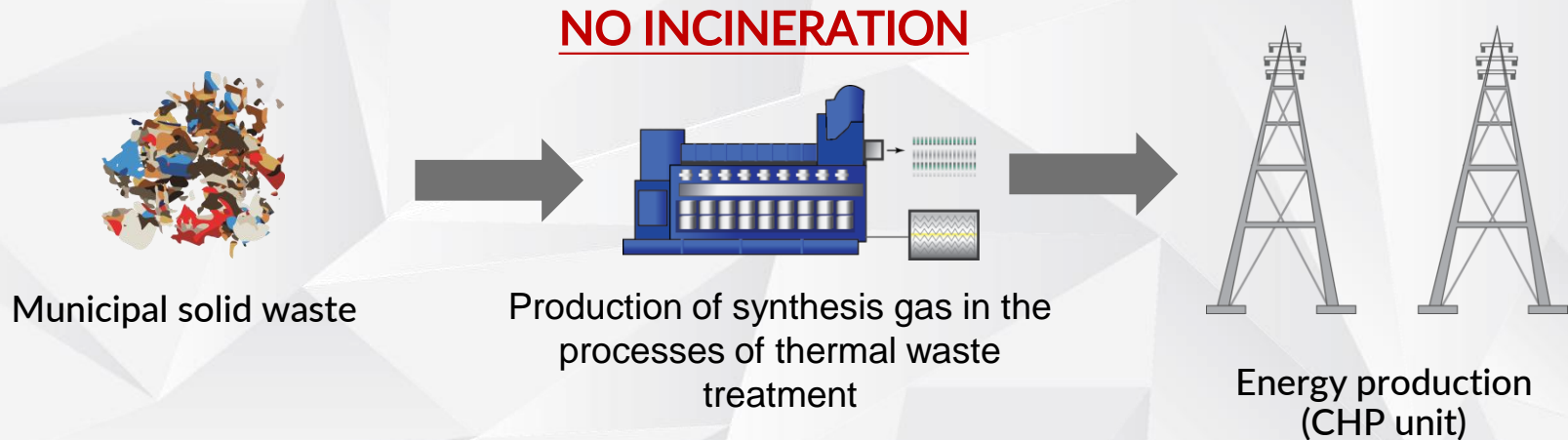
1. Difficulties in obtaining a bank guarantee, which subsequently caused the delay of the advance payment from the EC for more than four months from the date of the project commencement.
2. Partner withdrawal from participation in the project as a co-beneficiary.
3. Change of the laws concerning the Environmental Impact Assessment (Ref. Council of Ministers of 25 June 2013 amending regulation on projects likely to have significant effects on the environment, Journal of Law 17 July 2013). It is mandatory, extended and more complicated EIA procedure for the planned investment.

Difficulties encountered during project implementation

4. **Difficulties associated with the specifics of the plant location.** The foundation of the plant will be located on the remediated land of former mine “Kopalnia Polska”. The results of geological studies at the design stage indicated a discontinuity of geological formations and significant layer of soil embankment of several meters. It forced an extension of the design phase.



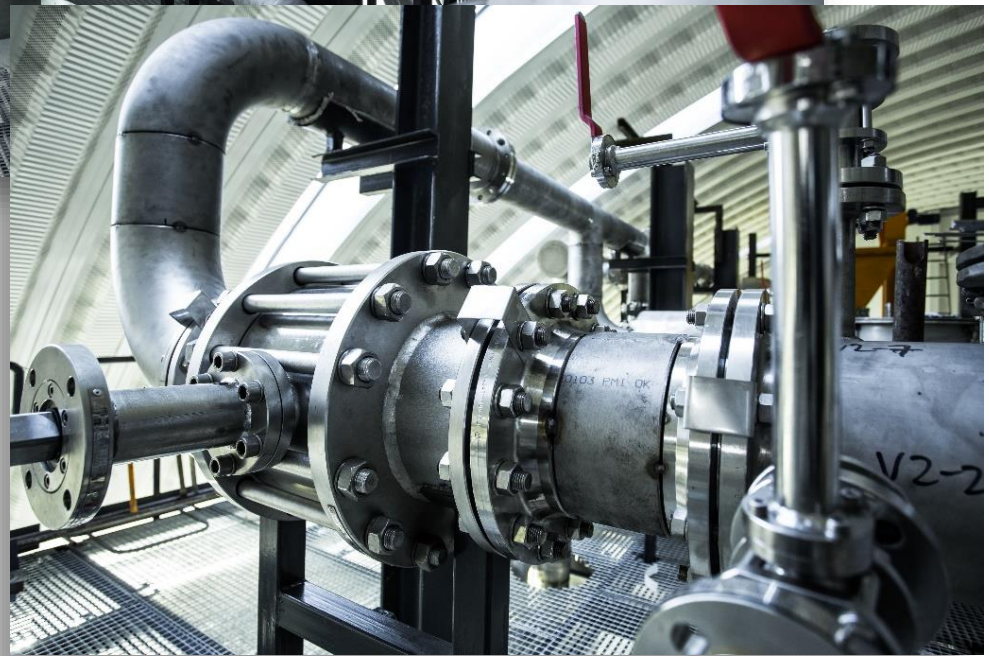
New philosophy of the energy management of waste



- ✓ Polish innovative technology
- ✓ Eco-friendly technology
- ✓ High share of electricity production
- ✓ High rate production of "green" energy

- The implementation of LIFEcooperation.pl has a decisive influence on the ability to develop and implement strategies in the form of guidelines for gasification of waste in Poland and Europe.
- The prototype installation of LIFEcooperation.pl is the first in Poland agreed completely in line with regulations as "**NO-incineration**". The project is a pioneering venture that has paved the way for any commercialization gasification technologies in this part of Europe.
- The widespread use of LIFEcooperation.pl technology in Poland alone will be associated with a reduction of greenhouse gas emissions of at least 1.886.000 Mg CO₂ eq / year.







- Environmental permit
- Change of the environmental permit after the transposition of Industrial Emissions Directive (IED) and article 42 into the Polish law – gasification plants according to the new philosophy
- Emission permit for gasification plant and syngas – March 2016
- Obtained a gasification plant use permit– May 2017
- The installation is the first of its kind in Poland to obtain a R1 recovery status and environmental permit for gasification of waste under the Industrial Emission Directive (IED) rather than the Waste Incineration Directive (WID) – May 2017
- Currently, Investeko S.A. is the only company in the country with complete environmental and building permits for pilot gasification plant, syngas production, and waste to energy.

- **Organizing conferences related to W2E**
(3 conf.– with a total of 470 participants)
- **Municipality debate meetings all over Poland**
(14 debate meetings – with a total of 420 participants)
- **Participation in international trade fair exhibitions**
(Poland, Czech Republic and Romania)
- **Promotion of innovative waste gasification technologies**
(workshops, press, publications, interviews, social media etc.)



No.	DATE	VOIVODSHIP	PLACE	ATTENDANCE
1	26/03/2014	Śląskie	Sky Bar, Biurowiec Altus, ul. Uniwersytecka 13, Katowice	20 people
2	25/06/2014	Podkarpackie	Restauracja LOFT, al. T. Rejtana 20, 35-315 Rzeszów	20 people
3	18/09/2014	Republika Czeska	PVA EXPO PRAHA, sala konferencyjna 4, ul. Beranovych 667, 19900 Praha, CZECHY	26 people
4	31/03/2015	Dolnośląskie	Hotel Qubus, ul. Wyszyńskiego 45, 58-304 Wałbrzych	33 people
5	09/06/2015	Opolskie	Hotel Aspen, Podlesie 52, 48-340 Głuchołazy	27 people
6	26/08/2015	Wielkopolskie	CKiR AKWAWIT, ul. Św. Józefa 5, 64-100 Leszno	36 people
7	15/09/2015	Świętokrzyskie	Hotel Binkowski, ul. W.Szczepaniaka 42, 25-043 Kielce	52 people
8	17/11/2015	Małopolskie	Hotel Beskid, ul. Limanowskiego 1, 33-300 Nowy Sącz	28 people
9	30/11/2015	Lubelskie	Hotel Polonia, ul. Grabanów 49D, 21-500 Biała Podlaska	24 people
10	21/12/2015	Łódzkie	CKR MOLO, ul Klonowa 16, 97-213 Smardzewice	24 people
11	07/03/2016	Lubuskie	Hotel Qubus, ul. Ceglana 14a, 65-211 Zielona Góra	39 people
12	20/05/2016	Kujawsko-Pomorskie	Mercure Toruń Centrum, ul. Kraszewskiego 1/3, 87-100 Toruń	23 people
13	31/08/2016	Mazowieckie	Hotel Lord, Al. Krakowska 218, 02-219 Warszawa	37 people
14	30/11/2016	Śląskie	Hotel Kotarz, ul. Wyzwolenia 40, 43-438 Brenna	35 people
TOTAL				424 people

Municipality debate meetings



International trade fair exhibitions



**POLECOSYSTEM 2016,
Poznań**



**EXPO ENERGIE 2015,
Bucharest**



**FOR WASTE&WATER 2014,
Prague**



**POLEKO 2013,
Poznań**

Demonstration workshops

No.	DATE	ATTENDANCE
1	17/01/2017	20 people
2	18/11/2016	15 people
3	25/11/2016	15 people
4	16/03/2017	19 people
5	16/03/2017	16 people
6	20/03/2017	17 people
TOTAL		102 people

Demonstration workshops



www.lifecogeneration.pl



facebook



youtube



GoldenLine

goldenline



twitter

Odbiorcy ogółem

1 gru 2013 - 31 mar 2017

Wszyscy użytkownicy
100,00% Sesje

Ogółem

Sesje



Sesje

12 840

Użytkownicy

9 598

Odskony

35 053

Strony / sesja

2,73

Śr. czas trwania sesji

00:02:02

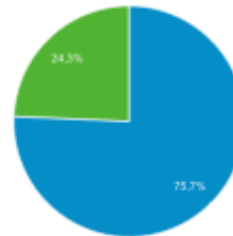
Współczynnik odrzuceń

63,82%

% nowych sesji

74,73%

New Visitor Returning Visitor



Kraj

Kraj	Sesje	% Sesje
1. Poland	5 494	42,79%
2. United States	1 688	13,15%
3. (not set)	1 172	9,13%
4. Japan	1 138	8,86%
5. Brazil	479	3,73%
6. United Kingdom	392	3,05%
7. Russia	355	2,76%
8. China	247	1,92%
9. Italy	239	1,86%
10. Germany	190	1,48%

facebook

In the period 1/10/2016 - 31/03/2017
facebook reached 7560 views i.e.

average 1260/month

Webpage statistics

www.lifecogeneration.pl

in the period

1/12/2013 - 31/03/2017



LIFE COGENERATION.PL is co-financed with the contribution of LIFE+ financial instrument of the European Commission and the Polish National Fund for Environmental Protection and Water Management"

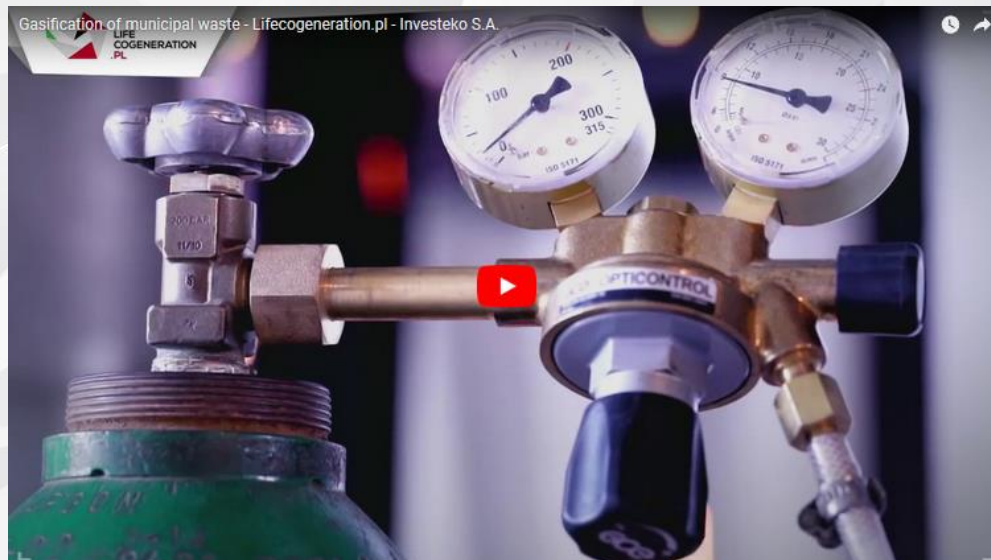


❑ **91 publications in the mass media**

(many of them published in reputable newspapers and journals such as: Gazeta Wyborcza, onet.pl, Puls Biznesu, Forbes Pierwszy Milion and also in the most recognizable industry media such as: Przegląd Komunalny, Czysta Energia, portalsamorządowy.pl)

❑ **10/2016 - on youtube was published the first of three planned video promotions**

Video promotion is available on: <https://www.youtube.com/watch?v=IYoC77s0tLU>





Thank you for the attention !!!



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