



Fryderyk Chopin monument, Warsaw, Poland



Włodzimierz Lewandowski, Dr

Polish physicist and metrologist, chief physicist at the International Bureau of Weights and Measures (BIPM) from 1985 to 2014, President of the Central Office of Measures from 2016 to 2018.

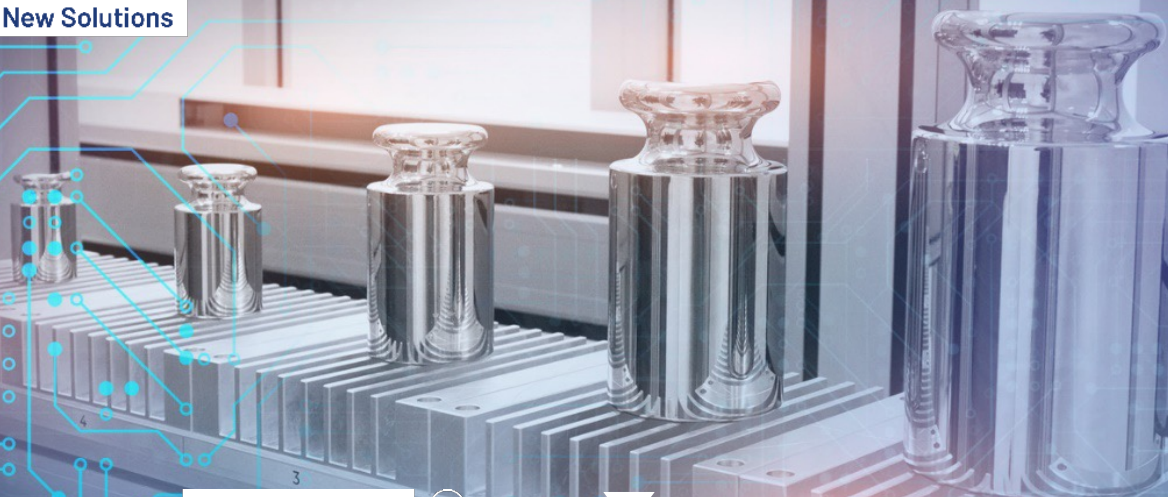
Graduated of the Warsaw Technology University and the Warsaw University in 1976. PhD in 1980 in space geodesy at the French National Geographic Institut (IGN). Principal Physicist at the Time Department of the BIPM in Sevres from 1985 to 2014. Chairman of the Timing Sub-committee of the Civil GPS Service Interface Committee (CGSIC), US Coast Guard of the US Department of Transportation from 1989 to 2017. 2016 – 2018 President of the Polish Central office of Measures (GUM): initiated fundamental reform of the GUM in preparation for setting-up the National Institute of Metrology; creator of the GUM campus project in Kielce.



METROLOGY SYMPOSIUM

DIGITALIZATION AND AUTOMATION IN MASS METROLOGY

Third Edition: Future and New Solutions



The History of Polish Metrology over the Past Century

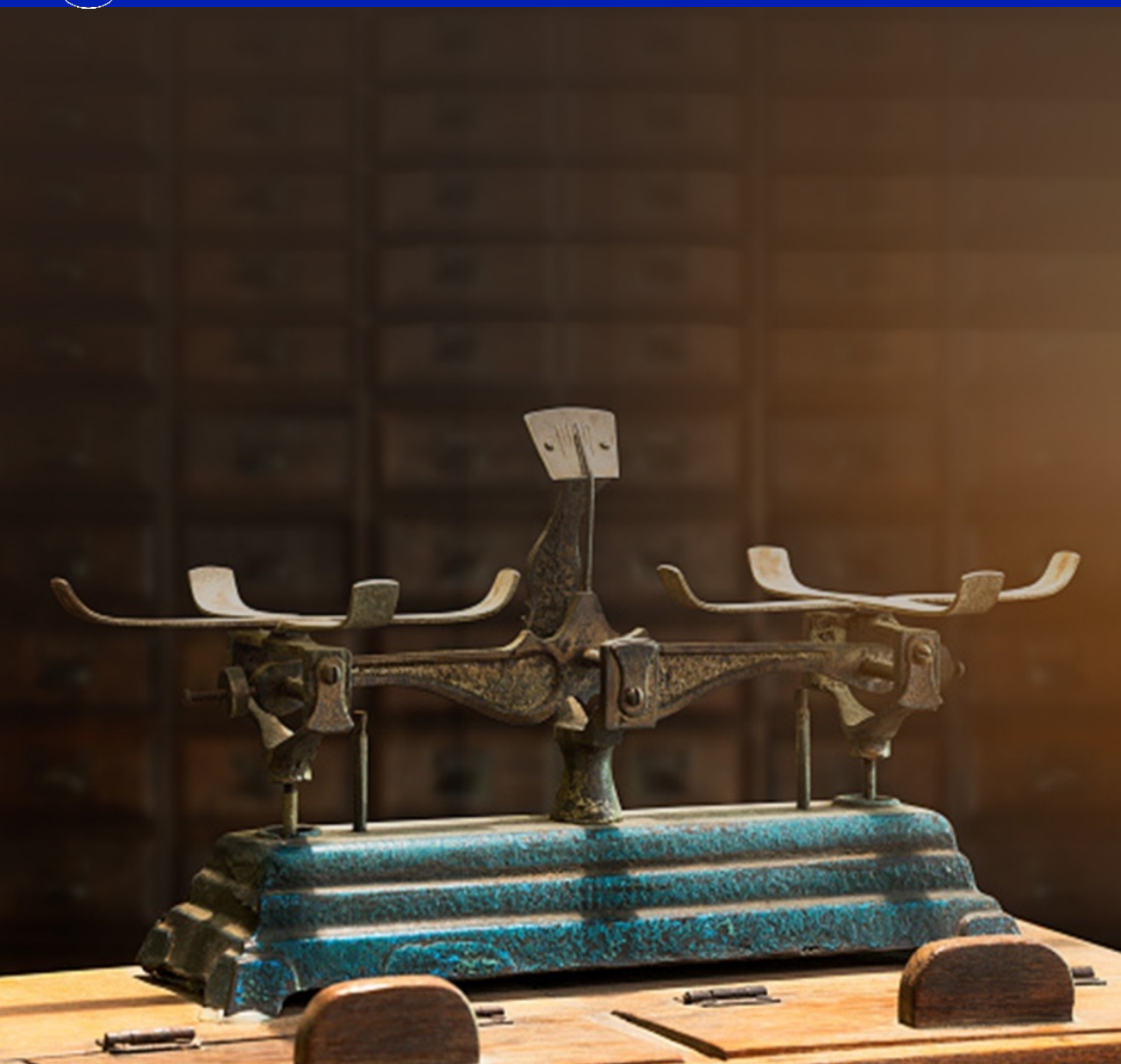
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The History of Polish Metrology over the Past Century

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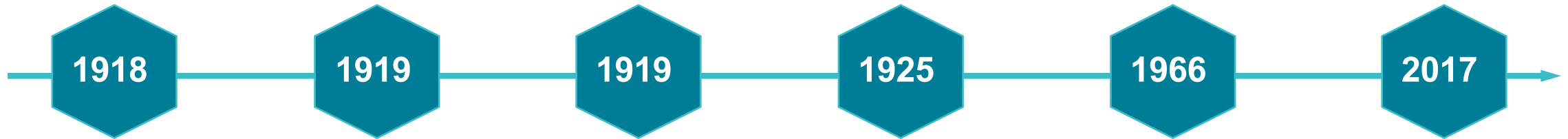
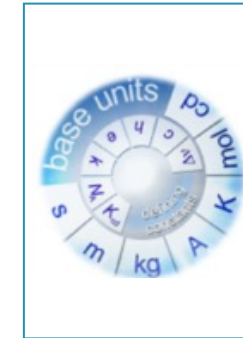
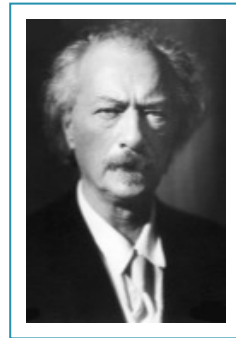
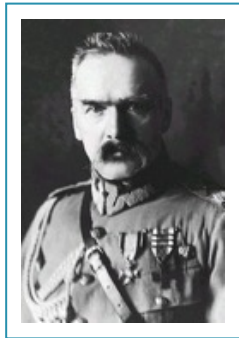
- **First two decades:** It was a period of quick technical and scientific development, staff education, organization of network of regional offices. It was necessary to support a rapid economical and industrial.
- **Cruelty of WWII:** Grand and dynamic development of Polish metrology was stopped by the war.
- **Period of limited sovereignty:** Most demanding duty after the war was rebuilding destroyed siege of GUM and rassembling the staff spread around the country.
- **Return to independence:** Unfortunately year 1989 did not bring modernity to Polish metrology. The bureaucracy did not disappear, worst, in some aspects progressed.
- **New times:** Happily, new economical governmental policy in 2016 allowed nomination of professional leadership of GUM; a short term goal is transforming GUM into a regular National Institute of Metrology.
- **GUM external laboratory campus** for most advanced technologies.

The partition of Poland

From 1795 until after the First World War, Poland did not exist as an independent nation. Between 1772 and 1795, it had been steadily divided up by Prussia and the Russian and Austro-Hungarian empires.



First two decades



Regaining our independence

Signature of Funding Act of Central Office of Measures

Establishing the Central Office of Measures

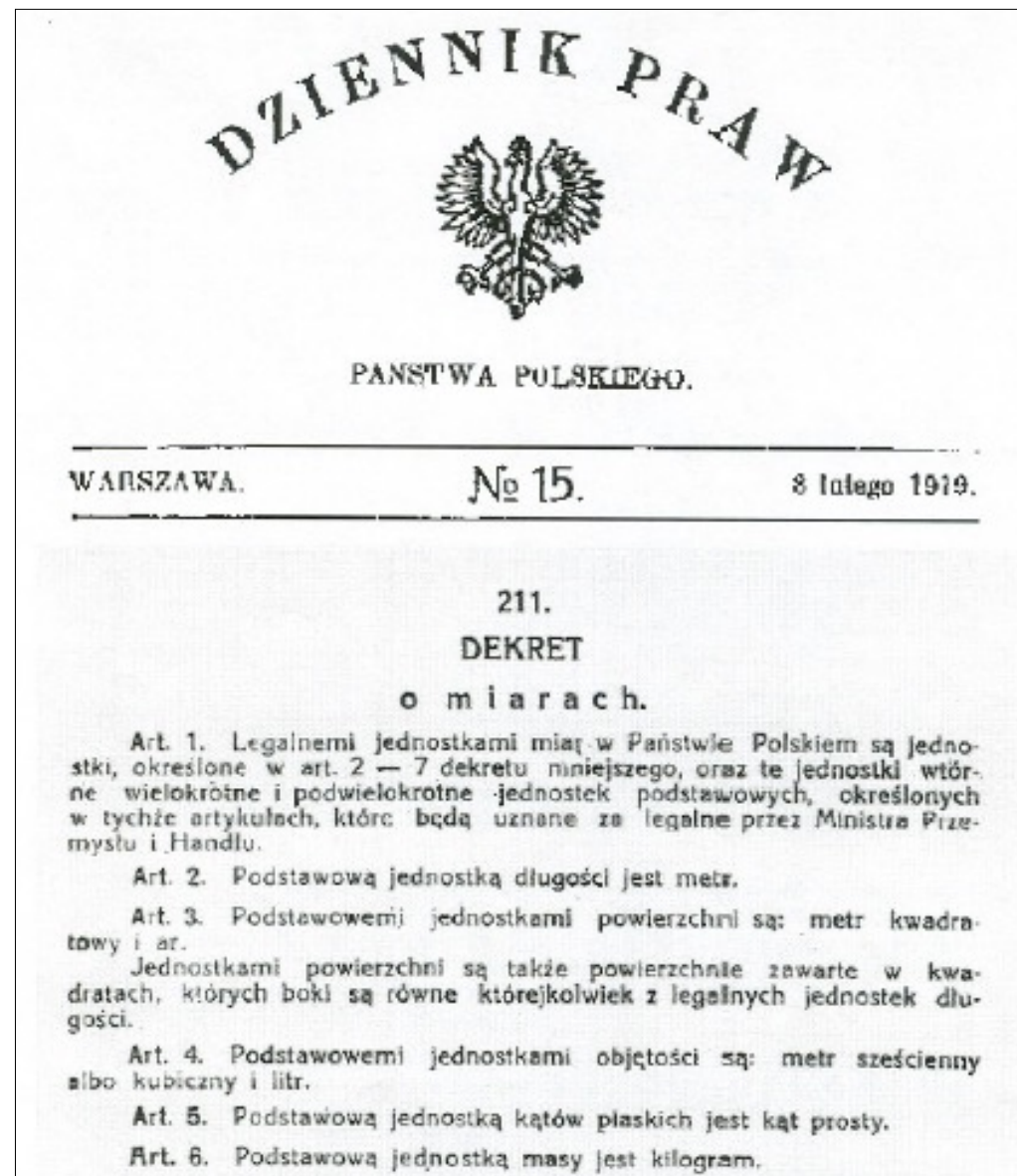
Joining to the Metre Convention

Introducing SI system in Poland

Beginning of the GUM reform, establishing Consultative Metrology Teams

Decree on Measures

On 8 February 1919, the Decree on Measures was signed, which was one of the first legal acts of the reborn Republic. On 1 April 1919, the Central Office of Measures (GUM) was established.



First two decades

GUM in 1920



GUM in 1945



GUM today in 2019



Changes of the structure

**Metrology
Council**

**Technical
Committees**

**Consultative
Metrology
Teams**

**Section for
certification**

Metrology Council

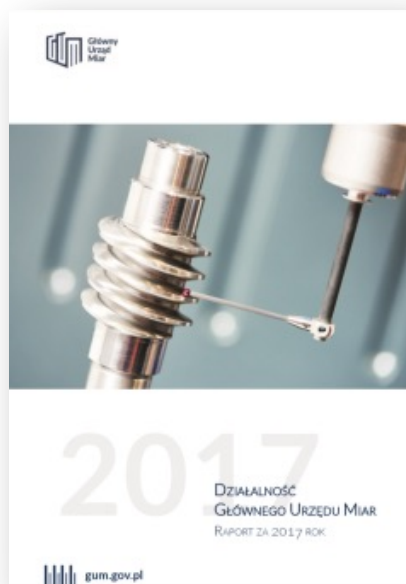
Establishment of the Metrology Council was sanctioned by the power of the amended Law on Measures act on 6 May 2017.

Metrology Council - an Advisory Body of the President of GUM - responsible for:

- Setting directions of development of Polish Administration of Measures,
- Giving opinions on strategic documents and periodic action plans,
- Advising the President on R&D areas in which organization should develop.



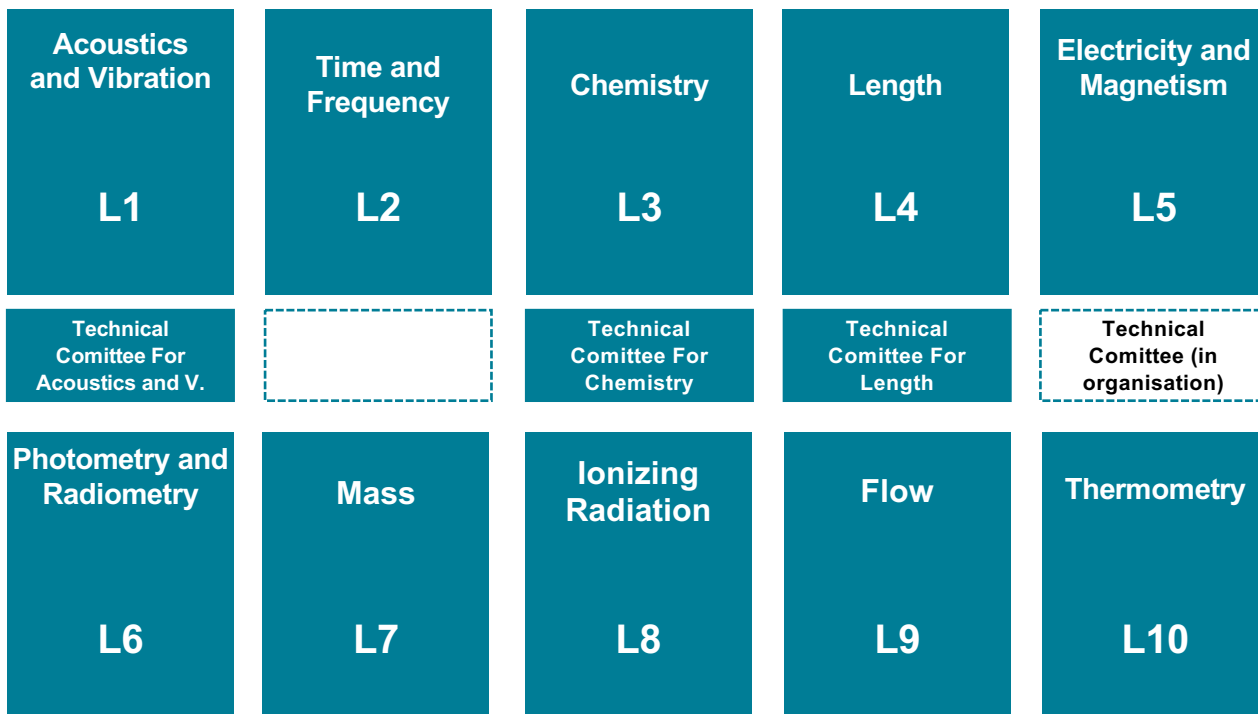
Publications of GUM - 2018



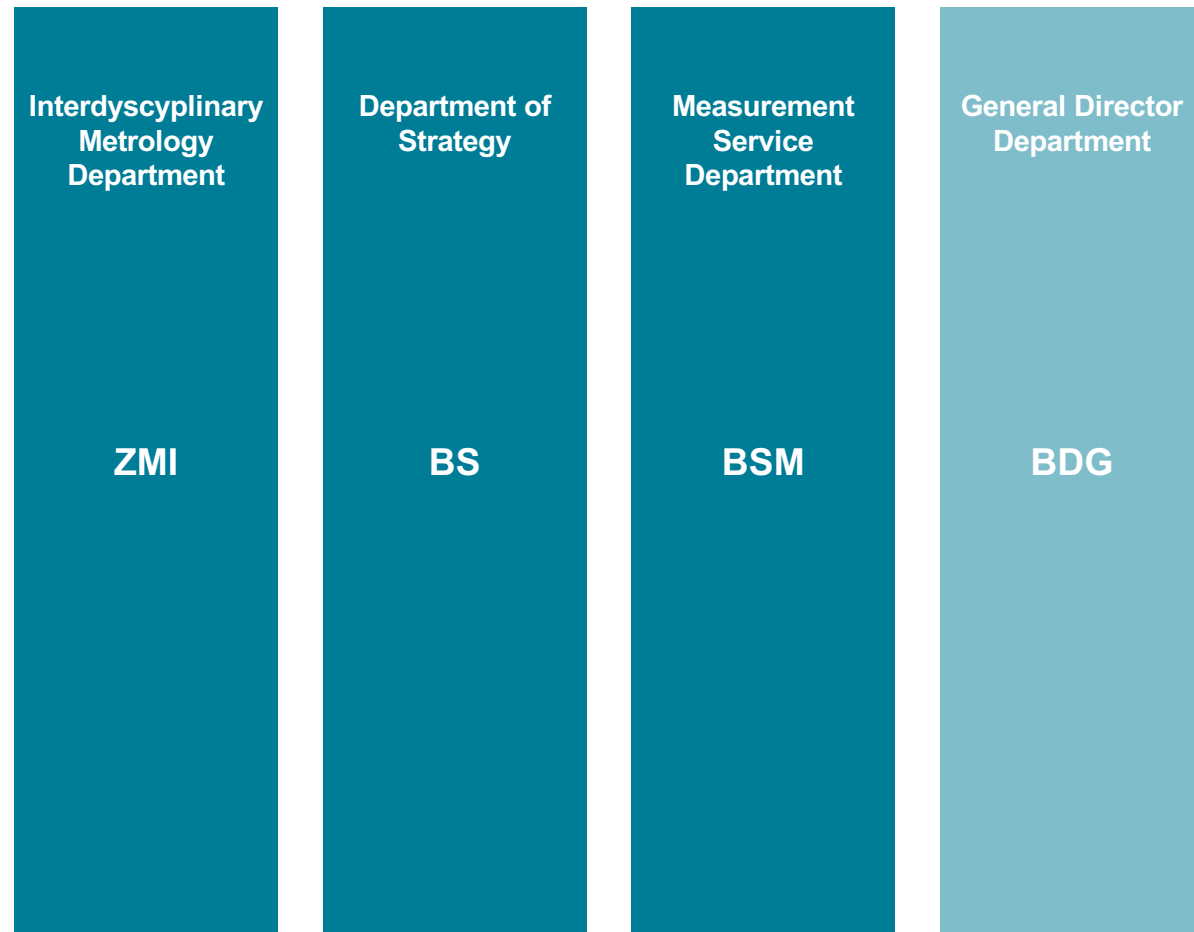
GUM organisation chart (2017-2018)



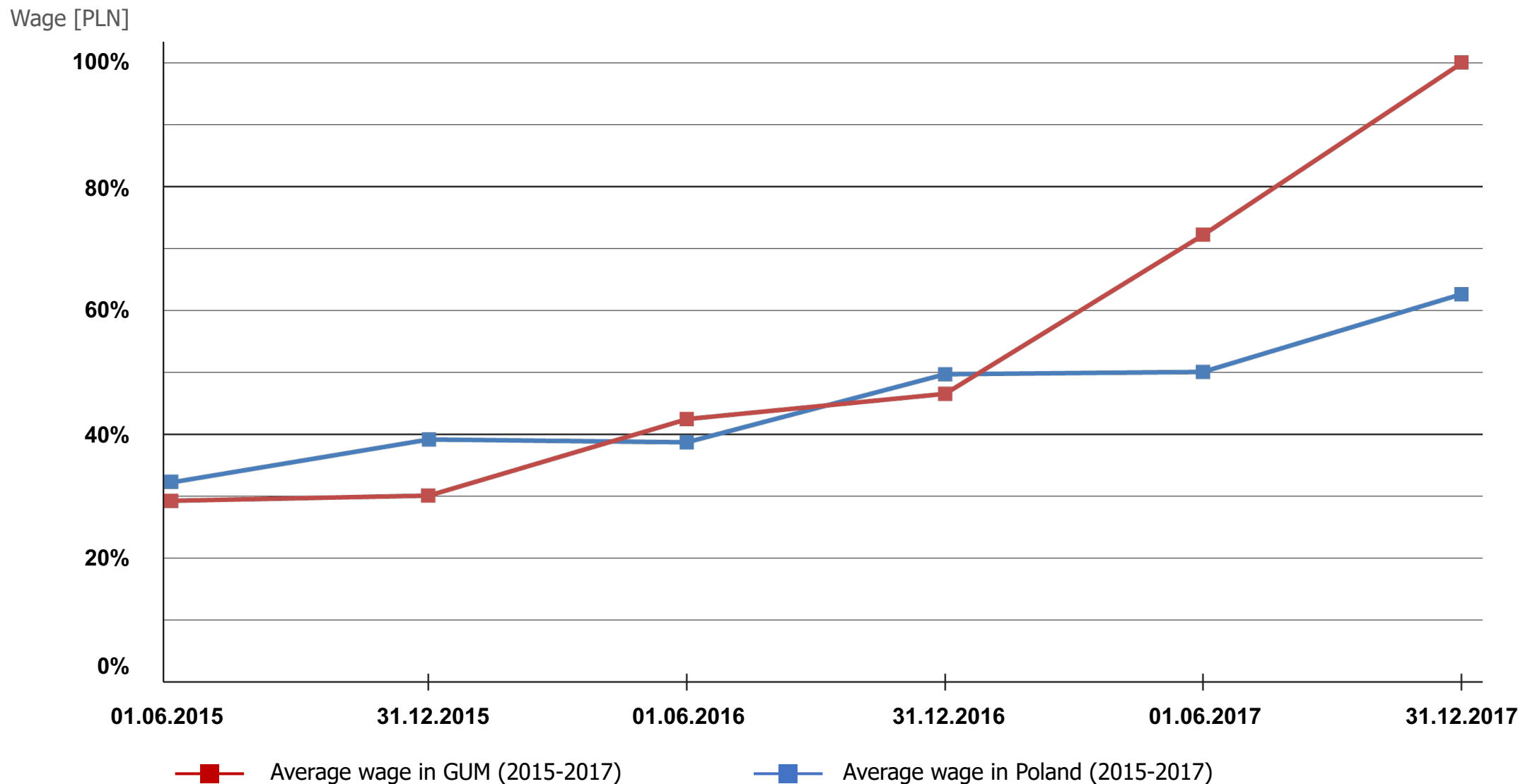
Laboratories



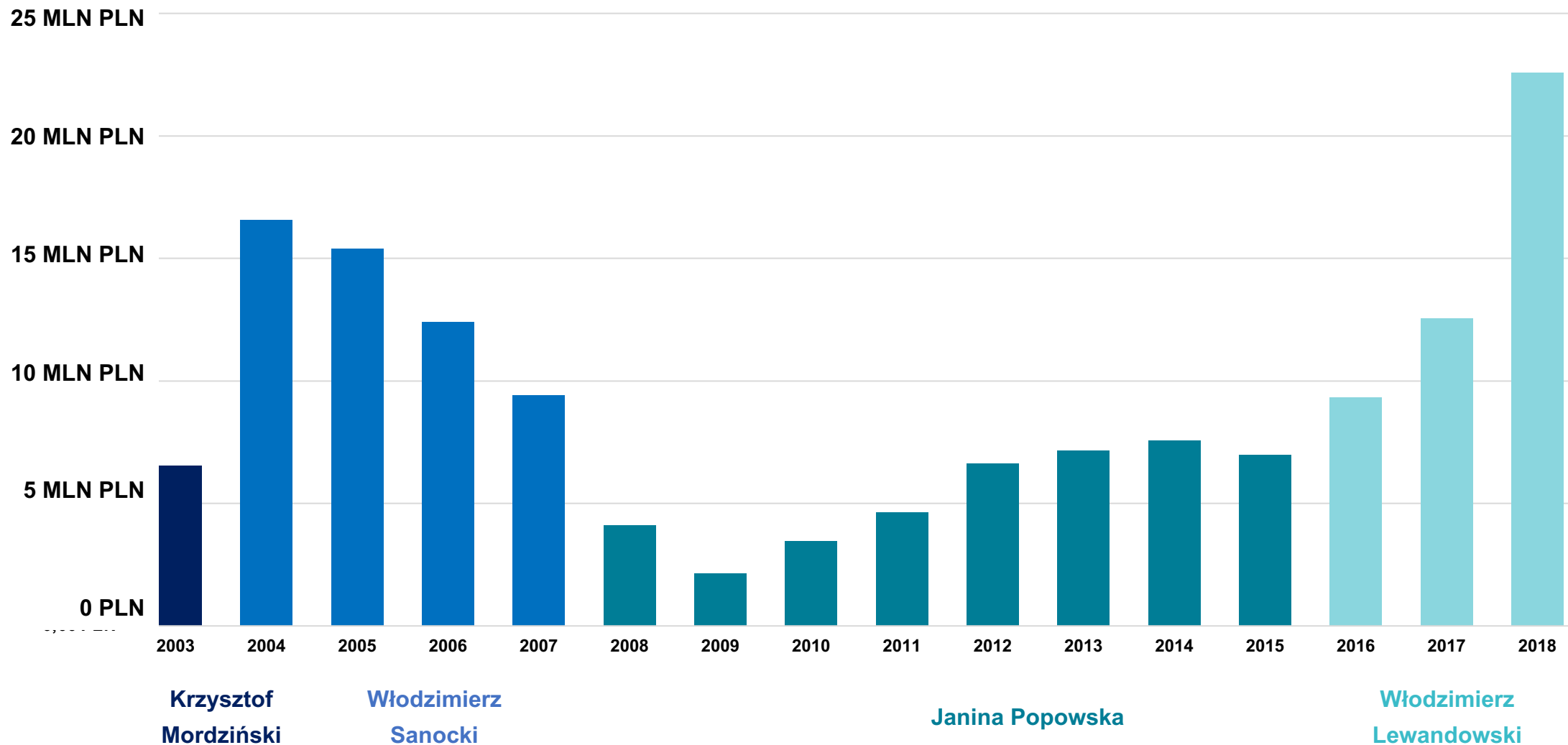
<small>Technical Committee (in organisation)</small>
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Average wage (2015-2017)



Budget for investments (2003-2018)



International Cooperation

GUM representatives participate in works taken up by the following international and regional organisations



BIPM

Bureau International
des Poids et Mesures



OIML

Organisation
Internationale de
Métrologie Légale

WELMEC
European Cooperation in Legal Metrology

WELMEC

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in Legal Metrology



EURAMET

European Association of National
Metrology Institutes

Big investments examples



2017

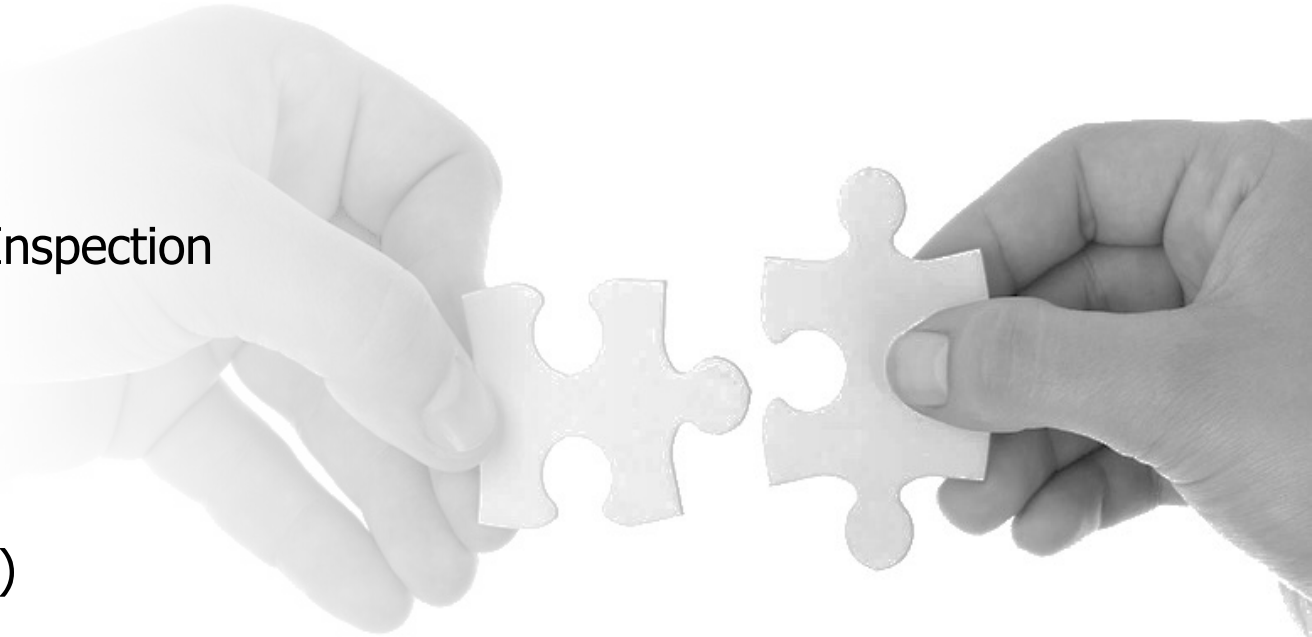
Implementation of the NPL cesium fountain in GUM



2018

Implementation of the Polish mass comparator

- Industry
- Scientific institutions and Universities
- Public bodies, e.g. Police, Road Transport Inspection
- Polish Center for Accreditation (PCA)
- Polish Committee for Standardization (PKN)
- Club of the Polish Testing Laboratories POLLAB



National cooperation





101 projects, upcoming about 50 PhD Thesis

EMPIR – Consultative Metrology Teams Bilateral cooperation

Aims of the project



- Creating center of the Polish metrology
- Building the modern metrological research and scientific center for science, economy, industry and social life;

Components of the project



- Innovative laboratory basis (biotechnology, nanometrology)
- Educational-conference campus
- Hotel and accommodation base
- Specialized scientific metrology staff

A new laboratory campus

Place of the project realization:
Kielce City, foothills of the Świętokrzyskie Mountains.

Estimated budget of the project:
Ca. 200-300 mln PLN

Area of the Campus:
Ca. 14 ha (investment area of the Kielce City and State Forest)





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