

**PUBLICENTER**  
*Cards for easy living*

CARD CATALOGUE  
light version

## THE WORLDS OF CARDS

Publicenter produces and customises plastic cards to the highest quality and security standards, giving top priority to state-of-the-art technologies and environment-friendliness. Depending on use requirements, clients can choose from a wide range of **materials** and **printing techniques** and opt for the **customisations** best suited to their needs, including **scratch-off panels** or **magnetic stripes**. Publicenter also produces contact and contactless **smart cards**. Here you will find a brief technical profile, ranging from card production to customisation, with guidance as to the possible **applications** in the many **sectors of use**.

Publicenter manufactures cards in a variety of materials depending on the intended use and the characteristics required. A range of finishes are also possible for each material. Publicenter is able to offer guidance to the best option in terms of functionality and costs, while assuring peerless quality in all cases.



## MATERIALS

### PVC - POLYVINYL CHLORIDE

Flexible, durable and recyclable, PVC is particularly suitable for a broad range of applications. It can be produced with a gloss or matt finish and it can be supplied with a laminated or coated finish (monolayer card). High opacity PVC is recommended for prepaid cards.

### PVC/ABS - POLYVINYL CHLORIDE & ABS

It features the same characteristic of PVC, though it's more heat resistant. This material, gloss or matt finished, can be also laminated. Its use is suggested for cards stressed by long exposure to the sunlight.

### PET-G - POLYETHYLENE TEREPHTHALATE GLYCOL

It is a durable, completely recyclable and «low environmental impact» material. Cards made with this material can be coated or laminated. It is recommended to meet specific requirements in terms of sensitivity to environmental aspects.

### PET - POLYETHYLENE TEREPHTHALATE OR POLYESTER

PET is a «low environmental impact» material that allows the production of coated cards with a typical thickness of 0.33 mm. Cards made using this material are far more heat resistant than those made of PVC.

### LENTICULAR PET

It is ideal to allow the creation of special effects or moving images. It is recommended for high creativity applications.

### POLYSTYRENE

It is a recyclable plastic that can be considered as a more economic alternative to PVC, particularly for cards with a short life cycle. Polystyrene is recommended for prepaid cards in its high opacity version.

### POLYPROPYLENE

«Low environmental impact» and recyclable, polypropylene is extremely durable, strong and constitutes a low-cost alternative to PVC usually adopted for high production volumes.

### PAPERBOARD

A «low environmental impact» material recommended for short life-cycle cards.

## ISO FORMATS

Publicenter produces cards following the ISO / IEC 7810 international standards.  
Dimensions: ISO ID-1 - Width: min 85,47 ÷ max 85,72 - Height: min 53,92 ÷ max 54,03 - Thickness: min 0,68 ÷ max 0,84.  
Every different format is available on request.

## FINISHES

### Laminated cards

The printing is protected by two transparent plastic overlays, bonded together by a thermal process: the result guarantees a high quality and longlasting card. A laminated finish is compatible with all types of personalization: thermal printing, embossing, inkjet printing, indent.

### Coated cards

The printing is protected by a layer of UV varnish. The monolayer version is more economical than laminated cards but of shorter life cycle.

Publicenter makes use of innovative printing processes able to guarantee excellent quality standards in the reproduction of graphics and images. Such processes allow an optimization of times and costs.



## PRINT TECHNIQUES

### OFFSET PRINTING

Offset litho printing ensures high definition of graphic elements of the layout or specific features such as fine lines, images, logos and icons, which are reproduced perfectly with high definition and sharp outlines.

### SCREEN PRINTING

This technique is particularly recommended to print trademarks and logos that call for high gloss and brilliance. Ideal for bright high opacity colours and for special colours such as gold, silver, glitters, fluorescents and phosphorescents.

### COLOURS

Our printing process combines the four basic colour and Pantone®, metallic colours, glitters, phosphorescent colours, special offset/screen printing UV ink. Full bleed cards are always held in stock and available on demand: ISO format cards, with one blank side and the other side coloured "full bleed" with one of the numerous screen printing colours.

Publicenter offers a wealth of experience in this field. The company's internal service bureau provides advice on the best option, helping clients in choosing the optimal personalization in terms of functionality, times and production costs.



## PERSONALIZATION

### MAGNETIC STRIPE APPLICATION AND ENCRYPTION

It is a tape on which a series of binary-code data can be recorded and read. It is usually applied to the rear of the card and in accordance with ISO norm 7811.

### CHIP APPLICATION AND ENCRYPTION

The chip is implanted using biadhesive material, after which electrical initialization is carried out: these operations are known as embedding. The next step is the electrical encoding, which allows data or software to be inserted in the chip. This is followed by the personalization of the card.

### SIGNATURE PANEL APPLICATION

There are two types of application: roll-on and screen printing. A screen-printed signature panel may be standard or non-standard, white or transparent, depending on the customer's requirements and on the layout of the card. It is available even in the counterfeiting version.

### THERMAL PRINTING

The thermal printing process is able to reproduce black and white or full colour photos, logos, texts, barcodes, etc. or to apply a special protective layer to prevent counterfeiting.

### EMBOSSING AND INDENT, TIPPERING AND INFILL

These are the most widespread card personalization techniques, normally used for credit cards. Embossed and indent card characters are coloured for better legibility.

### INKJET

With this print technique it is possible to personalize cards with alphanumeric data or barcodes at low cost.

### HOT STAMPING APPLICATIONS

Using this technique it is possible to reproduce logos and creative images by means of coloured, prismatic or holographic ribbons. Hot stamping applications serve to impart a prestigious appearance to the card while increasing security.

The trial of personalization is not ending here! Publicenter can offer a key in your hands, that includes service and support in order to personalize and put in envelope your card.



## FULFILMENT

### CARD FINISHING AND MAILING

The personalized cards can be applied on your forms and turn personalized with variable data. The trial pass safely, thanks to a system that check the correspondence of the information introduced on the two supports. It's possible to supply them in extended sheets and also in envelopes.

The use of magnetic stripes is currently the most widely adopted system for recording data. Also, the facility to choose the stripe colour has made this technique more attractive to card designers too.



## MAGNETIC STRIPE

### MAGNETIC STRIPE

It is applied to the reverse side of the card in compliance with the applicable ISO standards. It can be: LoCo (Low Coercivity) or HiCo (High Coercivity).

Thanks to a production facility unrivalled in Europe, wholly dedicated to the production and customisation of prepaid cards, Publiccenter provides the benchmark for this product: the firm specialises in the various kinds of scratch-off cards, specially designed for the telephony sector and other applications. Clients can also choose from a selection of additional security features, including holograms, invisible UV ink and background textures.



## SCRATCH-OFF

### SCRATCH-OFF

#### Scratch-off label

This is a transparent label on which a layer of scratch-off material is deposited; the scratch-off application comprises a base in the chosen colour with subsequent personalization with multicolour logos, text and images (also with "invisible" UV ink).

#### Scratch-off panel

Applied directly onto the card by a heat process. A significant variant is a prismatic panel characterized by the orientation of the surface layer, which refracts incident light to create appealing moving-image effects. It can be personalized with colours, text and graphics.

## SECURITY FEATURES

### Holograms

Holograms are security devices that can be personalized with text, images and company logos: an efficient, high-impact communication feature.

### Invisible UV ink

Offset or screen printing with special UV ink: UV ink does not affect the aesthetics of the graphic design because it is visible only under a Wood light and not with the naked eye.

### Background textures

Special coatings in relief applied with offset technology. The contrast created between glossy and matt areas is visible only when viewed against the light. It is also possible to reproduce text, images and logos that are perceptible also to the touch.

Smart cards offer the facility to manage a significant volume of data with much greater security guarantees than those of conventional card media, thanks to a silicon support: the chip, incorporated in the card. There are two types of smart cards: contact and contactless, which have different ways of data transfer. They are used for access control, loyalty card, electronic wallet, Internet card, healthcare card, university card, distance reading identification card, ski-pass, vending machine card,... Different types of standard chips are held in stock or available on demand.



## SMART CARDS

### CONTACT CARDS

Contact cards are regulated by the prescriptions of ISO 7816, which describes the physical and mechanical characteristics, the position of the chip, the protocols in use and the rules for data personalization (encoding).

### CONTACTLESS CARDS

They allow the distance exchange of data using a passive antenna inserted in the card and connected to the chip.

#### Low frequency (125 KHz; range 3-10 cm)

These cards range from 64 bits to 1 Kbit of memory and they are generally used for differentiated access control, vending machines or automatic dispensers.

#### High frequency (13.56 MHz; range 2-100 cm)

These cards have up to 2 Kbyte of memory and are mainly used for mass access and time attendance systems.

### CONTACTLESS LIGHT CARDS

They have the same features of the contactless, but the antenna comes applied on an outside adhesive label on a side of the card. The card support can be in PVC or in a inexpensive material like the PST (suggested).

Simple, intelligent tools, plastic cards are now central to many routine procedures, from topping-up a cell phone to withdrawing cash, the use of public transport and leisure activities. Their convenience and portability is winning them ever-increasing importance in everyday life.



## APPLICATIONS AND SECTORS OF USE

### APPLICATIONS

There are various chances of application of the cards, from the identification to the loyalty cards, from the access control to the business cards, from the gadget to the prepaid and so on..

### SECTORS OF USE

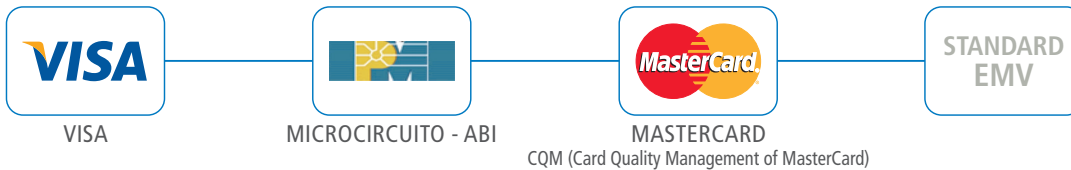
The cards may be used in many sectors, for example clubs and associations, telecommunications, shops and supermarkets, companies, credit institutes, banks and finance companies, public administration, travel and leisure services, health services, fitness centres, trade, education, transports, entertainment, food and drink sellers, insurances, computer and high tech.

The banking cards constitute one of the better expressions of the smart card power: safety, quality and differentiation of the dedicated services. The safety is guaranteed since the creation of the chip and the graphic art. Then the card goes for all the productive trial, severely monitored and certified, until it is received in the user hands, that also will be protected from the fraud for all the life of the card thanks to the chip EMV. The quality of the card is instead guaranteed by the continuous test on production that allowed Publiccenter to obtain CQM of MasterCard.



## BANKING

### CERTIFICATIONS



### SECURITY

Video surveillance 24/7, established against intrusion with access reserved anti pass-back, production compartments and video surveillance, caveau, systemized management and transfer of secure data.

### SERVICE BUREAU

Service bureau dedicate to the financial cards, for graphics and electronic personalization of debit / credit cards with EMV Chip: MasterCard, Microcircuit - ABI, Visa.

The product matrix summarizes types, characteristics and solutions of personalization for the entire range of materials available for the production of cards. On request, Publicenter provides sample cards of the materials marked with 'x'.

| Material       | Finishes             | Colour       |             | Thickness (mm) | Low environmental impact | Personalization + Scratch-off |                    |                              |                              |                      |                   | Security features |          |  |         | PBL internal code | Sample card available |   |
|----------------|----------------------|--------------|-------------|----------------|--------------------------|-------------------------------|--------------------|------------------------------|------------------------------|----------------------|-------------------|-------------------|----------|--|---------|-------------------|-----------------------|---|
|                |                      | White        | Transparent |                |                          | Panel S-OFF                   | Inkjet Label S-OFF | Thermal printing Panel S-OFF | Thermal printing Label S-OFF | Embossing (No S-OFF) | Indent (No S-OFF) | Hot-stamping      | Hologram | Special colours UV / Fluorescent / Metallic / Phosphorescent | Texture |                   |                       |   |
| PVC/ABS        | Laminated            | ●            | ●           | 0,30           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 1 A               |                       |   |
|                |                      | ●            | ●           | 0,40           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 B                   |   |
|                |                      | ●            | ●           | 0,50           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 C                   |   |
|                |                      | ●            | ●           | 0,60           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 D                   |   |
|                |                      | ●            | ●           | 0,76           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 E                   |   |
|                |                      | ●            | ●           | 0,80           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 F                   |   |
|                |                      | ●            | ●           | All            | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 Y                   |   |
| PVC            | Laminated            | ●            | ●           | 0,30           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 1 A               | x                     |   |
|                |                      | ●            | ●           | 0,40           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 B                   | x |
|                |                      | ●            | ●           | 0,50           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 C                   | x |
|                |                      | ●            | ●           | 0,60           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 D                   | x |
|                |                      | ●            | ●           | 0,76           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 E                   | x |
|                |                      | ●            | ●           | 0,80           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 F                   | x |
|                |                      | ●            | ●           | All            | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | ●                 | 1 Y                   |   |
| PVC            | Monolayer varnished  | ●            | ●           | 0,20           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 1 H               |                       |   |
|                |                      | ●            | ●           | 0,30           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 1 I               | x                     |   |
|                |                      | ●            | ●           | 0,40           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 1 J               | x                     |   |
|                |                      | ●            | ●           | 0,50           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 1 K               | x                     |   |
|                |                      | ●            | ●           | 0,60           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 1 L               |                       |   |
|                |                      | ●            | ●           | All            | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 1 Z               |                       |   |
| PET-G          | Laminated            | ●            | ●           | 0,50           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 4 A               |                       |   |
|                |                      | ●            | ●           | 0,60           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 4 B               |                       |   |
|                |                      | ●            | ●           | 0,76           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 4 C               | x                     |   |
|                |                      | ●            | ●           | 0,80           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 4 D               |                       |   |
|                |                      | ●            | ●           | All            | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 4 Y               |                       |   |
| PET-G          | Monolayer varnished  | ●            | ●           | 0,35           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 4 F               | x                     |   |
|                |                      | ●            | ●           | 0,50           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 4 G               |                       |   |
|                |                      | ●            | ●           | 0,60           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 4 H               |                       |   |
|                |                      | ●            | ●           | All            | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 4 Z               |                       |   |
| PET            | Monolayer varnished  | ●            | ●           | 0,33           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 3 A               | x                     |   |
|                |                      | ●            | ●           | All            | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 3 Z               |                       |   |
| PET lenticular | Lenticular varnished | ●            | ●           | 0,45           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 30 A              | x                     |   |
|                |                      | ●            | ●           | 0,80           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 30 B              | x                     |   |
|                |                      | ●            | ●           | All            | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 30 Z              |                       |   |
| PS             | Monolayer varnished  | ●            | ●           | 0,40           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 6 A               | x                     |   |
|                |                      | ●            | ●           | 0,50           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 6 B               |                       |   |
|                |                      | ●            | ●           | 0,60           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 6 C               |                       |   |
|                |                      | ●            | ●           | 0,76           | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 6 D               |                       |   |
|                |                      | ●            | ●           | All            | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 6 Z               |                       |   |
| PS             | Monolayer varnished  | High opacity | ●           | ●              | 0,40                     | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | 8 A     | x                 |                       |   |
| PAPERBOARD     | Coated               | Recycled     | ●           | 0,45 (350 gr.) | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 10 A              | x                     |   |
|                |                      | High opacity | ●           | 0,50 (400 gr.) | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 10 B              | x                     |   |
|                |                      | ●            | ●           | 0,55 (450 gr.) | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 10 C              | x                     |   |
|                |                      | ●            | ●           | 0,30 (230 gr.) | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 10 D              | x                     |   |
|                |                      | ●            | ●           | All            | ●                        | ●                             | ●                  | ●                            | ●                            | ●                    | ●                 | ●                 | ●        | ●  | ●       | 10 Z              | x                     |   |

# PRODUCT MATRIX

**LEGENDA**

- YES
- TO BE EVALUATED
- NO

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In Europe, one every two citizens uses a card produced by Publicenter. Whichever is the application and sector of use of your cards, please contact us: we will suggest you the best solution for your needs.

