

Ph.D. PRZEMYSŁAW JAN MAJCHRZAK  
DOCUMENTATION IN THE HABILITATION GUIDE

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**Ph.D. Przemysław Jan Majchrzak**

Product Design Studio III

Design Department of the Technical Design Institute of Koszalin University of  
Technology

[www.wzornictwo.tu.koszalin.pl](http://www.wzornictwo.tu.koszalin.pl)

A handwritten signature in blue ink, appearing to read 'Przemysław Jan Majchrzak', is located at the bottom of the page.

# THE LIST OF ACCOMPLISHMENTS

## **1. CV and the course of professional work**

Przemysław Jan Majchrzak

Born: July 16, 1982 in Połczyn-Zdrój

Address: 23 A F.Ruszczyca Street, Koszalin 75-654

Marital Status: married

### **Education:**

- 1997 - 2001 Staszica High School in Połczyn-Zdrój.
- 2001 - 2006 Koszalin University of Technology, Mechanical Department, Design, Faculty of Industrial Design
- 2004. – Studies at the School of Culture and Design in Finland under the Erasmus-Socrates program (one semester).
- 2006. - Master's diploma with honors in the Industrial Design Forms Studio; supervisor: DSc Tomasz Matuszewski Titular Professor of the University of Art in Poznań. Title: "Light as a perfect tool".
- 2011. - Postgraduate studies in the field of Pedagogical Preparation - Faculty of Electronics and Computer Science of Koszalin University of Technology; supervisor: prof. Wanda Woronowicz. Title: "The influence of television on the emergence of aggression and violence".
- 2012. - Defense of the doctoral dissertation at the Faculty of Design of the Academy of Fine Arts in Warsaw; supervisor: Professor DSc Michał Stefanowski. Title: "Modular Bus Stop. The element of the point infrastructure of the mass transport system".

## **Apprenticeships and professional experience:**

- From 2015. Designer in Arka Sp. z o.o. sp.k. company.
  - 2012 - 2014. Head of the Design Department of the Technical Design Institute of Koszalin University of Technology
  - Since 2012. Head of the Product Design Studio III.
  - Since 2012. Assistant professor at the Technical Design Institute of Koszalin University of Technology
- 2007 - 2012. Assistant at the Design Institute of the Koszalin University of Technology.
- Since 2006. Designer - freelancer, owner of the Qdesign brand Przemysław Jan Majchrzak.
  - July 2009. Workshops for designers in the field of effective cooperation with an entrepreneur in the process of implementing a new design product - the organiser of IWP Warsaw and PPNT Gdynia.
  - July 2008. Summer Fashion Design Workshop in Angermunde.
  - July 2008. Workshop "Design a car!" with Janusz Kaniewski at Gdynia Design Days.
  - Since 2007. Designing for orders for: Philips Lighting Poland, DAR Lighting UK, Imperial S.A., Terma Technologies, Metal Works, Arka, Metal Team, Breve, LockPol, Kołaszewski, KTA Hrankowska - Kanas.
  - 2005. Internship at Ergo Design studio in Krakow completed with a perfect result.
  - 1999 – 2008. - Graphic designer at the family-owned Finezja advertising company.

**2. Documentation of artistic achievements and information about didactic achievements, scientific cooperation and popularization of science (after obtaining the doctoral degree).**

**I. List of achievements constituting a scientific or artistic achievement referred to in art. 16 sec. 2 acts.**

**A) Title of scientific or artistic achievement:**

1. "The search for functional and formal solutions on the example of a set of bathroom and kitchen faucets" for Arka Sp. o.o. sp.k. company.

**B) Works included in the scientific or artistic achievements:**

1.1. Implementation project of the B01 faucet set - a design of new faucets: washbasin, shower, bidet, bath, wall mounted with a rotating spout, kitchen.

1.2. Graphic design - implementation of new faucet packs.

1.3. Implementation project of the display for a single faucet.

1.4. Implementation project of the display for three faucets.

1.5. Implementation project of the display for 11 faucets.

1.6. Concept design of B02 faucet.

1.7. Concept design of B03 faucet.

**II. List of other (not included in the achievement mentioned in point I.) published works and created works as well as indicators of scientific and artistic achievements.**

**A) Completed works of art and artistic works of international or national range.**

Below I only list the works. Visualizations showing forms and short descriptions can be found in the annex - a portfolio in the same chronology.

**Product design:**

1. Concept design of the modular set of LEGO ceramic tile displays for Metal Works Sp. z o.o .; 2013.
2. Concept design of the vertical display system with display modules in a vertical arrangement for Metal Works Sp. z o.o .; 2013.
3. Concept design of the bicycle stand submitted for the "Put on a stand" contest organized by the Association of Graphic Designers; 2013.
4. „Bow” door handle design with the trade name Twist; implemented by Domino Sp. z o.o .; 2013.
5. „Minimal” door handle design; implemented by Domino Sp. z o.o .; 2013.
6. Concept design of the modular bicycle shelter for the Industrial Institute of Automation and Measurements in Warsaw - I. place in the competition for employees and students of the Technical Design Institute of Koszalin University of Technology; 2014.
7. Concept design of the bicycle shelter for the Industrial Institute of Automation and Measurements in Warsaw - II. place in the competition for employees and students of the Technical Design Institute of Koszalin University of Technology; 2014.
8. Design of the wrist strap fastening for children; co-created with Maciej Ojrzanowski; implemented by KTA Hrankowska and Kanas Sp. J.  
My participation in the creative process is 50%; 2014.

9. Design of the wristbands packaging for children; co-created with Maciej Ojrzanowski; implemented by KTA Hrankowska and Kanas Sp. J. My percentage share in the project is 50%; 2014.
10. Conceptual design of the "Modular laboratory of MoLab molecular gastronomy". Project submitted for the competition organised by Siemens; 2014.
11. Designs of the knobs for angle valves of the SOLID, PLUS, ART and PRAKTIK series; implemented by Arka Sp. z o.o. sp.k. ; 2015 - 2017.
12. Design of the new Calido air venting valve form; in the implementation process by Arka Sp. z o.o. sp.k. ; 2016.
13. Design of the bowl of the circulation pump with the control panel included; implemented by Arka Sp. z o.o. sp.k. ; 2016.
14. Design of the TUBIO LED lamp family; implemented by Imperial Sp. z o.o. sp.k. ; 2016. The series of lamps was awarded: "PRODUCT OF THE YEAR 2016" in the Economic Competition of the Marshal of the West Pomeranian Voivodeship 2016 and the XXVII Edition of European Medal 2016 for products and services awarded by the Business Centre Club.
15. Concept design of the HB LED hall lamp for Metal Team Sp. z o.o. sp. 2016.
16. HB LED hall lamp design; implemented by Metal Team Sp. z o.o. sp k. under the Lumi Team brand; 2016.

### **Graphics design:**

17. Visual identification of Hospice in Darłowo. Project implemented; 2012.
18. Visual identification design for Breve - Tufvassons Sp. z o.o. The project implemented in the field of visual identity with the exception of the logotype; the project won II. the prize in the competition for a new logo for the Breve company; 2013.



19. Visual identification design for the new brand called "Relax Zone" for Marta Sanatorium in Połczyn-Zdrój. Project implemented; 2014.

20. Logo design including elements of visual identification for Kospel S.A. Concept and competition design; 2014.

21. Visual identification design of the parish in Sławno. Project scope: logotype, jubilee logotype, stationery, website. Project implemented; 2015.

22. Graphic design of the website for Arka Sp. z o.o. sp.k. Project implemented; 2016.

23. Design of a catalog of patented products and reported inventions for Arka Sp. z o.o. sp.k. Project implemented; 2018.

## **B) Participation in art exhibitions.**

1. Group exhibition "Koszalin Designed", 2013, an exhibition of small architecture elements designed for the city of Koszalin. Place: Koszalin City Hall.

2. Collective exhibition during the Design Lodz Festival, 2013, "Good Entry", Łódź.

3. "Exhibition of the Academic Achievements of the Technical Institute of Koszalin University of Technology", 2015. ; Made in Koszalin Forum; Koszalin Public Library.

4. "Master and student" - exhibition of projects by dr Przemysław Jan Majchrzak and student semester and diploma projects of the Product Design Studio III of the Technical Design Institute of Koszalin University of Technology. 2016 .; place: Museum of Technology and Transport Art Depot in Szczecin.

## **C) Participation in international artistic events, consisting in the presentation of own work and skills.**

1. 2012. Participation in the International Terma Design 2012 competition. Submitted project work - design of a panel heater.

2. 2014. Participation in the international collective exhibition "Design in the context of cultural practices and theoretical paradigms". Ivano-Frankivsk, Ukraine.

3. 2015. Participation in the international exhibition entitled "Design and art" at the National Museum in Gdańsk, Branch of Modern Art Palace of Abbots.

4. 2015. Individual exhibition in the cycle entitled "Creative Achievements of Workers of Science - Design and Art in Culture" at the National History Museum in Ivano-Frankivsk, Ukraine.

5. 2015. Participation in the international exhibition entitled "Identification / Integration. Design" organised as a part of the project of the Polish Culture Centre and European Dialogue with the support of the "Polish Community" association. Venue: Centre of Polish Culture and European Dialogue in Ivano-Frankivsk.

#### **D) Monographs.**

1. An article entitled "Design as a process of change" in a collective monograph of employees of the Technical Design Institute of Koszalin University of Technology edited by Iwona Mikołajczyk, 2015, "Languages of Design, Paradigms of Design Space", Publishing House of Koszalin University of Technology. My contribution to this work consisted of writing one of 11 chapters. I estimate my percentage share in the whole monograph by about 10%.

#### **E) Elaboration of expert opinions, works and artistic works.**

1. Creating an expert opinion - an expert opinion in tender proceedings for "printing and delivery service of higher education materials for Koszalin University of Technology" for the tender commission for proceedings No. 55 / PNOG / SZP-3/2014. in order to gather comments and evaluate submitted samples.

#### **F) Managing research projects.**

1. Project title: "Creating and verifying unconventional and conventional technical solutions in wood for the designed interior design elements (furniture). Creating new products based on the physical properties of wood: a) Searching for structural, construction and material solutions in the design of upholstered furniture." Start year 2013, end year 2015. Project manager as a part of the statutory research of the Technical Design Institute of Koszalin University of Technology.

#### **G) Awards for artistic activity.**

1. Special prize for the "Bow" door handle project in the "Good Entry" competition; 2013; Domino Sp. J.
2. Award for the second place in the competition to refresh the logo of the Breve-Tufvassons Sp. z o.o. company; 2013; Breve-Tufvassons Sp. z o.o.
3. The first place award in the competition for the bicycle shelter project; 2014; The Industrial Institute of Automation and Measurements in Warsaw.
4. Award for the second place in the competition for the bicycle shelter project; 2014; The Industrial Institute of Automation and Measurements in Warsaw.

#### **H) Presentation of papers at international and national thematic conferences.**

1. "The power of persuasion in design", during the VII International Scientific Conference. Topical Problems of World Artistic Culture. In Memory of Professor I.D.Rozenfeld at the Department of Art and Design at the University of Janek Kupala in Grodno, Belarus; 2014.
2. "Design as a process of change", during the International Scientific-Practical Conference "Design in the context of cultural practices and theoretical paradigms", at Vasyl Stefanyk Podkarpacki National University, Ivano-Frankivsk, Ukraine; 2014.

#### **III. Didactic and popularizing achievements.**

##### **A) Active participation in scientific conferences:**

1. A lecture entitled "Small architecture design on the example of bus shelters", at the conference of 46th Koszalin Days of Technology during the Days of Technology of Western Pomerania, Koszalin University of Technology; 2014.
2. Paper "The role of the designer in the process of creating a new product" during the „Modern Technology Forum” conference, at the headquarters of the Wireland Sp. z o.o. company, Bytów; 2014.

##### **B) Awards received other than in II G point.**

1. "Third level team award" for organisational activity, granted in 2013 by the Rector of Koszalin University of Technology.
2. "Individual II degree award" for obtaining the doctoral degree, 2013 by the Rector of Koszalin University of Technology.
3. "Third level team award" for organisational achievements, 2014 by the Rector of Koszalin University of Technology.
4. "Third level team award" for organisational achievements granted in 2018 by the Rector of Koszalin University of Technology.

**C) Membership in international and national organizations and scientific / artistic societies.**

1. Member of the Association of Industrial Designers since 2014.

**D) Didactic achievements and activities in the field of popularization of science or art.**

1. Organisation of an "OLED lighting of the future" series of lectures and meetings with Philips Lighting Poland. Lectures venue: Philips headquarters in Piła and the Technical Design Institute of Koszalin University of Technology; 2015.
2. Arrangement of the "Exhibition of the Academic Achievements of the Technical Design Institute of Koszalin University of Technology" which was held as a part of the "Made in Koszalin" Forum 2nd – 8th December 2015 in Koszalin Public Library and in the CITY BOX Koszalin.
3. Arranging the exhibition during Open Days at Koszalin University of Technology in 2013, 2014, 2015, 2016.
4. Conducting classes for groups of Koszalin University for Children at Koszalin University of Technology in 2015.
5. Distinction for the student in the "Laser Innovation Poland 2015" competition in 2016. Project: "Shelter", author: Amanda Julia Madej, 6 th semester, 1st degree studies, supervisor: dr Przemysław Jan Majchrzak.

6. First place for the student in "Coffee in the patio" 2017 competition. Project: "Sandglass", author: Weronika Wandachowicz, 5th semester, 1st degree studies, supervisor: dr Przemysław Jan Majchrzak.

**E) Scientific / artistic support for students in the course of specialisation.**

**1. Supervisor of 9 BA diploma theses at the Technical Design Institute of Koszalin University of Technology:**

- "Toy project activating motion" by Urszula Klisowska; 2015.
- "Graphics magazine on the subject of design", author: Karolina Zagórska; 2015.
- "Project of light structures for changing spaces" by Izabela Monkiewicz; 2015.
- "The design of an educational toy that influences the child's cognitive sense", author: Maria Rabiej; 2015.
- "Workplace lighting design", author: Emil Bajer; 2016.
- "Design of glasses with the use of unconventional materials" by Klaudia Antczak; 2017.
- "Design of lighting fixtures for the living space", author: Zuzanna Chmielewska; 2017.
- "Design of an urban scooter", author: Kamila Knitter; 2017.
- "Design of a modern wall unit" by Magdalena Marchlewska; 2017.

**2. Supervisor of 8 MA theses at the Technical Design Institute of Koszalin University of Technology:**

- "Travelling Office. Mobility, form, function", author: Marta Janiszewska; 2014.
- "The alternative to the carpet. Technical and material conditions", author: Marika Zajączkowska; 2014.
- "Design of the city furniture system", author: Marcin Stencel; 2014.

- "Creation of the new brand based on the example of snowboard gloves", by Agata Lewandowska; 2016.
- "Usable form in urban space. Design of the public toilet", author: Tomasz Stanke; 2017.
- "Visual identification design for the hospice in Darłowo", author: Yuliia Hranat; 2017.
- "Project of the facility supporting the photographer's outdoor work", author: Urszula Klisowska; 2017.
- "Lighting design with the use of unconventional materials", by: Izabela Monkiewicz; 2017.

#### **F) Expertises or other studies made to order.**

1. Co-authored opinion / expertise on the scope of creative freedom when designing toys, in particular toy figures, including figures combined with other elements, for the District Court in Warsaw, XXII Faculty - Court of Community Trademarks and Industrial Designs. My contribution to the creation of this work consisted in developing comparative methods and making computer combinations of the described figures. My percentage share in the entire study is 20%. Co-author: Professor DSc Jacek Ojrzanowski.

#### **G) Participation in expert and competition teams.**

1. Secretary of the "Laser Innovation Poland" 2015 – 2016 international competition for students for a furniture design using laser cutting technology in cooperation with Wireland Sp. z o.o. and the manufacturer of Lasers from Trumpf Huettinger Sp. z o.o.
2. Member of the Qualification Commission of the International Competition and Exhibition entitled "Object - Architecture - City". Exhibition at the Culture Station in Rumia. Organiser: The Technical Institute of Design of Koszalin University of Technology. Competition: 31st Dec 2015, exhibition: 06th – 20th Apr 2016.
3. Jury member of the International Competition and Exhibition entitled "Object - Architecture - City". Exhibition at the Culture Station in Rumia. Organiser: The Technical Institute of Design of Koszalin University of Technology. Competition: 31st Dec 2015, exhibition: 06th – 20th Apr 2016.

4. The secretary of the "Top Furniture" 2017 competition for students of the Technical Design Institute of Koszalin University of Technology for the design of furniture made from plywood in cooperation with Łąccy - Kołczygłowy Sp. z o.o.
5. Secretary of the competition for students of the Technical Design Institute of Koszalin University of Technology for the "Coffee in Patio" furniture project in 2017 in cooperation with Kołaszewski Sp. z o.o.
6. Secretary of the "Flexible Work" 2018 competition for students of the Technical Design Institute of Koszalin University of Technology for the design of a workplace with a laptop in cooperation with Furniko Sp. z o.o.

THE SUMMARY OF PROFESSIONAL  
ACCOMPLISHMENTS



## ***The beginnings***

The passion for design appeared in my life very early. From an early age I was fascinated with the creation of new facilities. I spent a carefree childhood mainly on constructing "objects of the future". Like most boys, I was mainly interested in vehicles which various versions were created in all of my school notebooks.

I was born in the early eighties of the last century, so the time of children's and youthful creative explorations fell in the years of political and economic changes that took place in our country. The beginning of capitalism, rapid economic development, travels, attractive products coming from everywhere, all this aroused my curiosity and desire to create.

I wanted to draw, build, construct - from the beginning, differently. I dreamt about living in a country as colourful as those from which attractive products, catalogues and books were imported. My creative enthusiasm was certainly fueled by my Father - a man with an unusual creative potential who at that time ran an advertising company. Very quickly, I made physical and intellectual contributions to building a family business, where I made my first project steps. After graduating from the high school, as one of the few graduates, I chose the design profile with full consciousness. The ability to listen, observe and formulate conclusions are the features that have proved crucial in the process of acquiring knowledge.

Extremely valuable in building my project consciousness were classes in Industrial Form Design Studio under the direction of professor Krzysztof Meisner and professor Tomasz Matuszewski. Two different personalities, different design methods, other life and professional experiences. For me, a young, unformed enthusiast of creativity, encountering such diversity was then a valuable process of getting knowledge and the beginning of shaping of my own views and ideas about design.

Professor Meisner opened to me an extraordinary world of design, combining a bit of madness with mathematical meticulousness; the world of contrasts and chiaroscuro, in which the smallest details of our surroundings

are not forgotten. In my memory, many interesting design tasks have been registered, during which the professor repeated not to take design seriously. It was in the studio of professor Meisner that my first vehicle design was created - the dreams of the youngest years were fulfilled. It was a task thanks to which I saw a treasury of inspiration for many areas of the project activity in the automotive industry. The vehicle had to be modeled in 1:10 scale. It was to be an alternative to existing and well-known cars in terms of both form and function. I began to analyze, discover, compare and experience.

I replaced yellowed, worn out to the limit, books with photographs of cars such as Fiat 125 p, Żuk, Nysa or Polonez with the Italian magazine entitled "Auto & Design", for which I spent the last student money. The bilingual magazine, which appeared every two months, contained documentation of design processes in the form of sketches and photographs showing the stages of modeling vehicles. In addition to car styling examples, the bimonthly magazine published Italian product designs that clearly emphasised stylistic references to motoring. Even then, I knew that I wanted to design like that. My fascination with automotive design has continued to deepen.

I began to look for opportunities and pretexts for designing more vehicles, to acquire knowledge in this field. My passion for motoring was enriched by professor Matuszewski, who encouraged me to look more broadly at the problem of designing means of transport as objects with complex functions. I began to see vehicles as multifunctional machines, noticing in them a multitude of objects, each of which is a separate product. All components must be consistent, because they form one machine. A car like a human body, parts of a vehicle like parts of the body, and everything perfectly combined, functioning in mutual relations. Since then, I have developed my passion for vehicle design in everyday use projects, combining function with a form inspired by the technical world of motorisation.

The period of my studies is also the beginning of experiencing with matter. It is also the time of the discovery and shaping of the ability to materialize the original ideas and visions.

Studying in Finland gave me the opportunity to experience with materials, purity of form and the links between product and nature, which made me interested in Scandinavian design. I spent hours in well-equipped wood, metal and plastic processing workshops. Experiments with combining materials, trials and struggles with matter, acting in accordance with the nature of the given material and nature - all this has allowed me to better understand the sense of the profession of a designer - as a sensitive craftsman of form. This short but extremely valuable Scandinavian adventure made me realize that I have always wanted to be a practitioner.

I want to design, create, experience, and even if I do not save the world this way, the view of satisfied buyers of my project will give me a sense of fairness and the need for my profession. I also understood that the passion for motoring will not dominate the desire to design everyday objects, but it will be visible and strongly accentuated in them.

The first significant project from which my professional adventure began was the The Leaf Of Grass lamp (photo 1), the original version of which was created in the Industrial Design Forms Studio, run by professor Tomasz Matuszewski. The lamp made of a steel pipe with a sharp cut in the form of a blade of grass is a combination of previously described experiences and passions.

I applied the project for the international Student Lighting Design Awards competition and I won the first place in the category of energy - saving lighting. The fact that I won the competition helped me a lot in my professional career. The project was implemented for production by the British Dar Lighting company, and the winning encouraged me to take on the next competition challenges.



Photo 1. The Leaf Of Grass lamp; Prototype (left); Product (right)- Giotto.

In the years 2006 - 2014 I participated in 10 design contests, which ended with a prize in 7 cases. Winning the contests reinforced my faith in my own abilities and opened many paths of cooperation with well-known producers. At the end of my studies, I started working at the Technical Design Institute, simultaneously designing products and graphics for many Polish brands.

I quickly discovered the desire to constantly broaden my own design skills and share experiences with younger colleagues. Working at the university is a valuable stimulation of creativity, new challenges, experiments and contact with interesting personalities.

As a young assistant, I was endowed with a significant degree of trust from my mentors - now my colleagues. I spent many hours in the laboratories of the Technical Design Institute on long discussions, consultations, exchange of valuable experiences and views, which widened my intellectual horizons and provided valuable creative stimuli.

In the years 2007 - 2016 I implemented 13 products manufactured industrially and several dozen graphic design projects in the form of visual identification systems, posters, packaging or websites.

My professional activity and the nature of the creative activities I undertook were all about proper preparation for my PhD thesis. PhD, on which I worked under the supervision of professor Michał Stefanowski was the result of fascination with the elements of small architecture.

In the doctoral dissertation titled "Modular Bus Stop. The element of the point infrastructure of the mass transport system " (photo 2) I undertook an attempt to design the system of the bus stops of Koszalin Public Transport.

The project, although mainly treated in the concept category, required technical knowledge and specialist consultations. The research and consultation on the strength of the innovative construction proposed by me as well as exploring the possibilities of steel and aluminum, is a continuation of the processes that I came across designing the lamp and decorative radiators mentioned above for Terma Technologie from Gdańsk in 2008-2011.

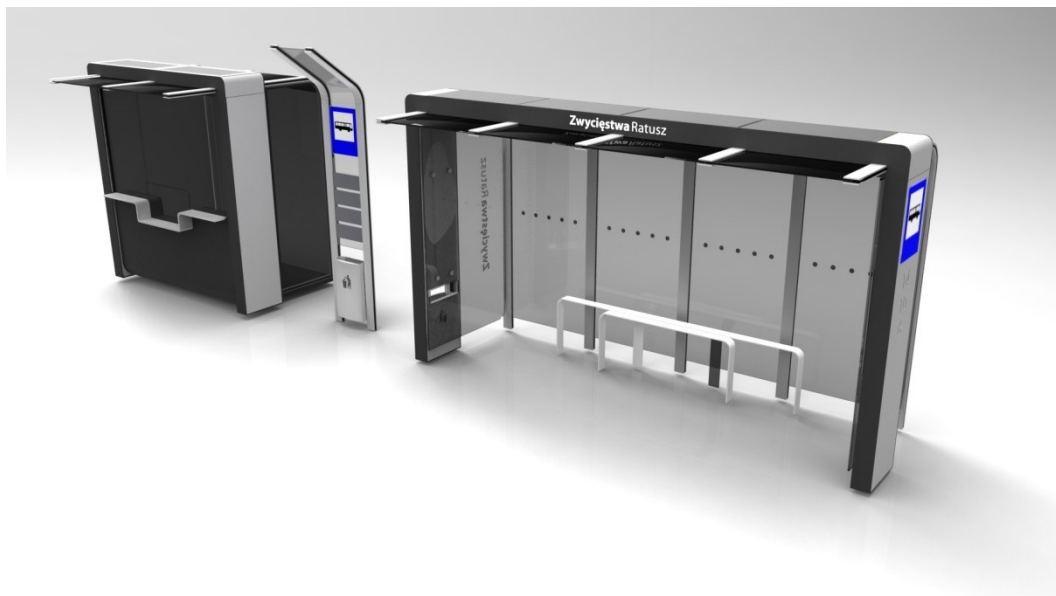


Photo 2. Design of a shelter, a stop post and a kiosk. Source - author's visualization for the purposes of the doctoral dissertation.

### ***The year 2012 is a breakthrough***

Acquiring a doctoral degree was a breakthrough in my professional career. I was unanimously granted the degree at the Faculty Council of one of the best universities in Poland which made me feel ennobled, sealed my skills and predispositions to the profession. Believing in one's own abilities is a factor that guarantees development and striving to achieve the next level. I began to look for further opportunities to prove myself as a designer with even greater enthusiasm.

High professional activity did not prevent me from undertaking competition challenges, which I still treated as a form of expanding my knowledge in the field of design in areas I had never worked in before.

In 2013, Domino and DRE companies, organised the competition for the door handle and the project of the door under the "Good Entrance" slogan, in which I received a special prize for the handle named Bow (photo 3). The door handle was put into production together with another model of mine - Minimal door handle (photo 4).



Photo 3. Bow handle (trade name - Twist); Source: Domino Sp. J.; 2013.



Photo 4. Minimal handle; Source: Domino Sp. J.; 2013.

In 2014, the Industrial Institute of Automation and Measurements from Warsaw organised a closed competition for a bicycle shelter project

addressed to employees, students and graduates of the Technical Design Institute of Koszalin University of Technology. I submitted four concepts to the competition, two of which were awarded. I received the first place for the concept of the PJM9 shelter (photo 5), and the PJM6 project (photo 6) was awarded the second place.

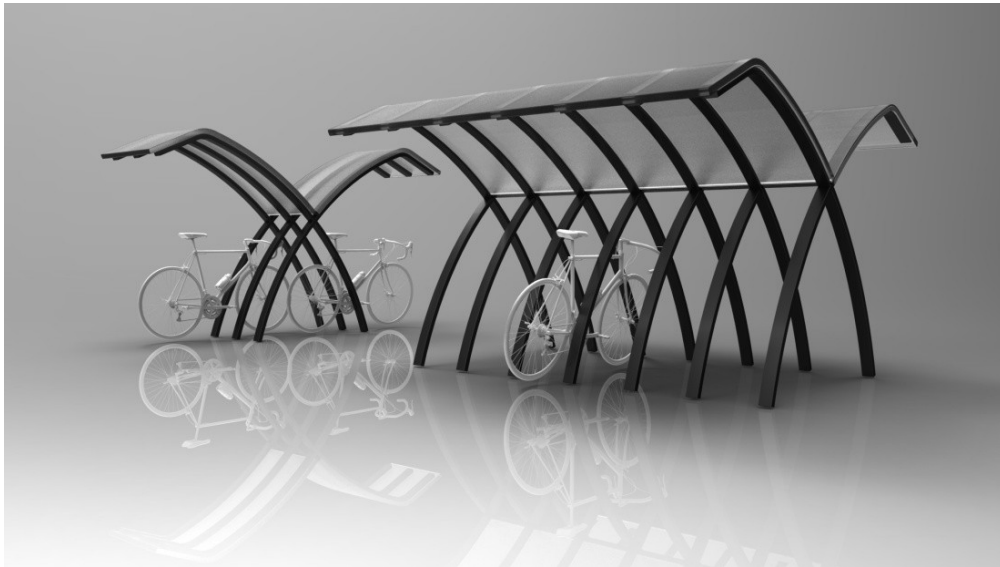


Photo 5. A conceptual design of the PJM9 bicycle shelter; First place in the competition organised by the Industrial Institute of Automation and Measurements; Warsaw 2014

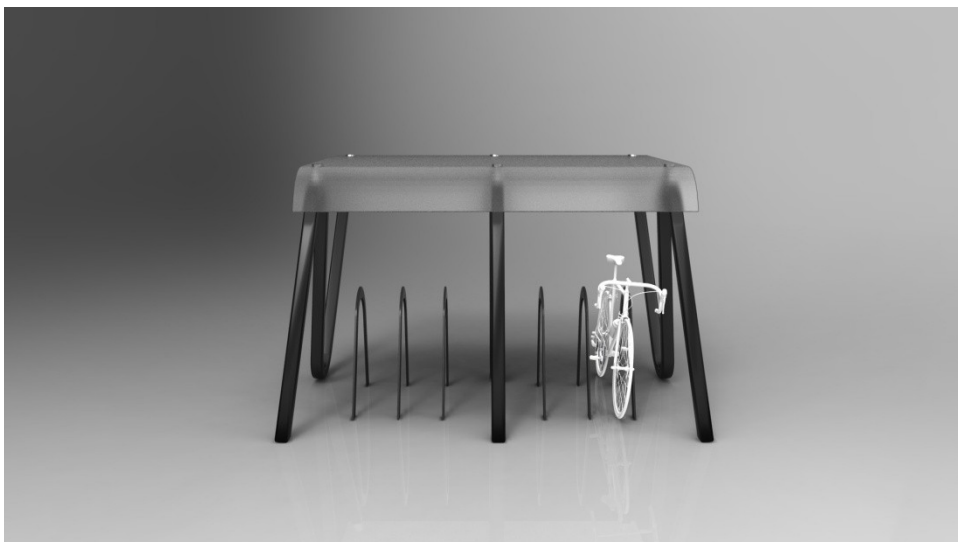


Photo 6. A conceptual design of the PJM9 bicycle shelter; Second place in the competition organised by the Industrial Institute of Automation and Measurements; Warsaw 2014

### ***2015 well-established subject-matter***

2015 is another breakthrough in my professional career all due to one phone which I received while working with students in the pattern-shop of the Technical Design Institute campus of Koszalin University of Technology.

I was called by the co-owner of the dynamically developing Arka company from Sianów (Zachodniopomorskie province, near Koszalin), who was looking for a designer to design knobs for new angle valves.

The order was not serious and at first I was not interested in it. However, when I agreed to go to the meeting at which I was presented with a problem, I got to know the company's profile and the awareness of its owners, I changed my view and I carried out the order with a great commitment.

The owners of the company talked passionately about the willingness to launch domestic installation and sanitary products on the market. The design task was not difficult. It was essentially based on styling. However, it was possible to propose solutions that significantly distinguished the product on the market and multiplied the sales results. I came with five designs and although initially one was planned, the decision was finally made to produce two different knobs with Plus and Solid trade names. Since then, the valves in question have been one of the best-selling products in the company. Market success, gratitude and satisfaction of the investor prompted me to accept the offer of permanent cooperation. The company did not have a designer, and all orders for graphic and product designs had previously been outsourced to external companies. Since September 2015, I have implemented dozens of graphic designs in the form of marketing materials and designed several products. The Art and the economic versions of Praktik soon joined the collection of Plus and Solid knobs (Photo 7).





Photo 7. Collection of knobs for angle valves designed for Arka Sp. z o.o. sp.k. From the left: ART, PLUS, SOLID, PRAKTIK.

The work of a designer on a full-time basis is different from that of the freelancer's nature. The subject of commissioned project tasks is significantly narrowed, which has its advantages. The limited thematic scope allows to deepen the knowledge about a given assortment more thoroughly, to get to know the market well and to specialise in a specific direction. The time spent at the company's headquarters gives the opportunity to get to know it well and give an individual character to new products.

The market success of attractive looking valves dared the owners of the company a bit and encouraged further implementation activities. Soon a series of air venting valve concepts was created – the products which function "in hiding" as well as angle valves.

Today, technical rooms such as boiler rooms and laundries look a bit different. These rooms are often designed by interior architects. Ecological and economical devices work in dust-free rooms. They are made of high quality materials and designed with attention to the smallest detail. Thus, a niche of complementary products was created, such as air venting valves or circulating pumps, which are often a part of complicated systems, extensive installations equipped with high-class, well-designed heating devices.

The new form of the air venting valve (photo 8) proposed by me encouraged the company's engineers to intensify their research for valve operation. In addition to the modern look, the product has been enriched with a number of interior innovations that will surely make it highly competitive.



Photo 8. Design of a vent valve for Arka Sp. z o.o., sp. k.; 2016.

For several years of my professional activity, my approach to design has been grounded, the source of which is fascination with motorisation and Scandinavian projects. This fascination does not, however, translate into the very aspect of product aesthetization. It goes deeper and sometimes provokes contradictory activities.

What distinguishes my view on design is rational functionalism, but enriched with specific aesthetic preferences. Oxymoron in the creative process? Rather, a natural desire to satisfy the needs of lower rank, fueled by hedonistic foundations, but still present in our lives and expressed in the search for joy for the eyes. Without radicals, I am open to new experiences, I look for niche areas and I try to introduce new value into them.

I am definitely closer to a functional, sensible design that focuses on the user, rather than to biomorphic activities, aimed only at the aesthetic aspects of the product. However, when I analyse all my projects, I notice strong, expressive, common features in them. Transforming basic shapes, minimum interference in matter, simplicity of construction, which translates into reduction of production costs, are the main attributes of my projects. Contrasts expressed in gestures - delicate and very strong, expressive; taut arc, radius, but also definite cut. I am referring again to car design - the NEW

EDGE style introduced by Ford in the nineties being the combination of gentle arches, sharp cuts and edges.

The cultivation of the "less is more" principle is not a blind pursuit of the ubiquitous spirit of minimalism, but rather the voice of reason and understanding of matter, which often suggests solutions. I have been looking for solutions that will optimize the functionality of the facilities. Minimalism is only the result of this approach to design. I often tell my students not to design an object named directly - that is, designing a chair, let them design the process of sitting down and as a result - an object that is supposed to serve a given activity. The effects of this approach are then surprising for the authors themselves.

Once in one of my classes I saw how much of the problem the student had about the seat. "Everything is already here!", an embittered student chanted at the door of the studio. "Of course" - I answered with a smile and in silence I watched her sit on the chair, rest the body, relieving the individual parts of muscles. After a few days of observation, I instructed the student that her friend should photograph her every time she sits at the table. The effects visible in the pictures surprised the student who had not realised the characteristic layout of her own body before.

In the design process, a strong focus on the user led the student to solve the design problem and finished in the form of an original chair, and thus interesting in the form and function. (Photo 9).



Photo 9. Ołena Rozwer; Chair; A photograph from the author's collection.

Studying, I once heard that design is not for everyone. However ambiguously this statement could be understood, I referred it to myself, my activity - the actions of the one who enters the world of design and intends to leave his molecule in it. I realised that design is an extremely responsible activity. This is a profession reserved for those who will bear the responsibility, who will understand it and will not waste the trust they have received.

Being a designer is to observe, draw conclusions, formulate problems and try to remedy them, take the profession seriously, but not to be closed in the pathetic attitude of a sulky mentor. What helps me sometimes is a sense of humour, a distance to seemingly difficult matters, and sometimes reflection and contemplation. Designing with the use of imagination, respect for matter and minimal interference in it, we get the so-called good design.

My aim is not to bring the designer's role to missionary, full of sacrifice, but I would not like the design to be just a calculated marketing tool. At the same

time, I do not argue that design is not intended to improve the visual quality of products, but nevertheless I expect greater awareness of the latent potential in it. Lack of observation of the world, changing human needs, including aesthetic ones, downplays the design, limiting it to the sphere of producing more artifacts. I do not want the design to close its concept. I want new generations, technologies and changing world to write more and more current definitions of the design, and the designers not to close themselves in offices, creating objects from the past from memory. In order to achieve this, however, one needs education, awareness not only at the academic level, but also among those who use design and on which they want to earn.

A handwritten signature in blue ink, appearing to read 'Majumdar', is positioned on the right side of the page.

**Presentation and description of the scientific or artistic achievement referred to in art. 16 sec. 2 of the act entitled "Searching for functional and formal solutions on the example of a set of bathroom and kitchen faucets".**

The following presentation concerns a comprehensively implemented project by Arka Sp z o.o. sp k. company. I started working on new concepts in autumn 2016. The project in terms of design is complete and finished. The resulting products of the test production, and the components that complement the work - displays for the designed faucets, are now used in accordance with their intended use as elements supporting sales.

The topic of the new family of faucets makes quite a difficult challenge. The high scale of task difficulty results mainly from the unusual popularity of this type of products on the market. A heavily exploited sector does not seem to accept any more designs, and every next one gives the impression of a copy of the previous one.

The project brief included mainly an incremental innovation with a clear marking of the market shelf. I was to create three separate concepts from which the company management was to choose one - the best placed at a given moment among higher quality products. Preparing for design work, I scrupulously analysed the Polish and global (mainly European) faucet market. In order to gain a lot of knowledge, I have made several business trips, including Trade Fairs for plumbing that took place in Milan.

Most of the global production market is owned by Chinese factories that mass-replicate designs of the best brands, offering unnoticeable changes at the level of detail or the product's colouring. One of the priority design assumptions was the distinction on the market of the faucets from the multitude of Chinese designs, while maintaining a balanced design. The

specificity of the Polish market is connected with the need to reconcile innovation in terms of the appearance of the product, its functioning, with a certain degree of conservatism - leaving the well-known elements, and thus in the eyes of the consumer perceived as reliable, tested, trusted.

Taking all the above into consideration, I divided the concepts I created into three groups:

1. A conservative group with features of incremental innovation - a product from this group can not shock with its appearance. Its silhouette should evoke associations with existing and well-known forms, while at the same time distinguish itself and arouse positive impressions.
2. An increased incremental innovation group - a product with characteristic features, making it individual, with simultaneous reference to the currently prevailing design trends. The product should also stand out in terms of its functioning.
3. A radical innovation group - a product with significantly individual characteristics both in terms of form as well as in terms of performance and functionality.

In each of the groups I created the concepts of two types of faucets - commonly referred to as basin and bathtub ones. Although one of the series I have designed has been implemented, it would be erroneous to limit myself to presenting only the one chosen, as the remaining concepts, although seemingly different, relate to one, consistently conducted design process, which at the outset assumed the presentation of three highly diverse forms as the effect of research, at the same time creating focusing material for the sales department. It is also worth mentioning that the other two variants of the faucets were not rejected, only the decision on their implementation has been postponed. Perhaps in the unchanged form they will appear in the near future as a continuation of a coherent design style though expressed in

slightly bolder versions. Faucets are not the main product and profile of the company's implementation activities. They are new in the constantly expanding sales offer.

### **B01 faucet.**

The concept of B01 (photo 10) was intended to evoke a positive, albeit modest, aesthetic experience, not to provoke with an excessively avant-garde form and to blend in well with contemporary interiors. The fulfillment of these assumptions influenced the board's approval of the choice of concept and implementation for production. Faucets, like most products placed on the Polish market, must meet standards in the field of safety of use and material standards. This considerable limitation of creative freedom raises the level of difficulty of the task, but also forces us to intensify the search and develop our own research methods. Three-dimensional printing technology - today extremely popular, allowed to make detailed ergonomic research and check whether the proposed curvatures, specific decisions in the field of external form will allow free flow of water. The prints also helped to eliminate hard-to-reach spaces in which mold casting would be less precise. As a result, a set was created based on the style generated for the first washbasin mixer.



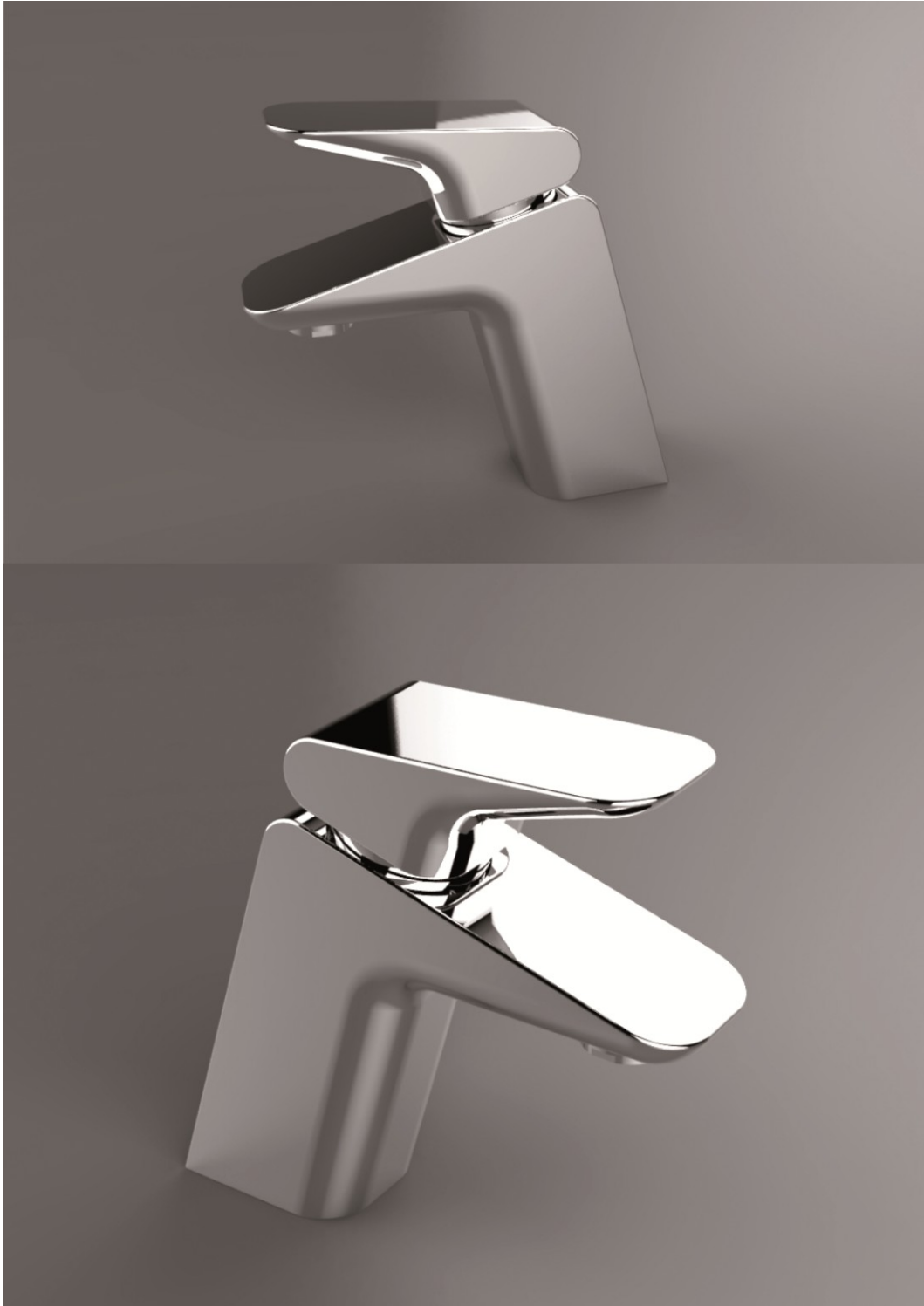


Photo 10. B01 washbasin faucet. Chrome version.

The inclined dynamic body made it possible to shorten the screed and thus reduce the overall size of the faucet. This form also guaranteed proper distancing of the water stream from the edge of the basin. The smooth, flat surfaces guarantee easy cleaning. The small size handle, controlling the

mixer head, has been designed in such a way that the positioning of the head is as precise as possible. The two-stage head was assumed here to limit excessive water consumption. The handle was profiled on the basis of trial models, which helped determine the optimal gripping method, hence the flat, thinned form at the end of the mold. The large angle between the spout and the bottom edge of the handle makes it easier to open the valve with the palm closed in a fist or the forearm itself. This is important in the case when the faucets are used by people with physical disabilities, spastic fingers or simply when the user's fingers are dirty and make it difficult to hold.

The basic finishing of the faucet surface is chrome plating, but in the project I also created white and black painted versions, which bring out completely different values of the product, and above all emphasize all the details and lines building the form (photos 11 and 12).

Another faucet that makes up the set is a bathtub version - surface mounted. In principle, the faucet does not have a movable spout, so like in the washbasin version, its construction can be described as monolithic (photo 13 and 14). The visual dynamic effect has been preserved by maintaining a sloping, strongly cut spout. In addition, such a configuration has made it possible to obtain a space for a water stopper valve for the shower head.



Photo 11. Washbasin faucet - B01. Painted version - white.



Photo 12. Washbasin faucet - B01. Painted version - black.

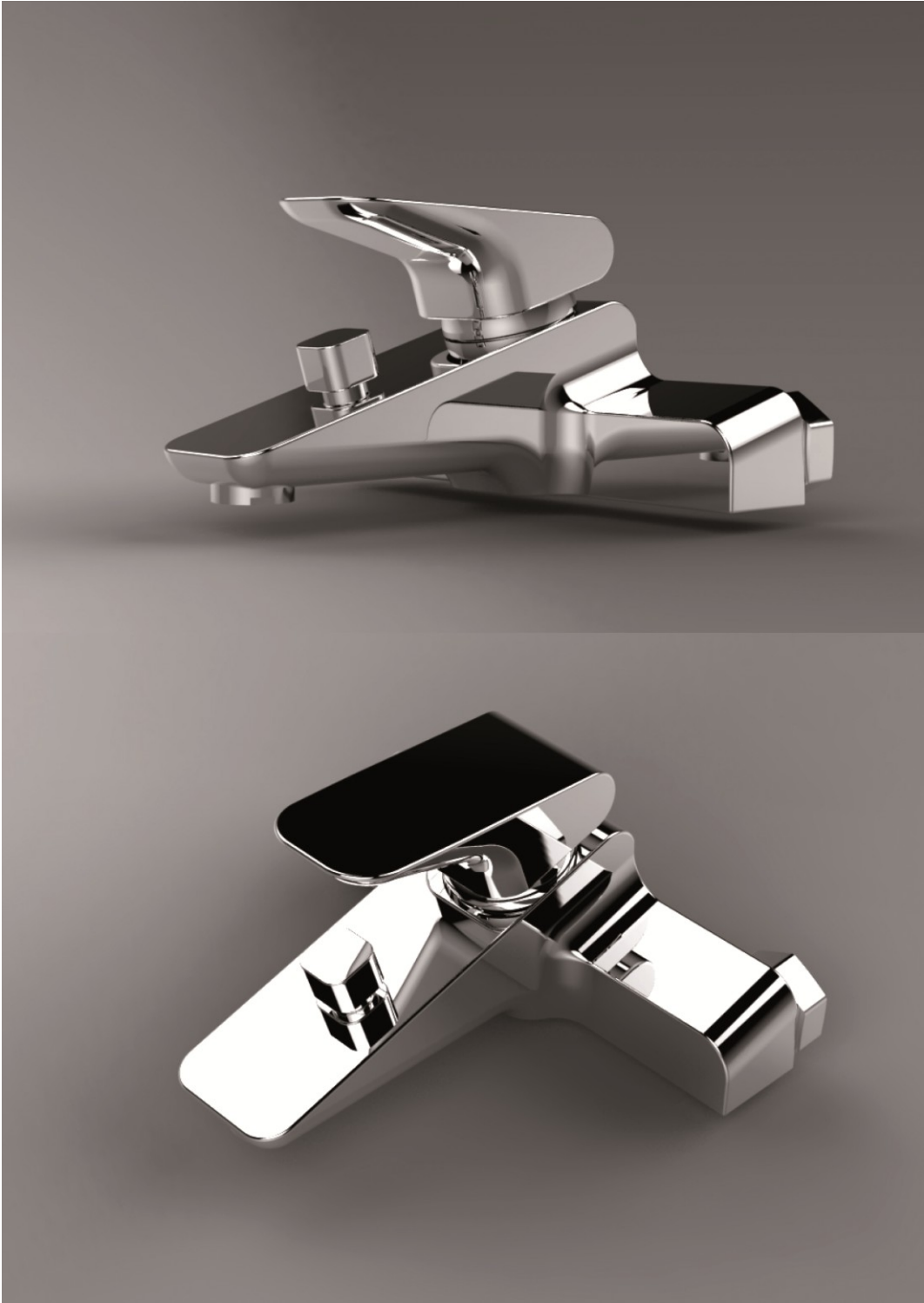


Photo 13. Bath mixer - B01. Chrome version.

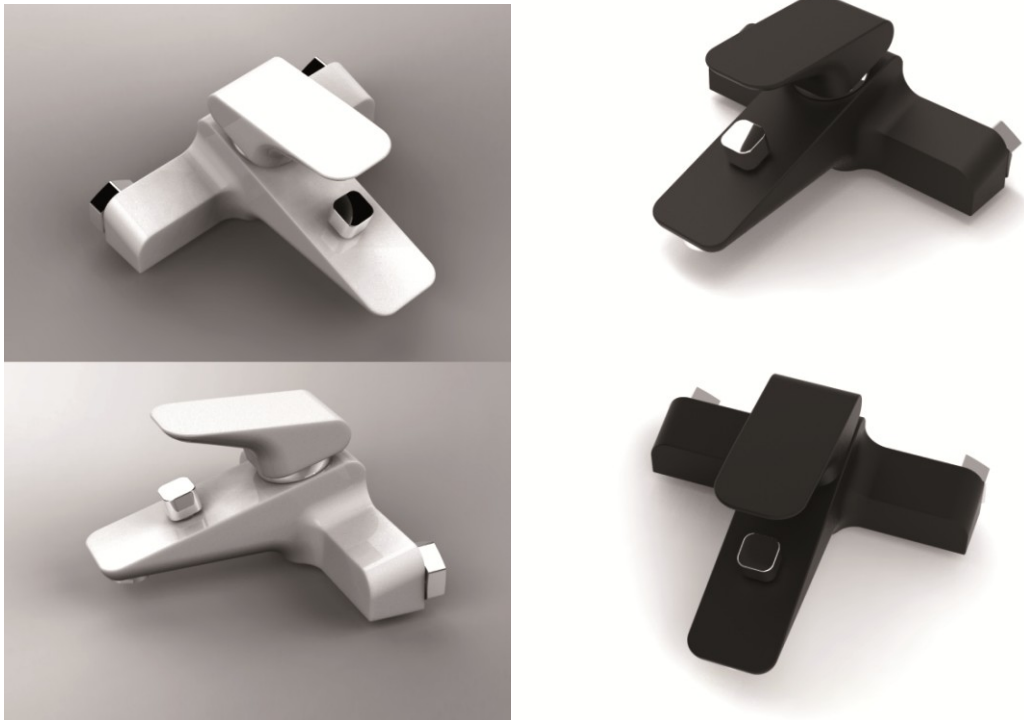


Photo 14. Bath mixer - B01. Painted version - white and black.

The shower mixer with the upper handle was made by reducing the bath mixer spout. The family of faucets should be a system solution, contain common elements to reduce production costs and maintain formal consistency. That is why, it is important to accurately plan the geometry, at which all models of the set should be taken into consideration immediately. Although individual elements of the faucet family function differently, it is possible to preserve many identical features (photo 15 and 16).



Photo 15. Shower mixer - B01. Chrome version.

What I mentioned earlier was the specificity of the Polish market and the quite conservative approach of consumers to everyday products. The market need is often at odds with the idea assumed by the manufacturer, which nevertheless undergoes pressure and introduces a forced product. In the case of the faucets in question, this situation is illustrated by the wall-mounted version with a swivel spout (photo 16).



Photo 16. Faucets: wall mounted with swivel spout and B01 shower mixer. Chrome versions.

The faucet with a movable, rotating spout generates the costs of another casting mold of a large, brass element. Many manufacturers give up the introduction of this model to new collections. The faucet is used in kitchens where the water connections have not been modernized and they are found in the wall above the sinks. The body has been designed in a way that allows connecting both shower hose and spout with a slight modification of the connection itself, which after casting remains a raw element. This approach to the project has reduced production costs by using one body for two faucets.



Photo 17. B01 bidet mixer. Chrome version.

Bidet mixer (photo 17) - the smallest in the B01 series. The design was made from the transformation of the basin mixer. The shortened screed was equipped with a movable element with an aerator.



Photo 18. B01 kitchen faucet. Chrome version.



The most ergonomic tests were made for the kitchen faucet (photo 18). Defining the form of the screed and looking for a relationship between the body and handle, it was necessary to create several three-dimensional versions. The operating models printed in the 1: 1 scale allowed to determine the optimal spout height, its range and the necessary range of rotary motion. The optimization of the faucet handling in terms of accessibility to the handle, freedom of movement in the space under and around the battery, consisted of placing the spout base behind the body. This solution, combined with the profiling of the spout at an angle of 90 degrees to the base, allowed to obtain a high level of functionality, while maintaining the principles of ergonomics and safety. Modification of the length of the screed itself, as well as the introduction of a pull-out and multifunctional screed are a development issue.

### **B02 faucet.**

Before I presented the faucet version chosen above, the second concept, defined as B02, was also created in the search for form and innovation. The advantage of the design is its visual and physical lightness, which translates not only into aesthetic values, but also reduces production costs.

A characteristic feature of this project is a long handle that allows you to lower the force necessary to control the head of the faucet, but on the other hand reduces the precision of the setting. The radical elevation of the spout and the diagonal head placement are characteristic (photo 19).



Photo 19. The concept of B02 basin faucets in the painted version - white and black.

The lightness of the mold was also preserved in the wall-mounted bathtub model (photo 20).



Photo 20. The concept of B02 bath mixer in chrome version.

### **B03 faucet.**

B03 concept - a faucet with innovative operation system that could stand out on the market with strong, straight lines and large, flat surfaces. An unusually solved handle in the faucet is an idea preceded by observations and research on models that distinguishes and classifies the project in the category of radical innovation (photo 21). The form of the handle forces the way of mounting the faucet head, which is rotated by 180 degrees. Thanks to such a procedure, controlling its head is like manipulating a popular joystick used in computer games. This form of grip is intuitive and natural.



Photo 21. The concept of B03 basin mixer in chrome version.

The form of the bathtub version (photo 22) is the result of a combination of simple solids, each of which has undergone a minimal transformation. At the same time, the transformation and proper merging of these solids is the result of the analysis of all the functions of the faucet. Connections of hot and cold water, mixing head and spout with free access to the shower valve are three elements, which in this case I combined with cuboids, providing all the required dimensions (photo 23). The introduction of rays that round the

edges of the battery are treatments enforced by security considerations, but their values are design decisions that constitute purely visual aspects.

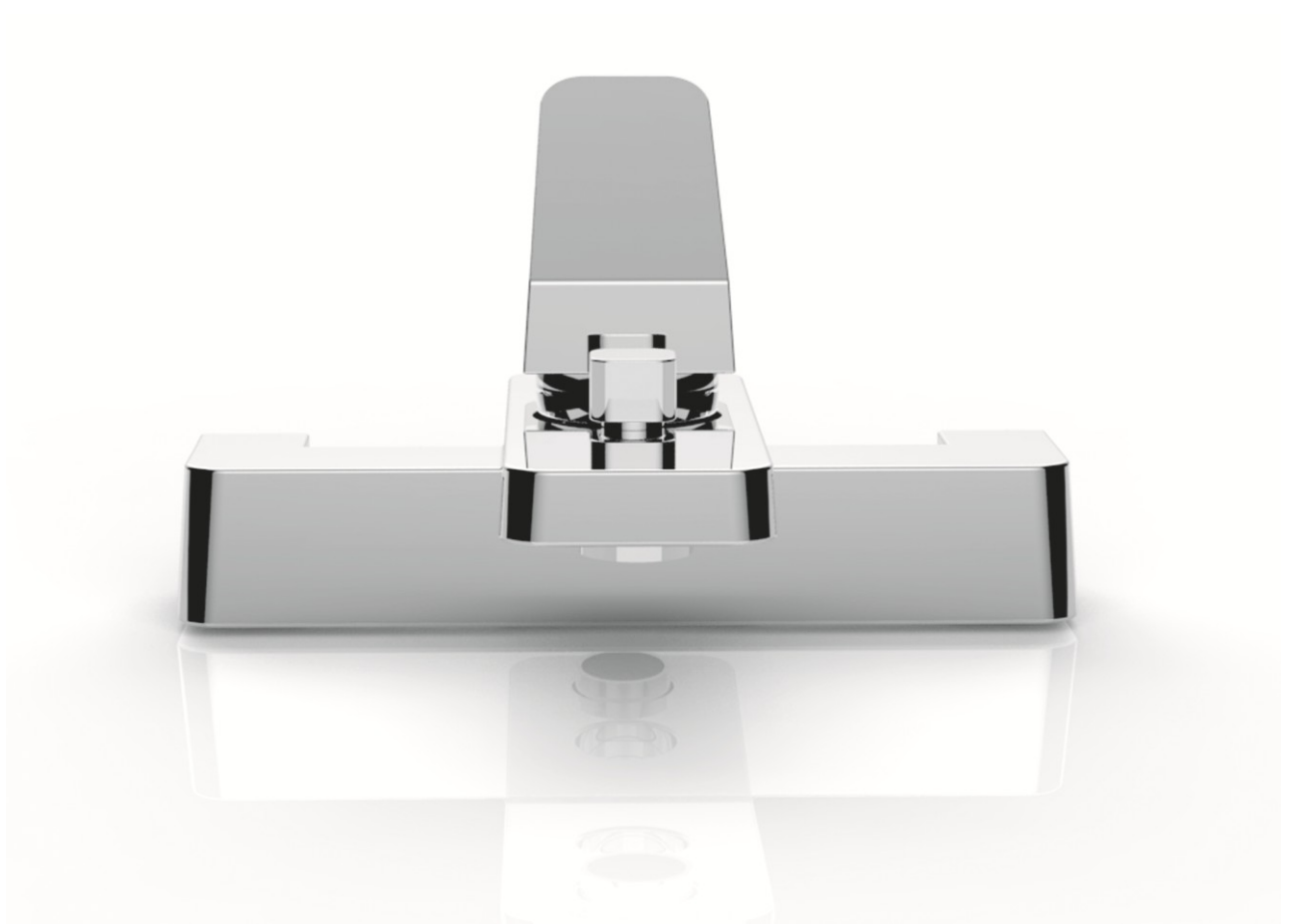


Photo 22. The concept of B03 bath mixer in chrome version.

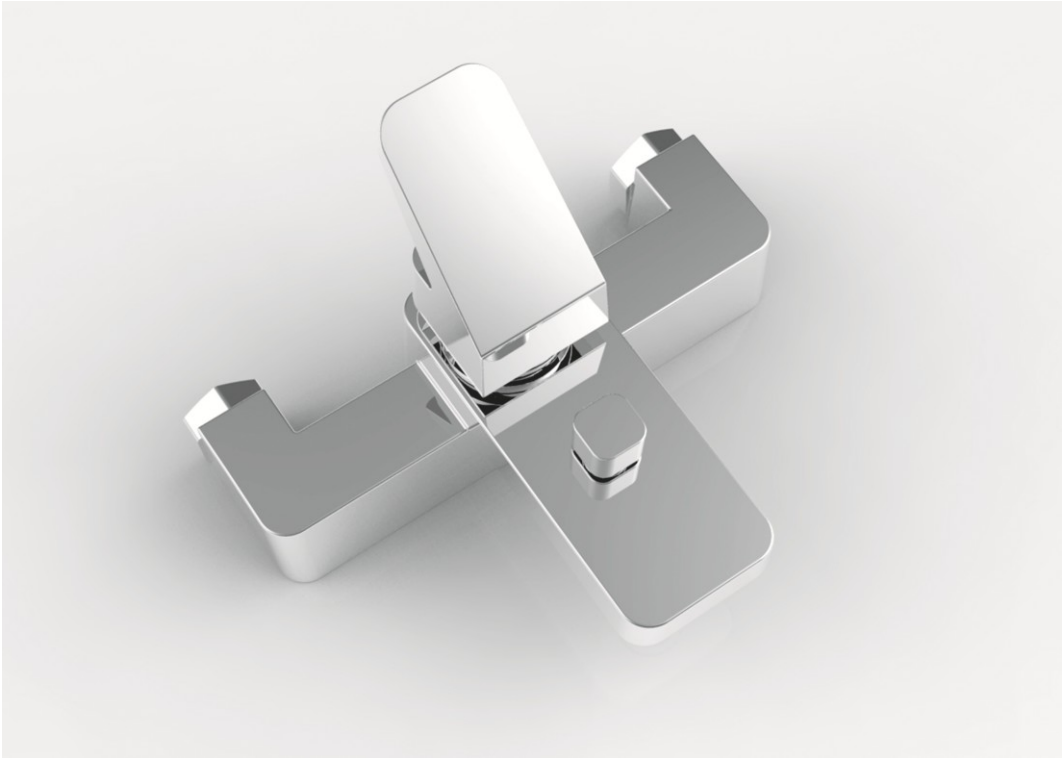


Photo 23. The concept of B03 bath mixer in chrome version. View from above.

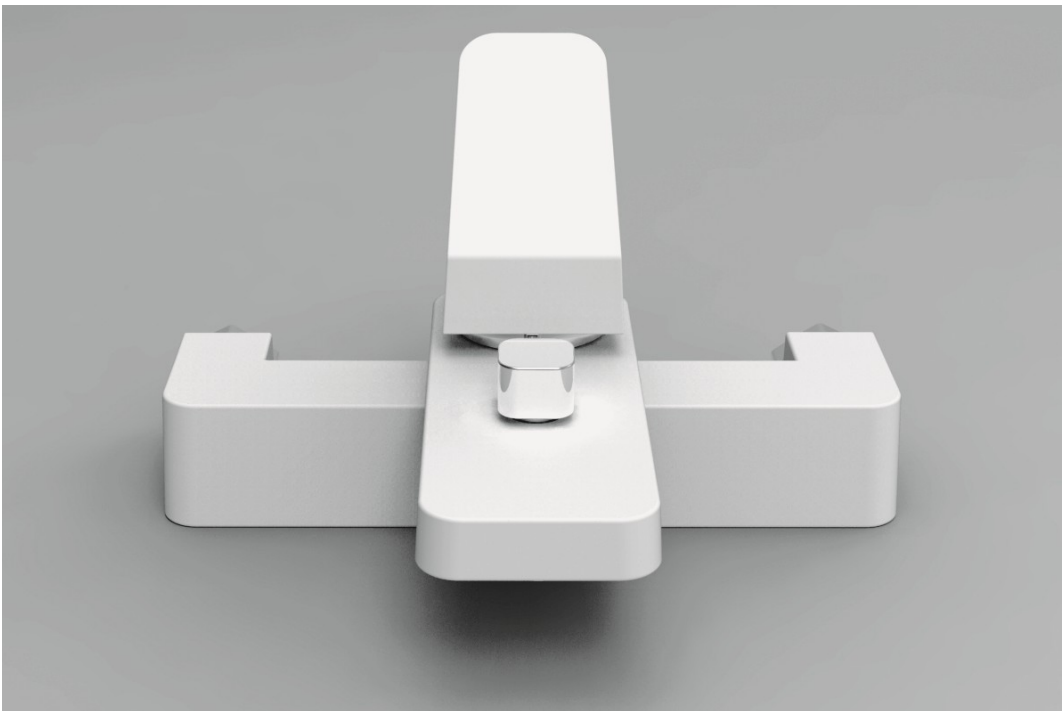


Photo 24. The concept of B03 bath faucet - painted white.

## Designs of elements supporting sales.

Counting on the market success of the B01 implemented faucets, the manufacturer took care of the preparation of elements that support marketing activities. The supersaturated market is more and more demanding, and customers expect attention to the smallest detail. Buying a new faucet, it is often not possible to confront it with a selected washbasin, bathtub or kitchen sink.

Having analysed the signals coming from the sales network from all over the country, I made a decision to implement three types of POS elements: two for the over-the-counter exposure and one for a free-standing object with a storage function. The smallest displays are designed to expose individual faucets in a way that allows them to be combined with a washbasin. Initially, the project was to be made of pressed steel with a thickness of 3mm (photo 25).



Photo 25. The concept of displays for a single faucet in three variants of colors.

Finally, due to the high cost of production, the weight of steel displays and the risk of damage to the delicate sanitary ceramics, the material was changed to white plexiglass. White colour refers to bathroom ceramics, while leaving the element neutral. The form of the POS, acting as a base, could not distract from the essence of sales - faucets. However, it had to bear the weight of the exposed faucet, balance the highly elevated centre of gravity, and also hide the fasteners. From the point of view of marketing, it was also necessary to place the logotype of the brand on it, signing new products. Taking into account the above requirements as well as technological limitations, the conceptual form has been simplified, and the new POS is currently used to display also the faucets of other producer's series (photo 26).



Photo 26. Display for a single faucet made of plexiglass - implemented version.

On the basis of single, small displays, another POS was designed for the presentation of three faucets: one on the wall and two pillar taps. As in the case described above, the display was to be made of steel, painted and powder coated (photo 27).

Ultimately, however, the production version with a simplified base was made of two types of shiny plexiglass: black and white (photo 28). The display is most often set on shop counters or shelves available for customers, that is why it was important to design a stable base that balanced the wall-mounted, vertical element. In the back part there are nuts fastening the wall battery and vertical brackets ensuring rigidity and strength of the vertical element. The logo has been laser cut.



Photo 27. Display concept for three faucets.





Photo 28. Display for three faucets – implemented version.

The standalone display, due to the large size and the additional function of the cabinet for packaging, is a complicated project. The highest element reaches the height of 186cm, and the material from which it is produced is similar to the smaller displays - plexiglass (photo 29.). The front of the cabinet is made of three-layer DIBOND material. A distinctive, oval opening in the cabinet door is a container for A4 leaflets, and also a handle with which we open the door. The display enables the exhibition of pillar taps, four wall faucets and one shower set.

Vertical elements, due to their height and load, required vertical reinforcement and the use of plexiglass with a thickness of 8mm. As in smaller forms of displays, the target material was steel sheet. The most difficult task was to adapt the project to a different one than the originally planned technology, keeping all the details and functions.

Although in my plan there were no illuminated elements, at the investor's request I introduced light boxes with LED diodes that display the logo and introduce a subtle glow on the highest vertical post. The average, in terms of height, shelf is distinguished by a pink color, characteristic of the new series

of the implemented batteries. This colour may vary depending on the series, or the element may remain black.

Deep, piano black plexi strongly underlines the chromed bodies of the faucets, on which characteristic blicks and reflections appear. The white sides relieve the solid body of the cabinet, exposing the thin layers of the material from which it was made. The display can function as a free-standing element of an island character or create a series of duplicated furniture with different series of faucets.



Photo 29. Cabinet display - implemented version.

A generally accessible exhibition entitled "Design working on faucets", presenting my projects, took place 4 -11<sup>th</sup> Dec 2018 in the "Stairs" gallery on the campus of Koszalin University of Technology (photo 30 - 35).



Photo 30. Exhibition „Design working on faucets” in the „Stairs” gallery.



Photo 31. Exhibition „Design working on faucets” in the „Stairs” gallery.

During the vernissage of the exhibition, in addition to the boards presenting all the faucets of the implemented collection, it was possible to see the models already produced, their versions printed on a 3D printer and the implemented over-the-counter displays.



Photo 32. Faucets testing on the day of the vernissage of the "Design working on faucets" exhibition.



Photo 33. „Design working on faucets” exhibition.



Photo 34. Presentation of the faucet during the vernissage of the "Design working on faucets" exhibition.



Photo 35. Presentation of the faucet during the vernissage of the "Design working on faucets" exhibition.



Photo 36. Poster promoting the exhibition.

At Arka's headquarters there are monthly public presentations of implemented new products that will soon be on store shelves for groups of clients from all over Poland (photo 37 - 40). Below are photos from the presentation of the faucets being implemented.



Photo 37. Presentation of the batteries being implemented at Arka's headquarters.



Photo 38. Presenting faucets introduced to the market (from the left) Przemysław Majchrzak and Andrzej Pawłowski - co-owner of Arka Sp. z o.o. sp.k.





Photo 39. Faucet presentation for the customers of Arka Sp. zo.o. sp. k.



Photo 40. Author of new faucets designs during the presentation.

