ICad3d+
PROsolutions

The most efficient software for footwear

" Make your shoes come true "

ICad3d+
3D footwear design and pattern engineering

ICad3d+ is the first software for footwear design and pattern engineering that integrates into a single program two different environments, virtual 3D and technical 2D, which work in parallel and simultaneously. This way, ICad3d+ is presented as the best virtual alternative to the traditional process of design and pattern engineering, reducing the time spent as well as the material and human resources of the company.

- Design, create and modify footwear models, and their patterns, in parallel and simultaneously in 3D or 2D with total reliability and precision.
- Flatten lasts for all types of footwear, including boots and ankle boots, with total accuracy.
- Modify the flattening with a single "click", avoiding repeating the processes that should be carried out when such modifications are made manually.
- Create, or import, soles, heels, decorations or accessories quickly and easily, thanks to its intuitive interface.
- Customise and get images as hyper-realistic as photographs taken from real footwear models.
- Simulate the appearance of shoes after last slipping adding realism to your models.

" From sketch
to virtual design "

- Export the patterns to any cutting device, with no need for further adaptation and without ever losing the 3D-2D correlation.
- Recalculate the yield without having to re-flatten. Thus, you can modify the model parts to maximise material yield.
- Grade the footwear sizes in a completely customisable way and in just one "click".
- Create fully customisable technical spec sheets, adapted to your company's production process, by adding any kind of information, photographs and even 3D objects.
- Work in a simple and intuitive environment, very easy to use, where any change is automatically recalculated in both software environments (3D and 2D).
- Get regular software updates and enjoy the most advanced technology at any time.
- Increase the competitiveness and the productivity by reducing the time and the costs of human and material resources, and achieving a faster production.

ICad3d+ has been developed by the "Footwear Technology Institute (INESCOP)". INESCOP has more than 30 years experience in the development of CAD-CAM products and works closely with the companies in the sector. This has allowed them to develop software systems adapted to their customers' needs and always oriented towards continuous improvement.

ICad3d+ can be obtained through the Spanish company "Red 21 S.L.", which is the exclusive dealer of INESCOP's CAD-CAM programs with over 20 years experience in sales, distribution and technical support.

"Design any footwear type"

Photo-realistic render image
Modelled and rendered with ICad3d+

Workflow

Working with ICad3d+ is very simple and intuitive. The first steps to start working are importing a digital last, preparing this last for the model design and start drawing on the last. Then, you can choose working in either software environments of ICad3d+, virtual 3D (to create soles and heels, add volume and thickness, create accessories, etc.) or technical 2D (to flatten, to generate patterns, to grade, etc.). You can change from one environment to another at any time.

Virtual 3D

Soles and heels · Pieces and thicknesses · Details and decorations · Materials and variations · Virtual last slipping · Rendering

Importing a digital last · Preparing the last · Drawing on the last

Technical 2D

Flattening · 3D/2D pattern engineering · Size grading · Material consumption, technical spec sheets and cutting
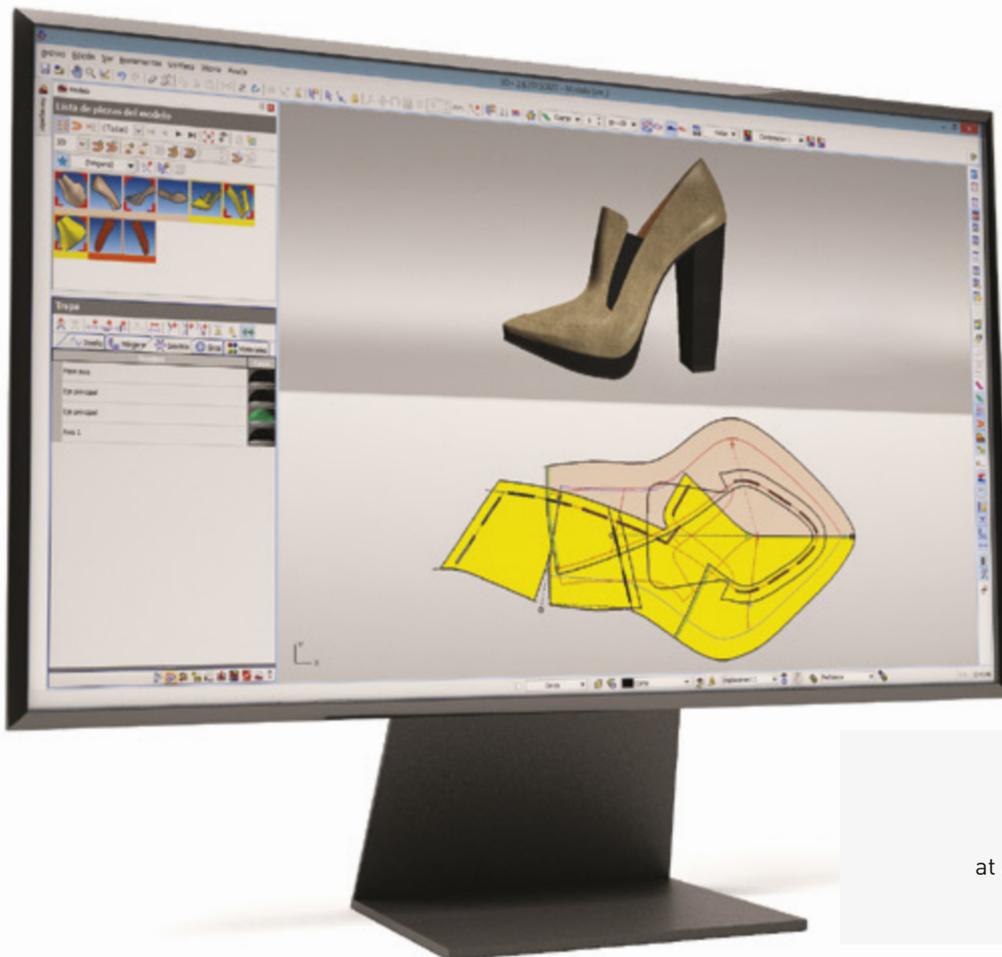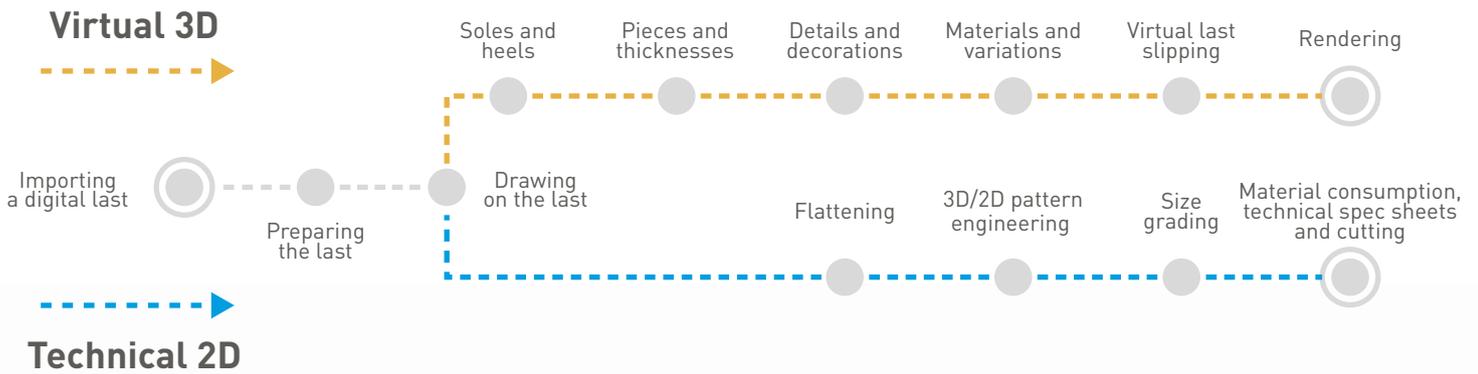
3D/2D simultaneous view. Change from 2D to 3D environment (or vice versa) at any time and decide the most suitable work process.

Importing a digital last
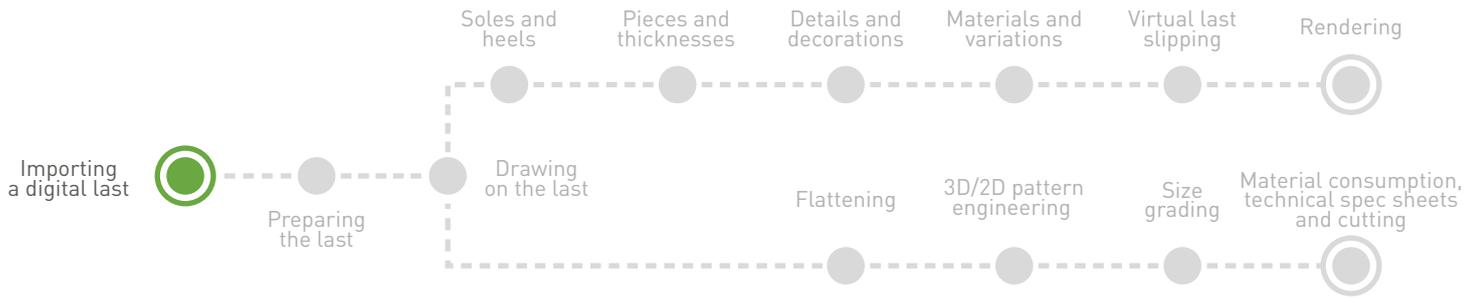
The first step of the process is to import a digital last.

ICad3d+ allows you to import a wide range of formats both proprietary (HOR, LST, FVR, etc.) and standard ones (STL, IGS, SEC, OBJ, etc.).

Using the imported last you can obtain the patterns and photorealistic footwear models, fitted to real proportions.

original last
modified last
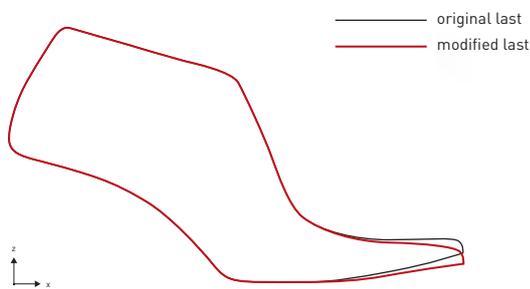
Modifying the toe spring
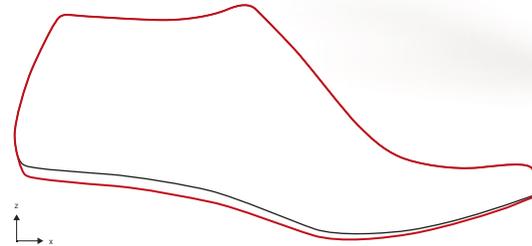
Creating an insole to the last

Cage deformation

Rotation deformation
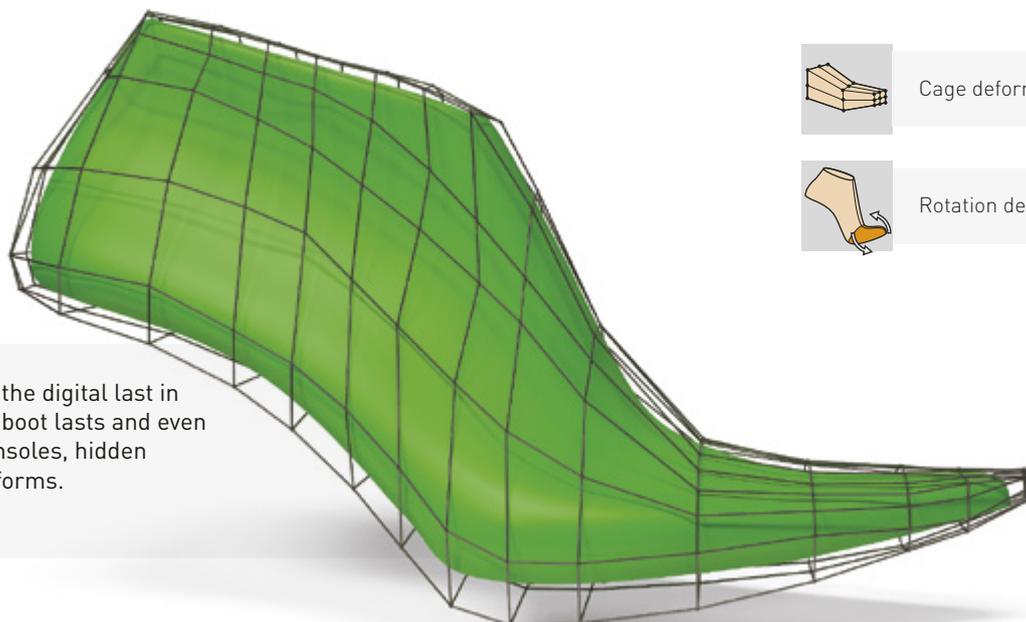
You can modify the digital last in order to create boot lasts and even add or merge insoles, hidden wedges or platforms.

Preparing the last

3D lasts

ICad3d+ automatically calculates the bottom and cone curves, dividing the imported last into the three necessary surfaces for the design and flattening processes (body, bottom and cone).

Edit the front and back profiles to get a perfectly flattened last.

Create virtual lasts for boots and ankle boots following a simple guided process that lengthens the digital last.

Flattening of any last

Using ICad3d+ you can flatten any last, including those for boots and ankle boots, in a totally accurate and reliable way.

Upon flattening the 3D surfaces of the body and the bottom are displayed on a 2D surface where each point is parametrically linked. This way, the modification of any design line on one of these surfaces (3D or 2D) is automatically transferred to the other surface, thus simplifying the process that should otherwise be carried out if these modifications were to be made in a manual way.
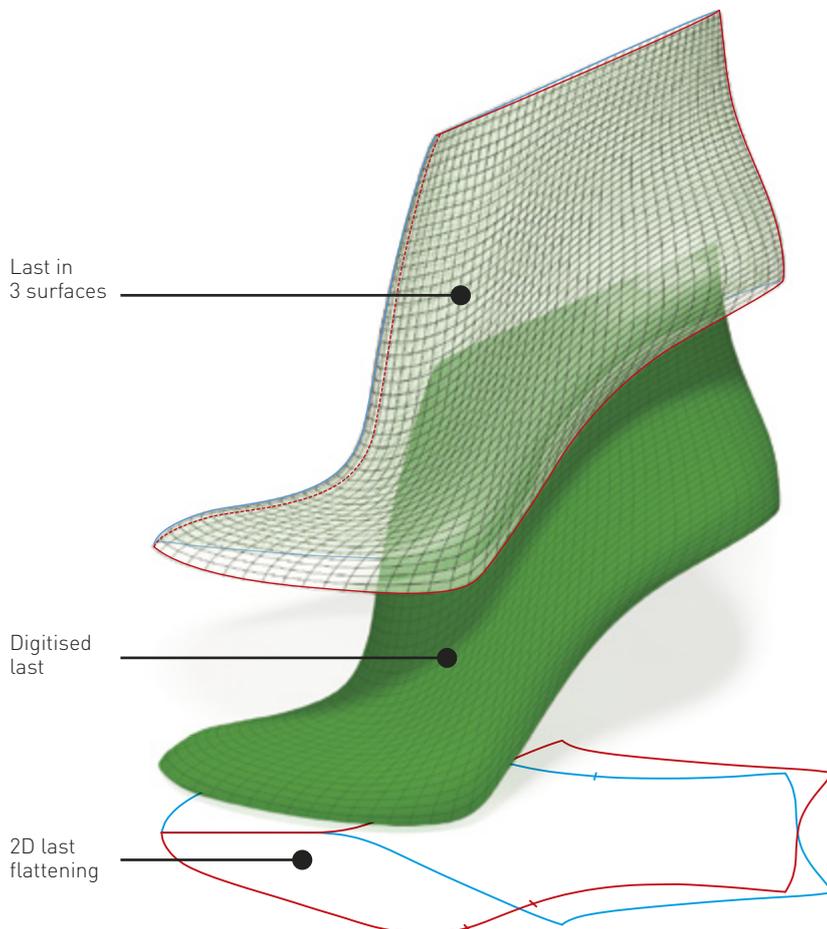
Wizard to create a 3D mesh over the digitised last

Easy and quick flattening operations

Editable centre line

Guided process to create lasts for boots and ankle boots

Last in 3 surfaces

Digitised last

2D last flattening

Extending the last to create any kind of boot of any height.

The wizard also includes the creation of zipped and gaucho boots and ankle boots.

Drawing on the last

Intuitive design of style lines

Drawing onto a digital last with ICad3d+ is as easy as drawing on a real last. Working with ICad3d+ will allow you to:

- Use sketches or model pictures as a reference to draw the style lines.

- Draw lines using very few points quickly and easily.

- Perform automatic smoothing of lines and curves to obtain finer and more precise piece outlines.

- Instantly create constant width or variable-width lines.

- Automatically create mirrored lines to work more accurately and save time.

- Make mirror lines independent to edit them individually.

- Save the style lines and re-use them at any time, avoiding iterative work.

- Include any kind of shape in your models, such as punch holes, cut-outs, logos and custom drawings. Such shapes can be stored in a library for future retrieval.

Smoothing curved lines automatically	Creating variable-width lines
Creating constant-width lines	Mirror lines dependent on a baseline
	Inserting predefined or customised shapes
	Importing reference images to create lines

Designing soles and heels

Make your ideas a reality

ICad3d+ creates quickly and easily any kind of sole (sports shoes, platforms, wedges, etc.) and heels.

Thanks to its wizard tools, soles and heels can be created quickly with total precision. Just edit the lines of the created structure in order to modify the component.

You can also create new soles and heels by freely tracing curves and surfaces, without using the wizard tools.
The components can be exported directly to a 3D printer to produce prototypes quickly, thus reducing time and unnecessary costs.

Wizard for the creation of soles and heels

Importing reference images to create soles and heels

Importing files in STL, VRML and IGS formats

Exporting soles and heels for production or 3D printing

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Creating pieces and thicknesses

Define 3D pieces instantly

With ICad3d+ you can quickly create all model pieces by selecting the sequence of lines or just with a single "click" on the inside of the piece.

Moreover, using the various options of ICad3d+, your model can be provided with more realism defining piece thickness, adjusting the offset to simulate overlapping, choosing the type of profile, adding padded areas, adding automatic stitches connected to the edge of the piece, and creating punch hole lines.

Creating pieces by line selection

Oxford punch holes

Creating scallops automatically

Creating pieces with a single "click"

3D stitches completely customisable

Simulating piece overlapping

Punch holes

Padding and engraving

Editing profile and thickness

Details and decorations

Create decorations quickly

Easily create decorations of any shape, material and complexity, and organise your own library.

Effortlessly add and adapt decorations in your model using the transformation functions to resize them, rotate them, or even automatically distribute various objects at a constant distance.

In addition, you can automatically create and add many different types of decorations like laces or zippers.

IGES, STL and VRML

Import them from other programs

ICad3d+ allows you to import decorations in standard formats: IGES, STL and VRML.

- Importing reference images to create accessories
- Wizard for the automatic creation and addition of laces
- Creating zippers automatically
- Adding decorations on the last automatically
- Basic tools for surface creation: extrusion, revolution, etc.
- Importing files in IGES, STL, VRML formats
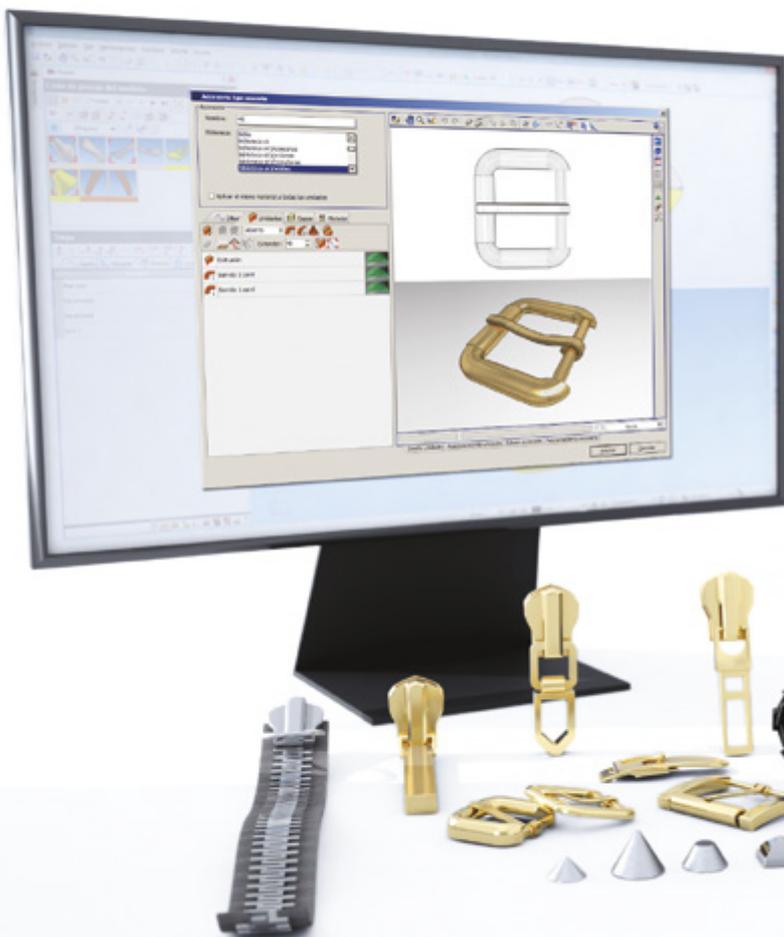
Creating countless materials and variations
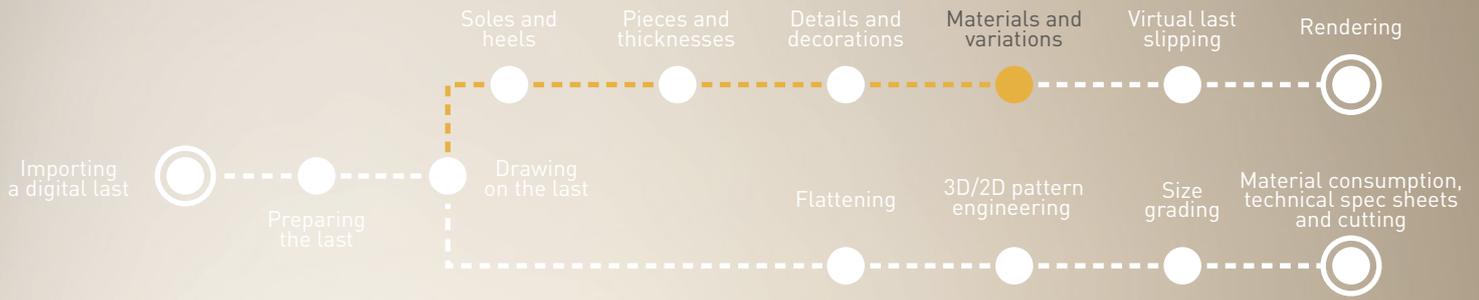
Photorealistic materials

ICad3d+ is conceived to speed up the creation of any kind of material (leather, rubber, patent leather, metal, gemstones, rhinestones, etc.) in any colour.

The materials can be created directly in the software using the wizard for material creation, or importing scanned textures that are easily editable with ICad3d+. Created materials can be saved to your own library to use them later.

Apply materials on any part of the model with just one "click", creating countless material combinations in different colours of the same shoe design instantly.
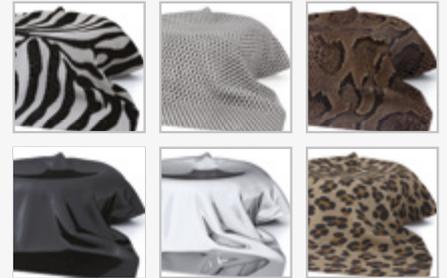
Creating materials starting from a scanned image

Creating new materials starting from predefined settings

Create countless combinations of materials and colours!

With ICad3d+ there is no need to physically produce prototypes and model samples that never end up in the production stage.

It is so quick and easy to change the appearance of the different components of the same model that it will considerably help designers make decisions and show their work before producing the shoes physically. In addition, ICad3d+ can be complemented with the applications **ShoeViewer** * (model viewer, free of charge) and **ShoeCombiner** * (model viewer and material combiner), giving more visibility to your products.

* See more information below

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Virtual last slipping
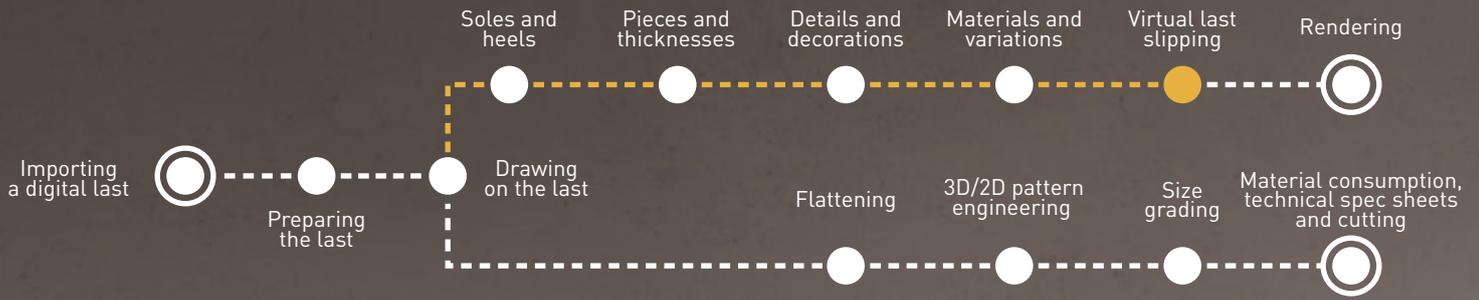
Adaptations that bring more realism

ICad3d+ can provide models with added realism, and can simulate the real process of slipping the last from the shoe, when certain changes in tension are produced on some materials and shoe pieces.

Thus, it is possible to make numerous deformations, such as changing tongues, altering upper lines, deforming counters and toes (lifting them up), widening quarters or even simulating wrinkles.

Cage deformation

Curve deformation

Rotation deformation

Original model without any deformation effect.

The same model with last slipping effect. Obtained by cage deformation to simulate the real shoe relaxation after last removal.

Rendering
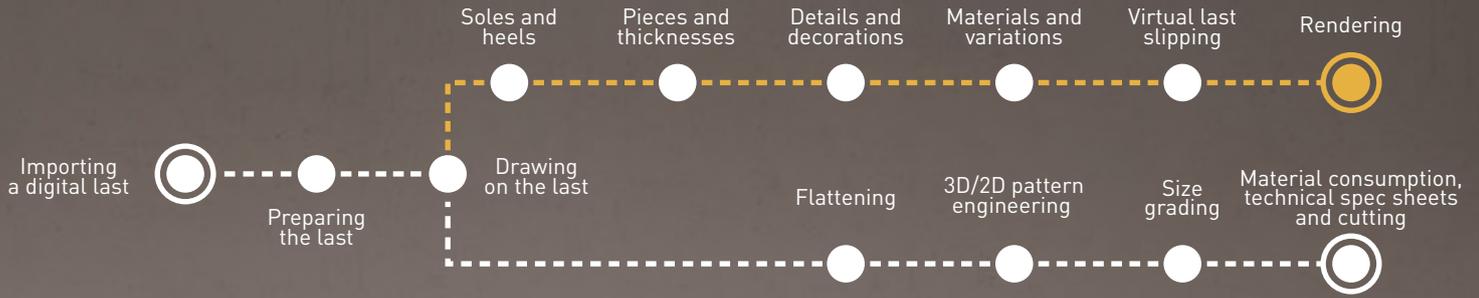
Imagine and make it real

ICad3d+ integrates an advanced high quality rendering system* that allows you to obtain so real images (and videos) that it is difficult to tell the difference from pictures taken from physical footwear models. In addition, 3D models can be rendered in any simulated scene.

Try different camera perspectives, locate lights at different points, or adjust lights to simulate special lighting conditions to achieve the desired visual effect.

Unleash your imagination and create any appealing setting for your footwear models. No matter what you have in mind, ICad3d+ can make it real!

Give more visibility to your catalogues, adds, website or presentations with no need to physically produce the shoes.
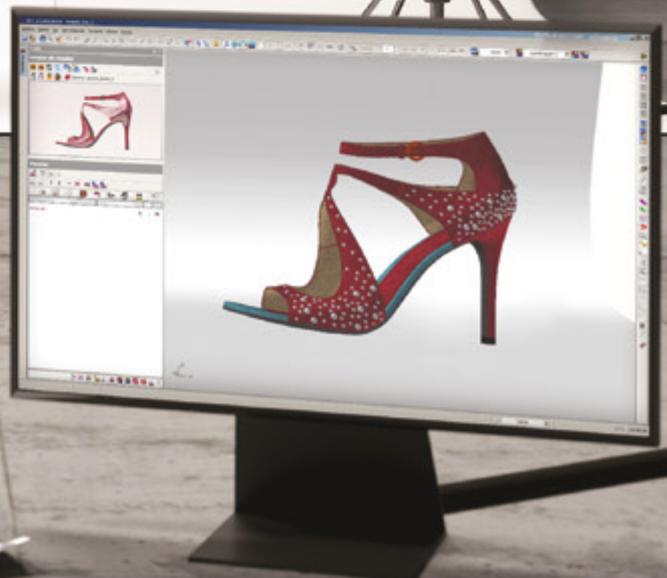
Predefined scenes

Creating 3D spec sheets with model information and data

* Photorealistic representation of a 3D object.

ICad3d+
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The tools integrated in ICad3d+ not only allow you to design quickly and accurately your footwear models, but also enable you to add a wide range of details that will improve the quality of the technical information of the model.

"All in one is better!"

"Extraordinary definition of details"

Add stitches quickly and automatically.

Create soles with infinite modelling possibilities and details.

Photorealistic image
Designed and rendered with ICad3d+

Insert laces automatically.

" Photographic realism "

Create and locate all kinds of accessories.

Adjust the heights to simulate the overlapping of pieces.

Add any shape or vectorial logo and customise your models.

Red21

Technical flattening
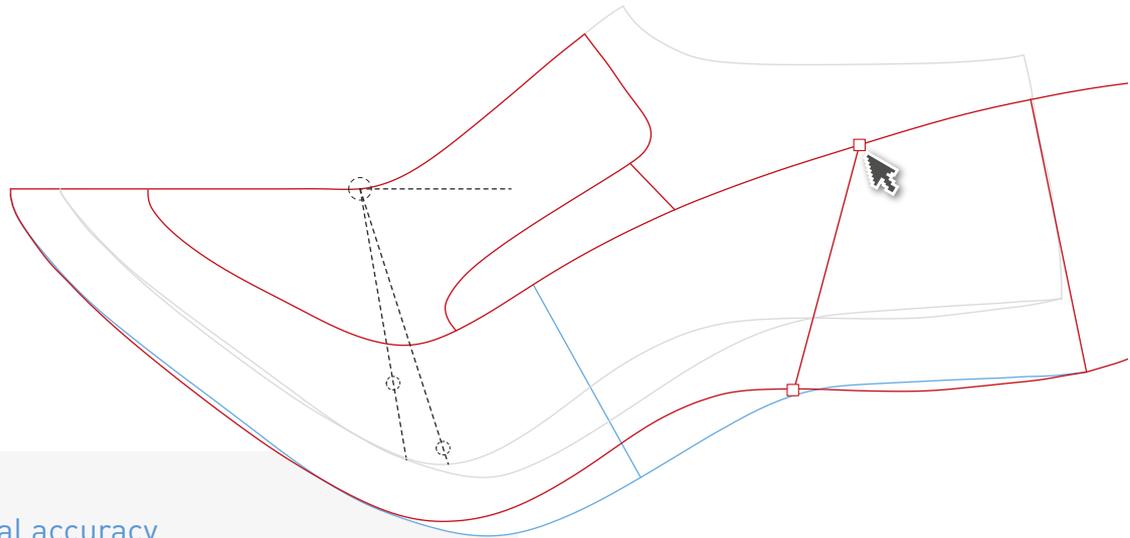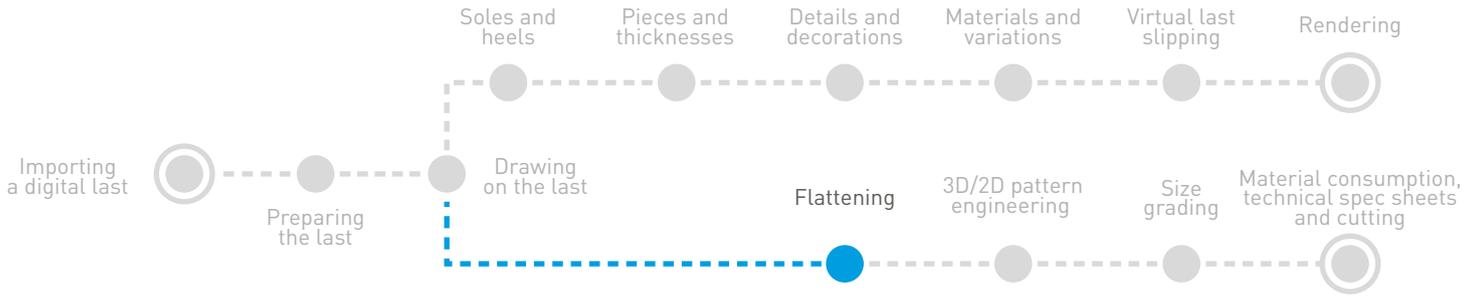
Total accuracy

Get any 2D flattened last with total reliability and precision, and use it as the basis for the creation of your patterns.

Use the flattened lasts to easily create shells for boots and ankle boots.

Save time and resources. With ICad3d+, any change you make to the 2D design lines will be automatically and accurately transferred to the 3D design and vice versa.

Accurate and simple flattening of any kind of last: women's, men's, children's, etc.

Simple and quick operations with shells

Strobel flattening

Special flattening of model pieces (pumps)

Wizard to create boot and ankle boot shells

Dependent rotation of lines
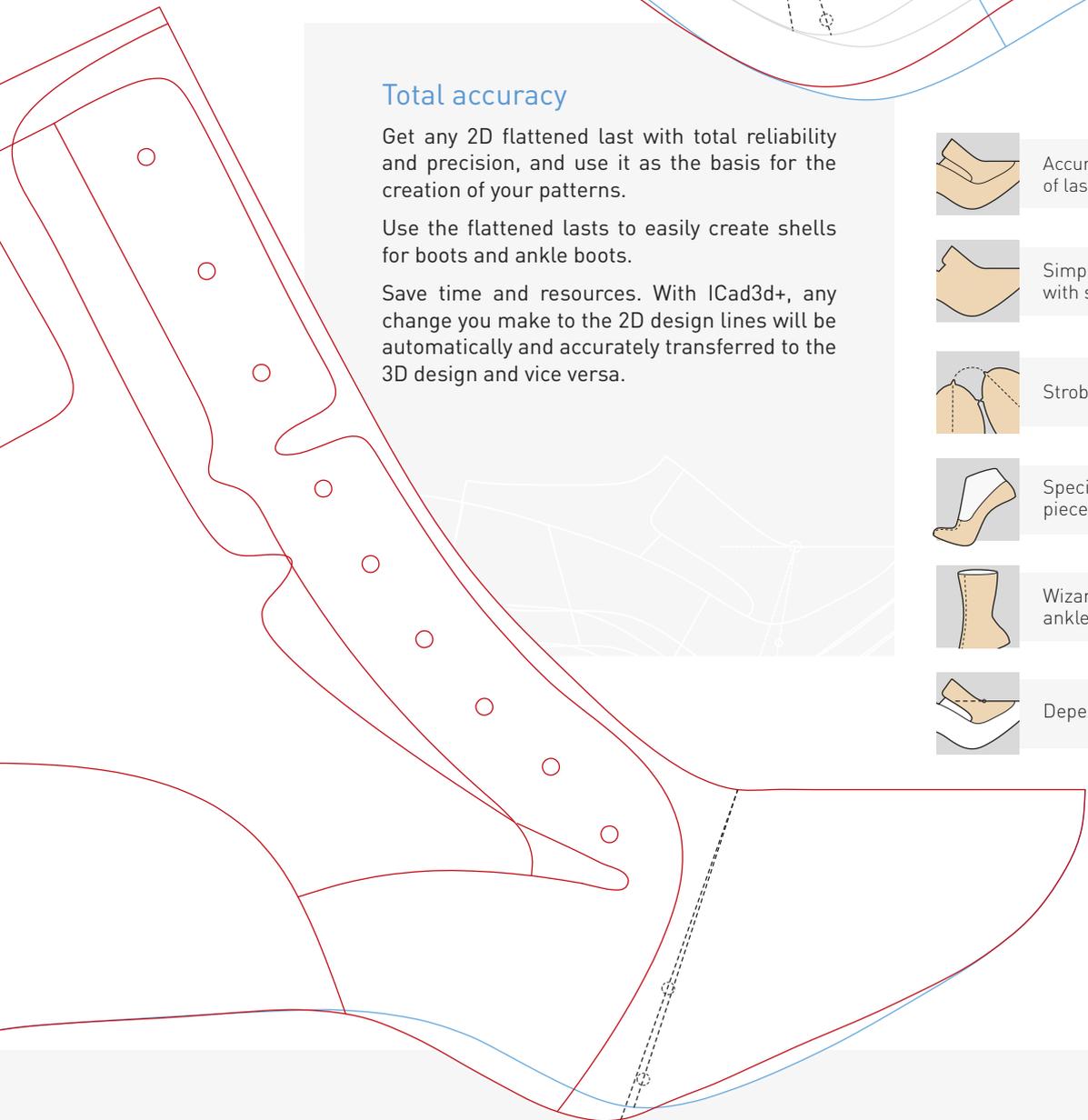
2D/3D pattern engineering
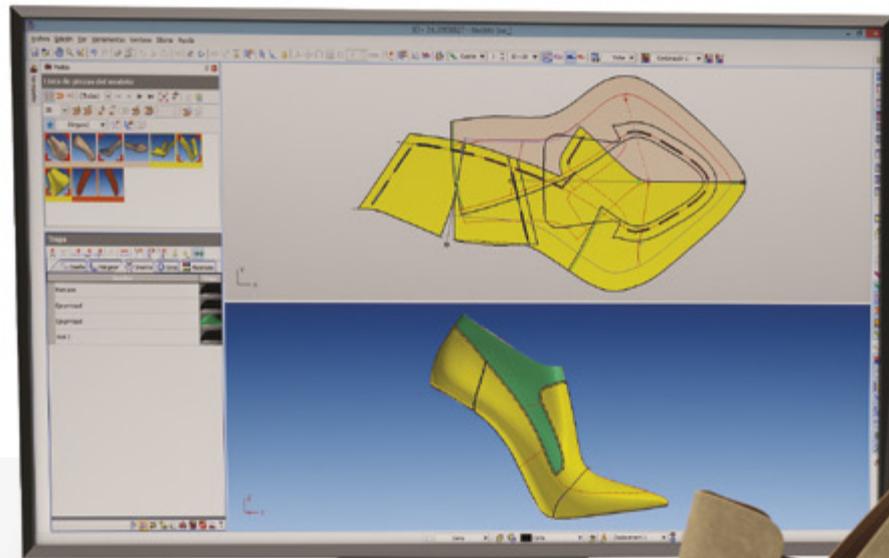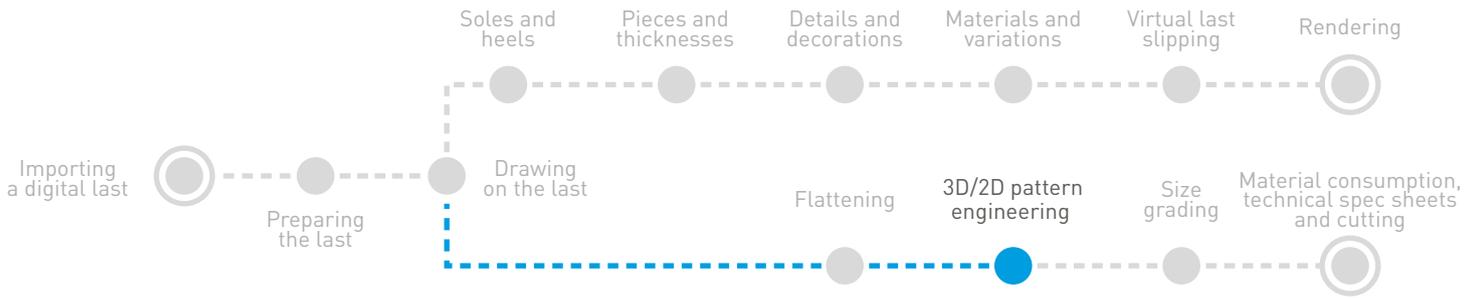
Quickness and accuracy

Develop your patterns quickly with just one click or by selecting lines.

Work either in 2D or 3D, since all technical adjustments will be precisely transferred to the other environment.

Add allowances (lasting, folding, inlays, etc.) and decorations (stitch marking, punch holes, stitches, etc.) in a fast and simple way.

By using the "Texts" tool, you can organise and identify the patterns to be cut on cardboard or leather, facilitating the subsequent production tasks.

|	
Creating pieces by line selection	Adding text
Creating pieces automatically with a single "click"	Punch holes
Allowances	Oxford punch holes
Creating scallops automatically	
Automatic grooves	
Distribution of customised shapes on a line	

ICad3d+
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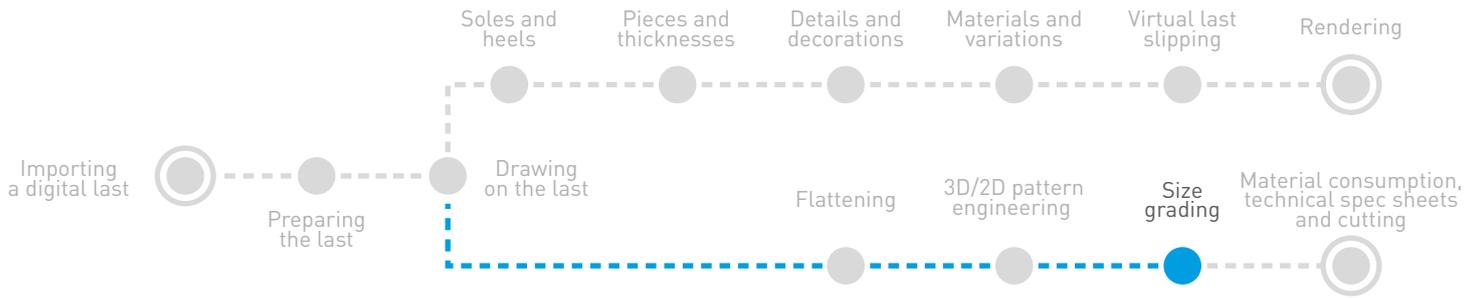
Size grading

Fast and simple grading

Use standard grading systems or customise them to your needs. In addition, with the grading rules you can control the grading of each of the baselines and thus lock or grade lines individually to grade pieces, such as straps, decorations, labels, counters, zippers or boots.
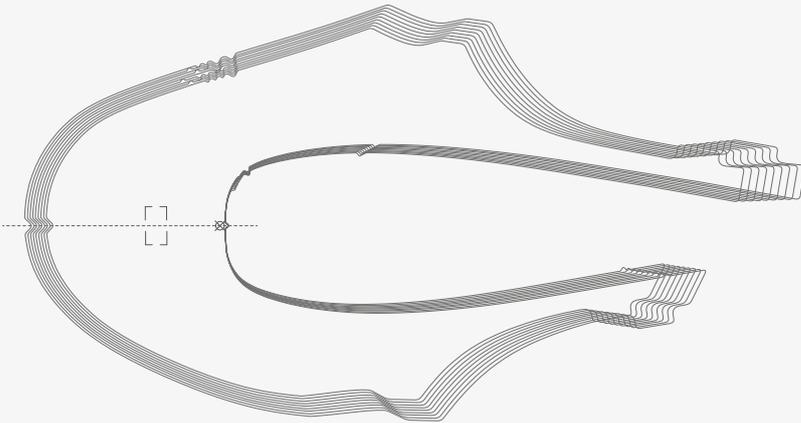
Standard grading increments

Customisable grading rules

Size grouping

Automatic strap locking

Special grading rules for boots

34 | 35 | 36 | **37** | 38 | 39 | 40 | 41 | 42
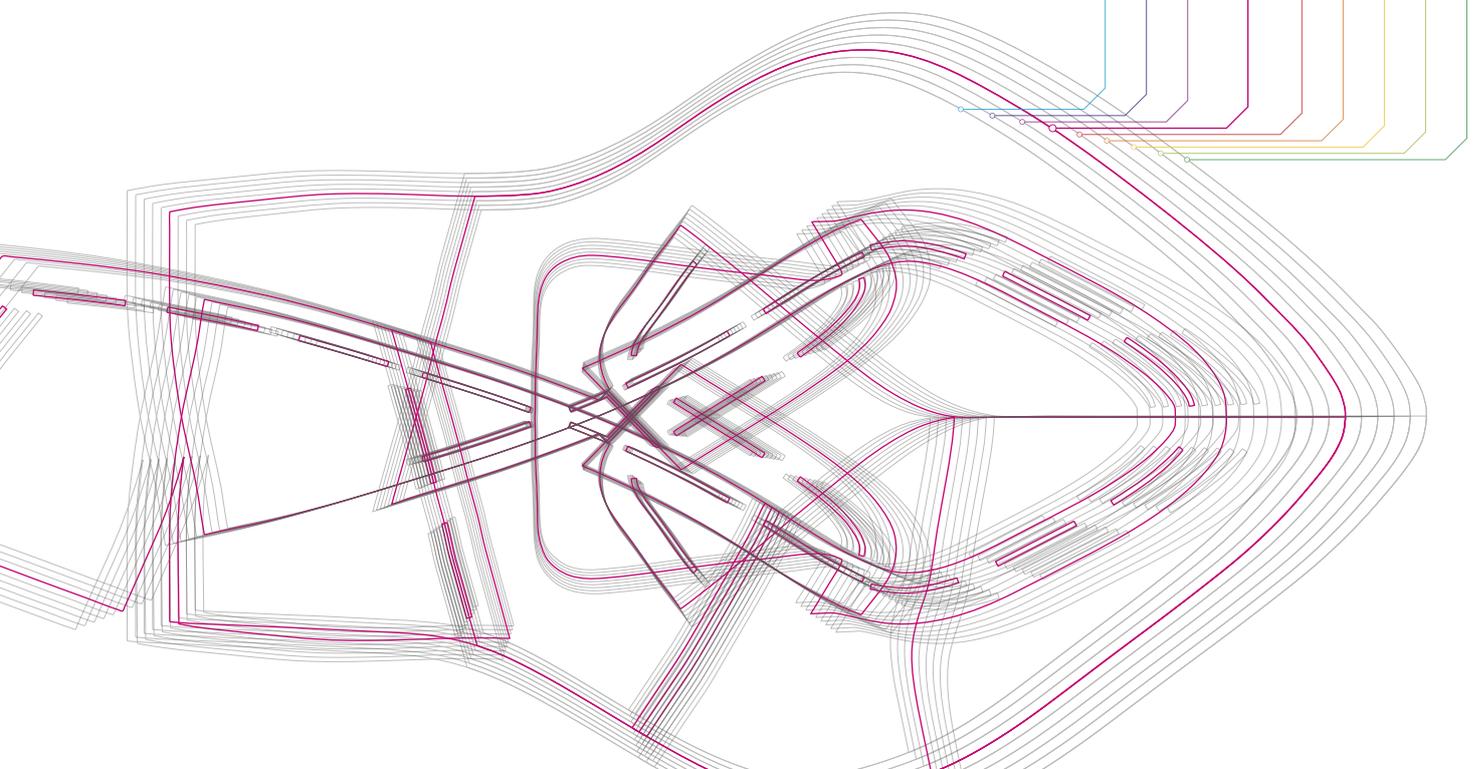
Material consumption, technical spec sheets and cutting
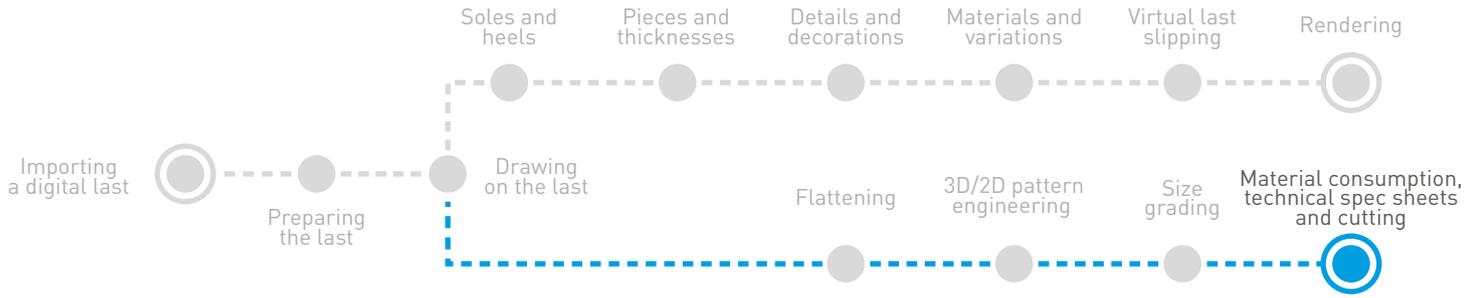
Optimise leather yield

Calculate in real time the material consumption of your model and minimise waste.

Thanks to the 2D/3D connection, with ICad3d+ you can modify any line and update consumption values instantly without the need to re-flatten. Thus, you can modify the model parts to maximise material yield.

SPEC SHEET: Style 1203/NF — Red21
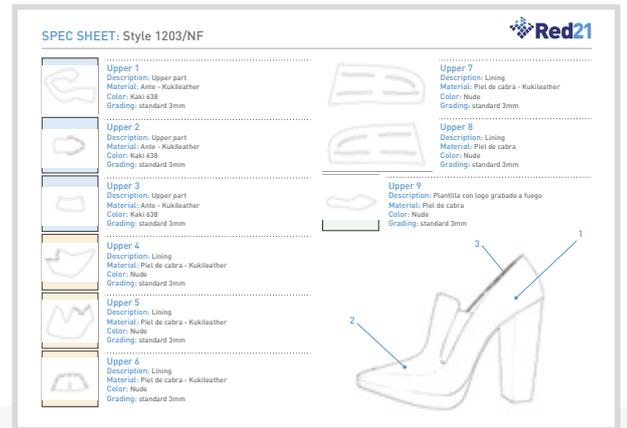
Customise your technical spec sheets

Create and customise the technical spec sheets for the design and production stages.

Export them to PDF integrating any kind of information, pictures and even rotating 3D objects.

Parallelogram

Rectangle

Synthetic

Outline

HPGL, PLT, DXF, SHC, CPZ y SPC

Cut your patterns in any cutting machine

Export your patterns to any cutting machine without any additional adaptation and always keeping the 3D/2D correlation.

ICad3d+ PROsolutions

ShoeViewer

With ShoeViewer your customers, or any other user, can view at no cost the models designed with ICad3d+ in great detail and from different perspectives, in a simple and attractive setting.

FREE

Download ShoeViewer
free of charge

ShoeCombiner

ShoeCombiner is an application that allows 3D footwear models to be viewed and different materials, colours and textures to be combined in a quick and easy way. Optionally, you can also view the rendered image of the model created.

Customise the software interface adding your logo as well as choosing the colour combination that best suits your corporate image.

Select the piece on the 3D model

Choose the material and view the new material combination

ICad3d+
PROsolutions
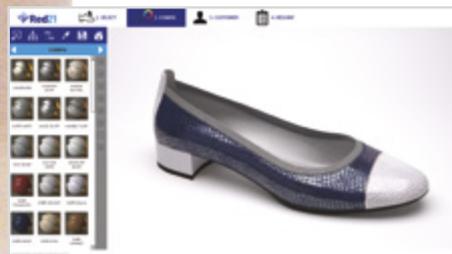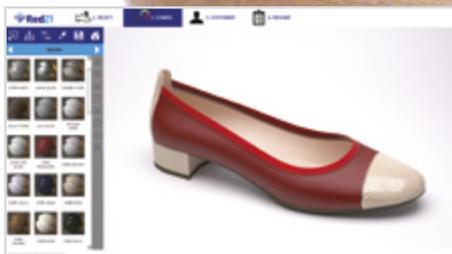
ICad3d+ Pack

Choose the version that best suits your needs

	ICad3d+ Pro	ICad3d+ Design	ICad3d+ Patterns	ShoeViewer	ShoeCombiner
3D last preparation	+	+	+		
Last and boot flattening	+	+	+		
3D sole and heel design	+	+			
Drawing lines on a 3D last	+	+	+		
3D piece editor	+	+			
2D piece editor	+		+		
3D accessory design	+	+			
Creation of rendering materials	+	+			
3D last slipping simulation	+	+			
2D pattern engineering	+		+		
Size grading	+		+		
Consumption calculation	+		+		
Technical spec sheets	+	+	+		
Photorealistic 3D render	+	+			
Model viewer and render	+	+		+	+
Model combiner	+	+			+

Contact our sales department and we will advise you on the product that best suits your business.

ICad3d+ Versions

ICad3d+ Pro
(Design + Patterns)

Aimed at footwear professionals and technicians who want to create virtual prototypes, or transfer handmade sketches to a virtual 3D environment, with high definition, quality and realism. It is also intended to obtain flattened lasts and 2D-3D patterns with total accuracy and 2D-3D correlation, as well as to generate complete technical information in order to send the model to the manufacturing stage.

Furthermore, the integrated rendering software makes it especially useful to provide hyperrealism to the models created, allowing designers to make decisions without physically producing all the footwear models. Rendered images can also be used to give greater visibility to catalogues, adds, websites or presentations.

ICad3d+ Design

Aimed at footwear professionals and technicians who want to create virtual prototypes, or transfer handmade sketches to a virtual 3D environment, with high definition detail, quality and realism.

A render software is integrated to allows a greater realism to created models and speed up the decision making, avoiding the physical production of all the models and use the images for a greater visibility of catalogues, advertisements, web or presentations.

ICad3d+ Patterns

Aimed at footwear professionals and technicians who want to get 2D patterns with pinpoint accuracy from 3D lasts. This way, the model can be designed by directly drawing onto a 3D last and get a perfect 2D flattened last.

ShoeViewer

FREE

Intended for users who do not have the ICad3d+ software and wish to view the 3D models created with this software.

ShoeCombiner

Aimed at footwear professionals and technicians who want to view easily, quickly and realistically, the different possibilities of materials and colours that can be applied on the virtual models created with ICad3d+. It is then easier and faster to make decisions about the different model variations to be manufactured, without physically producing them.

Our software around the world
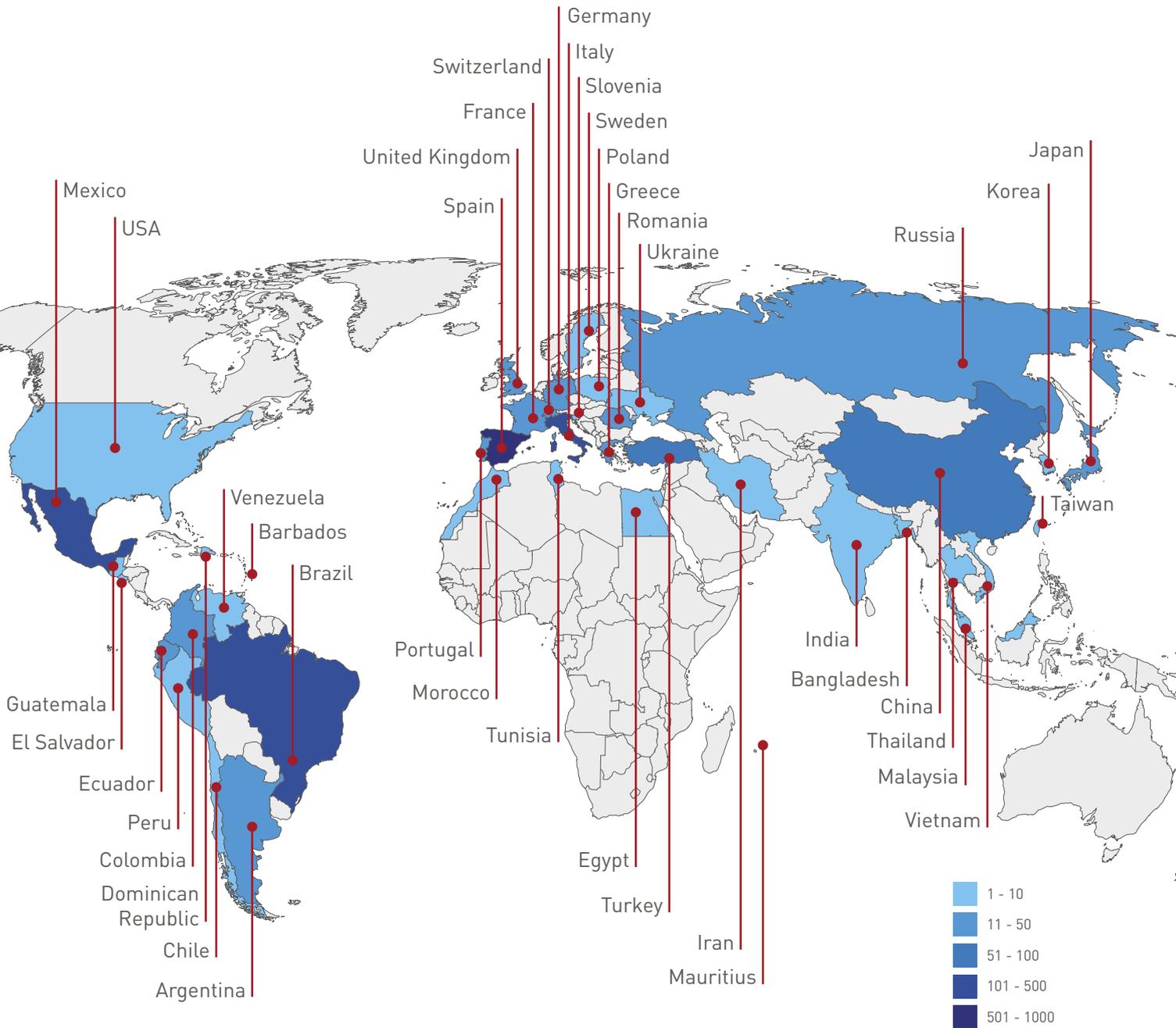
Germany
Italy
Switzerland
Slovenia
France
Sweden
United Kingdom
Poland
Spain
Greece
Romania
Ukraine

Japan
Korea
Russia

Mexico
USA

Venezuela
Barbados
Brazil

Guatemala
El Salvador
Ecuador
Peru
Colombia
Dominican Republic
Chile
Argentina

Portugal
Morocco
Tunisia

India
Bangladesh
China
Thailand
Malaysia
Vietnam

Taiwan

Egypt
Turkey
Iran
Mauritius

1 - 10
11 - 50
51 - 100
101 - 500
501 - 1000

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