

20th **UITIC**
INTERNATIONAL TECHNICAL
FOOTWEAR CONGRESS

Porto
2018
16th - 18th
MAY

FROM FASHION TO FACTORY

A New Technological Age



Last analysis and modification software

Christophe CUMIN - CTC - Head of shoe department

Thursday May 17th 2018



CUSTOMERS NEEDS

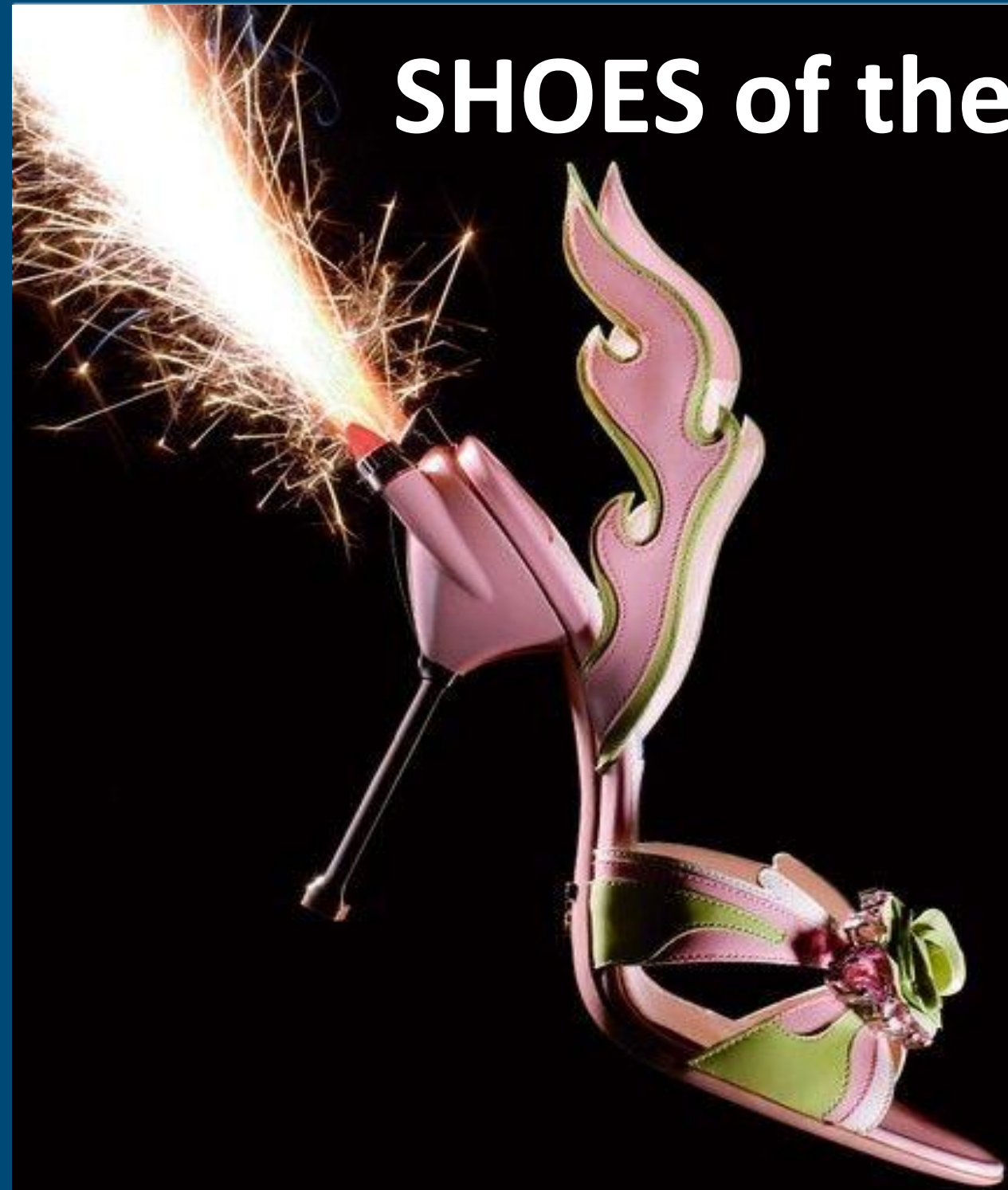
PERFORMANCE

COMFORT

TECHNICITY

INNOVATION

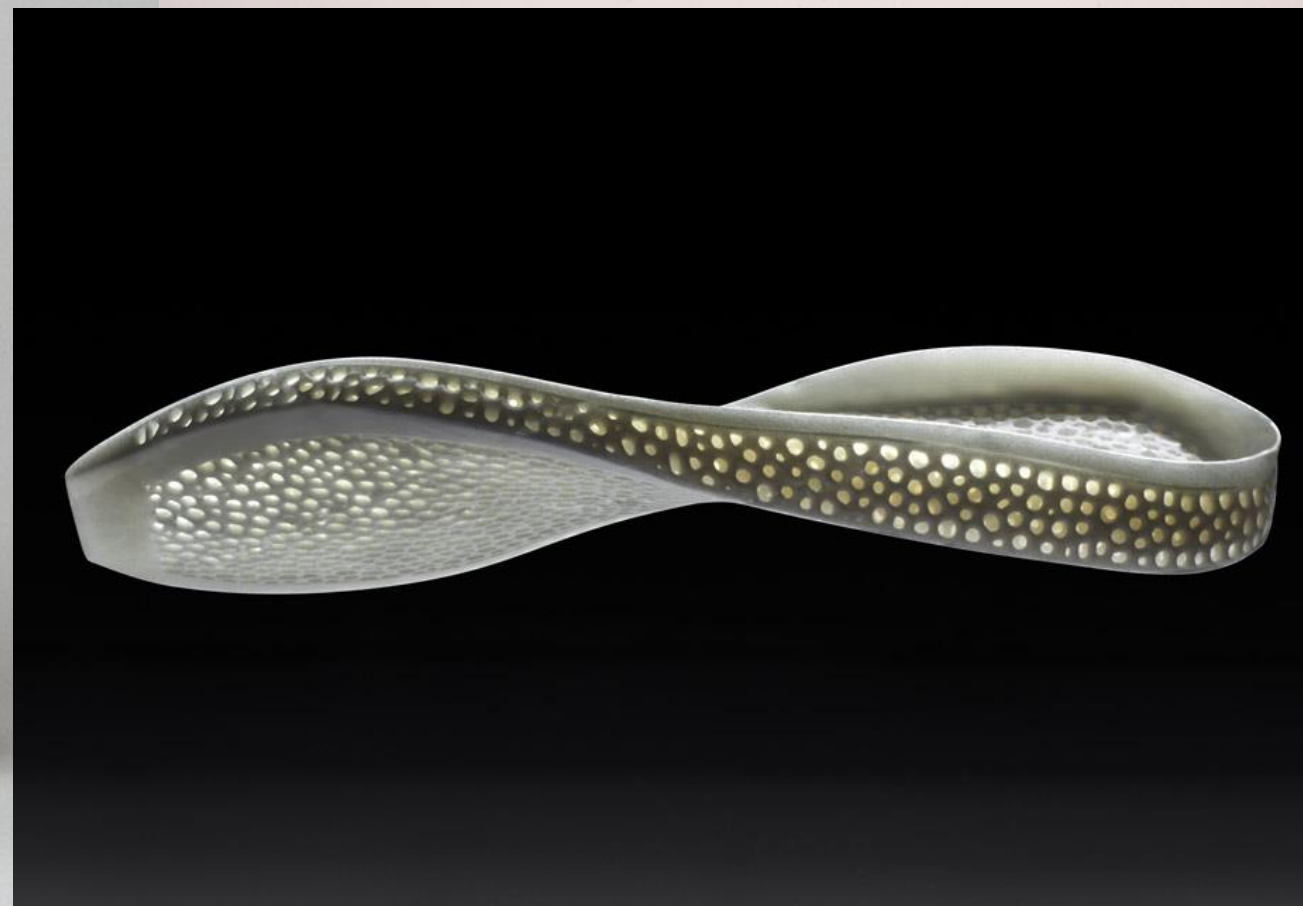
SHOES of the FUTURE



SHOES of the FUTUR



3D Printed ?



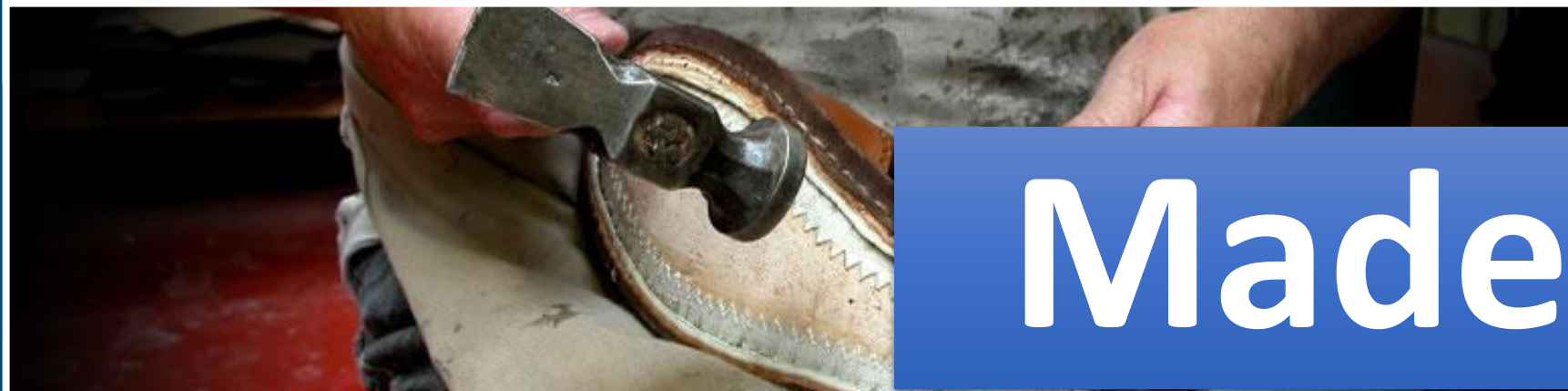
SHOES of the FUTUR



Knitted ?



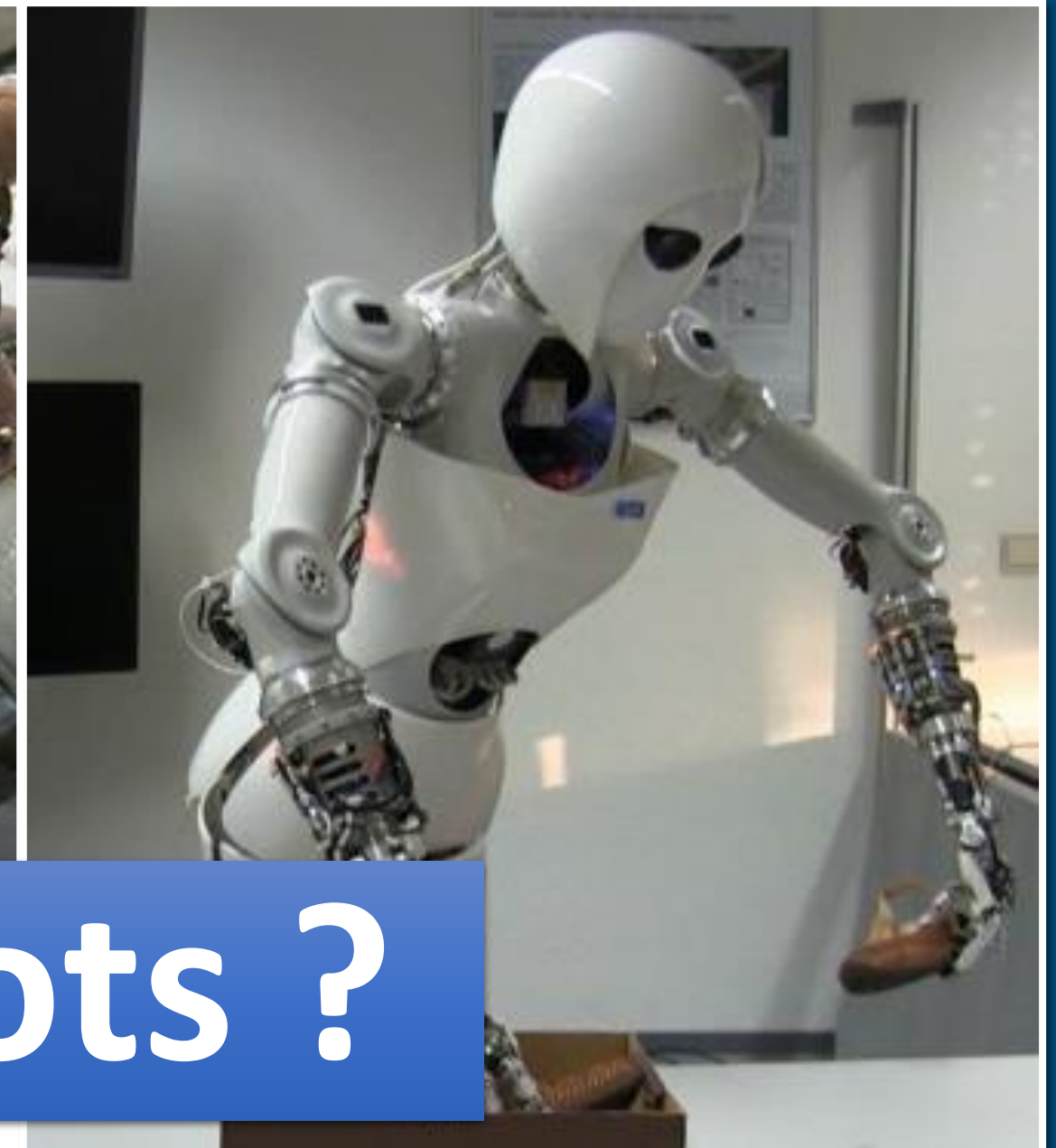
SHOES of the FUTUR



Made by hands ?



SHOES of the FUTUR



Made by robots ?



SHOES of the FUTUR



We actually don't know



SHOES of the FUTUR

We just know that for **at least** a few more years we will need a **LAST** to make shoes

I HAVE A DREAM

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that everybody in the world will one day
wear **comfortable** and **nice** shoes

© Christian Naegele





LAST IS ESSENTIAL

**Too many brands and factories in the
world are not interested by the last**

For them it's just a tool to make shoes !

A grayscale background image showing a pair of sneakers and a digital watch resting on a rocky, uneven surface. The sneakers are positioned in the upper half, and the watch is in the lower right. The entire image is framed by a dark blue border.

LAST IS ESSENTIAL

To make a good shoe we need a good last

**To make a good last we need to know the
customer foot and his fitting request**

LAST IS ESSENTIAL

Sir Francis BACON said

Knowledge is power

FOOT and LAST

**CTC started to work 10 years ago with
3 goals**

Understand the link between last and foot

Make accessible to all last construction keys

Create a last analysis software

FOOT and LAST

We have made

Foot measurement campaigns in

France : 10 000 persons

China : 5000 persons





FOOT and LAST

We bought
25 000 lasts models
created between 1960 and 2017
to the oldest last maker in France

FOOT and LAST

We have developed

Lasts analysis **procedure**

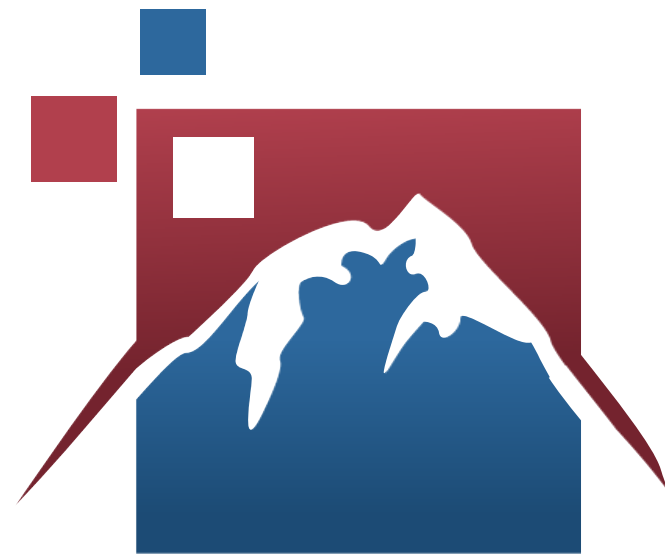
Lasts analysis **machine**

Lasts analysis **databases**

SOFTWARE

The difficulty

**Translate human experience into
mathematical calculation**



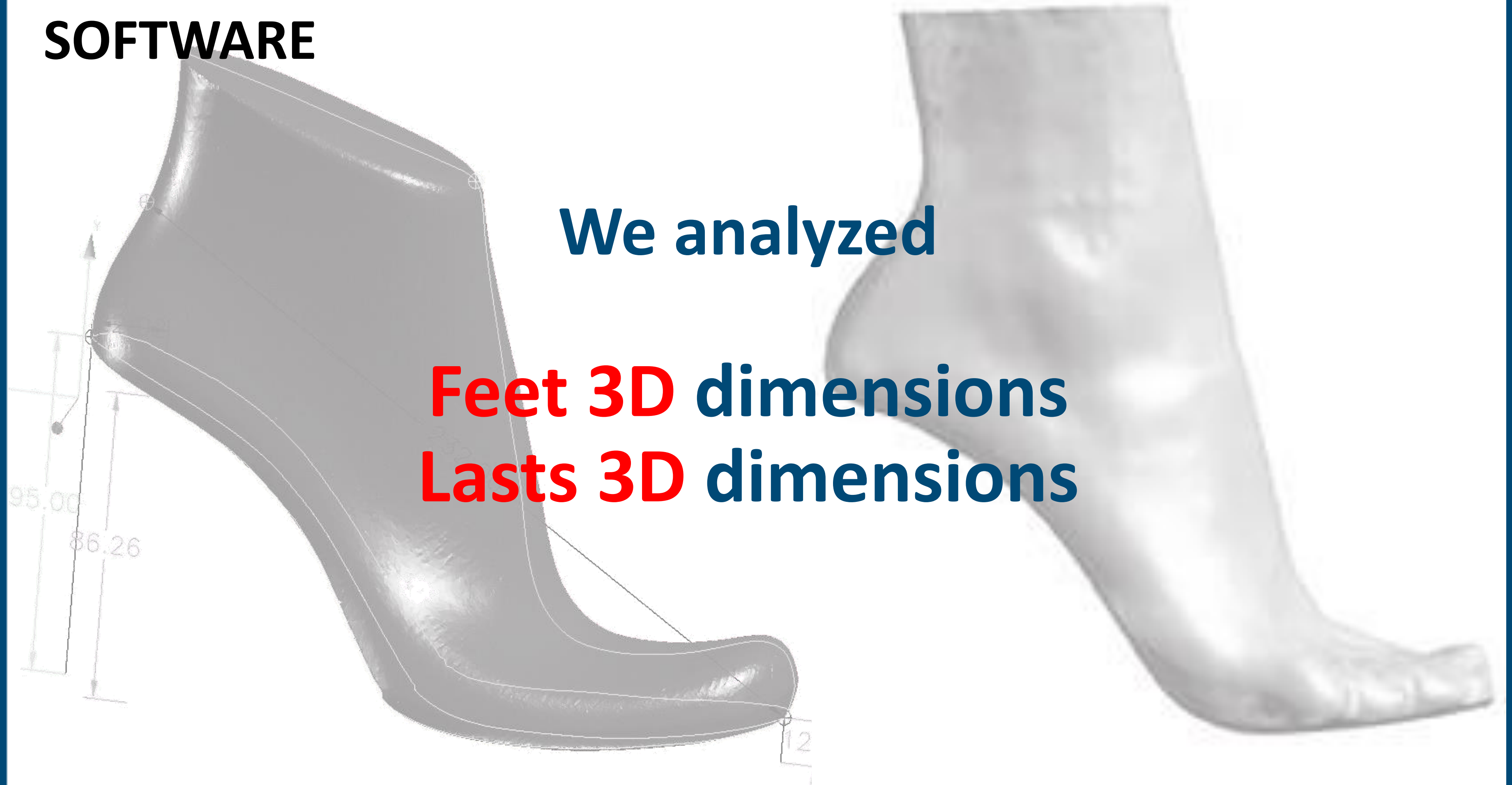
BLUE RIDGE

LOGICIELS

SOFTWARE

We analyzed

Feet 3D dimensions
Lasts 3D dimensions



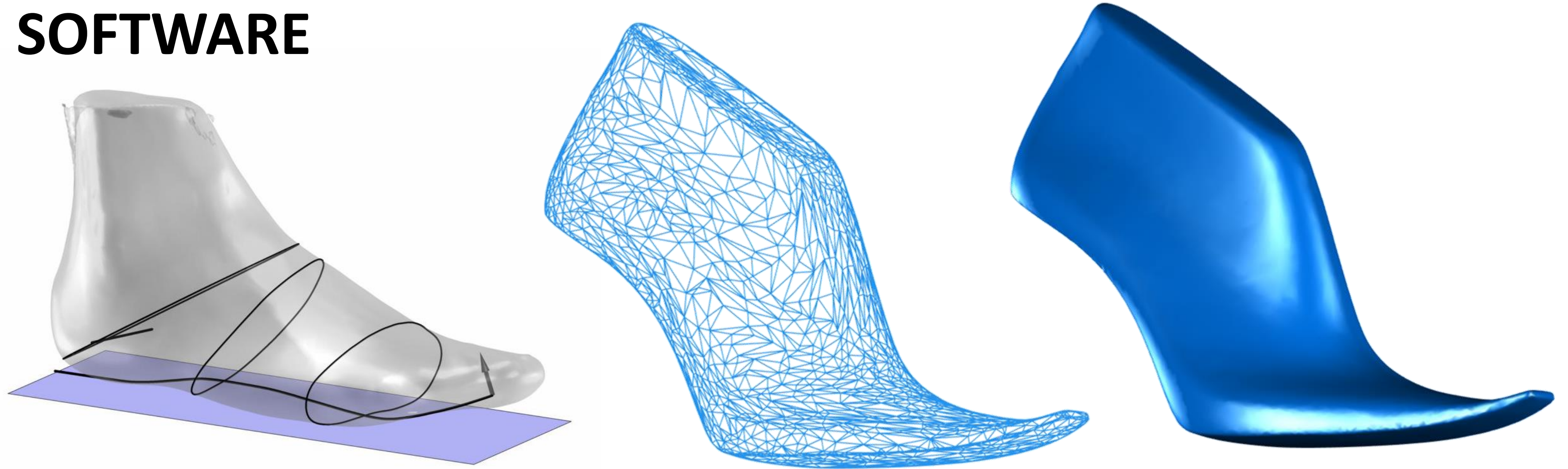
SOFTWARE

**We have produced shoes and performed
fitting test**

**With different last parameters
With different feet morphologies**



SOFTWARE



We have developed algorithms

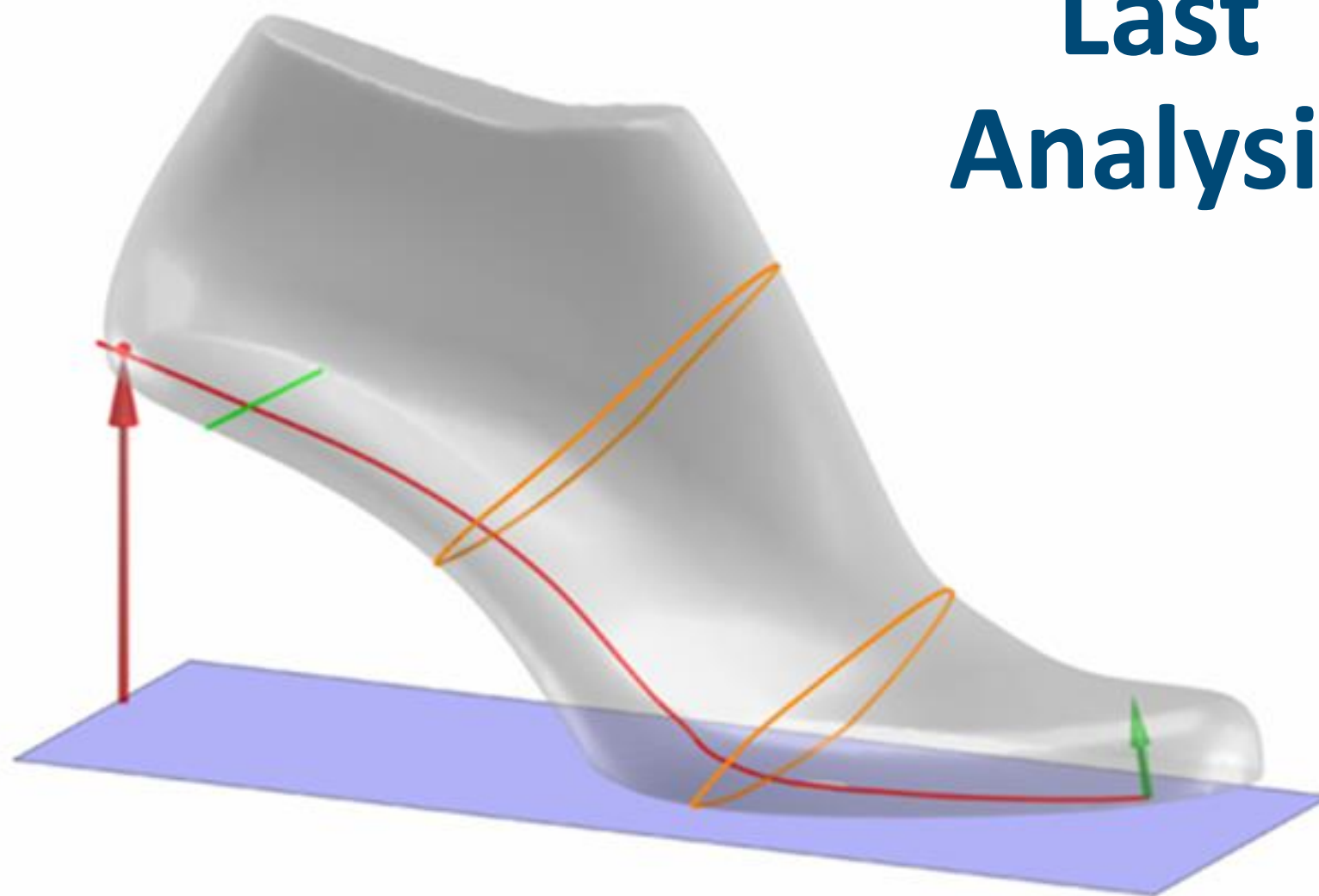
To compare feet and last parameters

To modify lasts following feet geometry

100%
Auto



Last Analysis



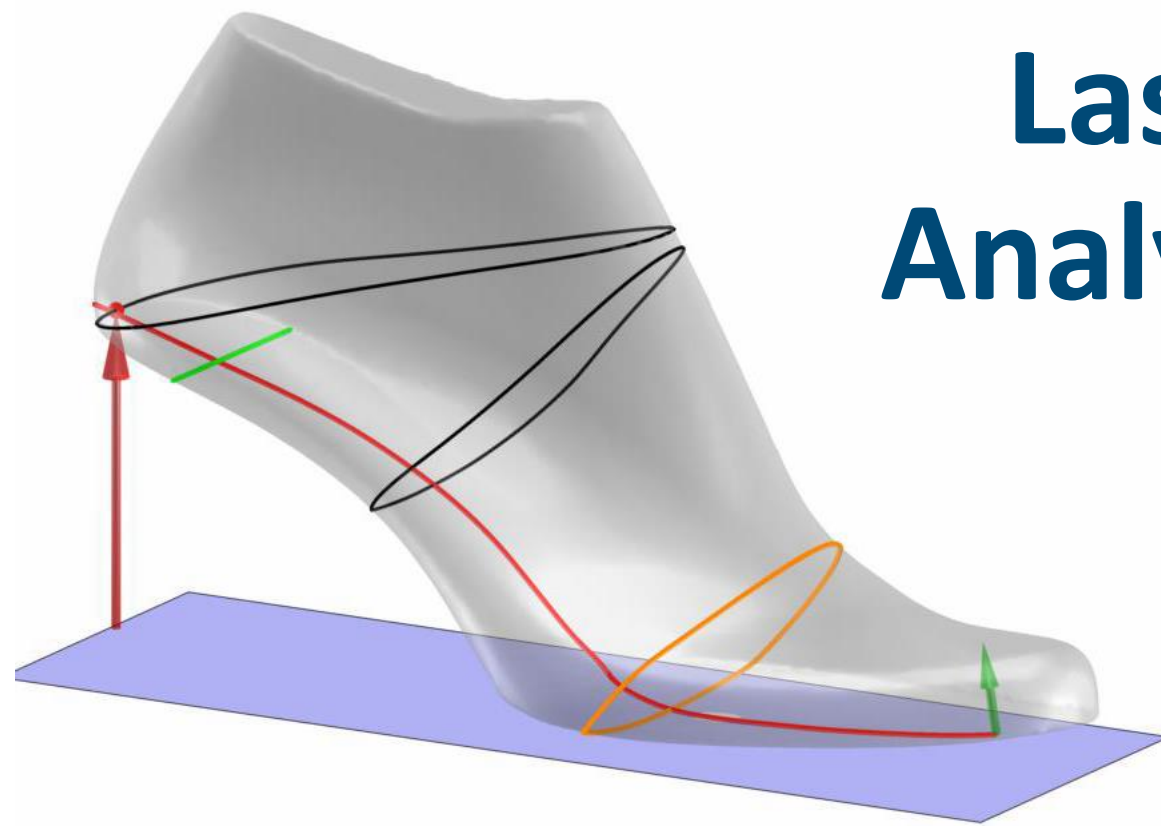
Mesure	Forme G
Longueur de forme	239 mm
Hauteur de talon	80 mm
Pointure	36,4
Circonférence arrière-pied	220 mm
Circonférence médio-pied	213 mm
Circonférence avant-pied	145 mm
Largeur talon	60 mm
Largeur talon 1ère	50 mm
Largeur métatarses	83 mm
Largeur métatarses 1ère	83 mm
Hauteur pouce	16 mm
Angle assise talon	20°
Relève	8 mm
Angle de vrillage	0,4 °
Conformité des volumes	65 %



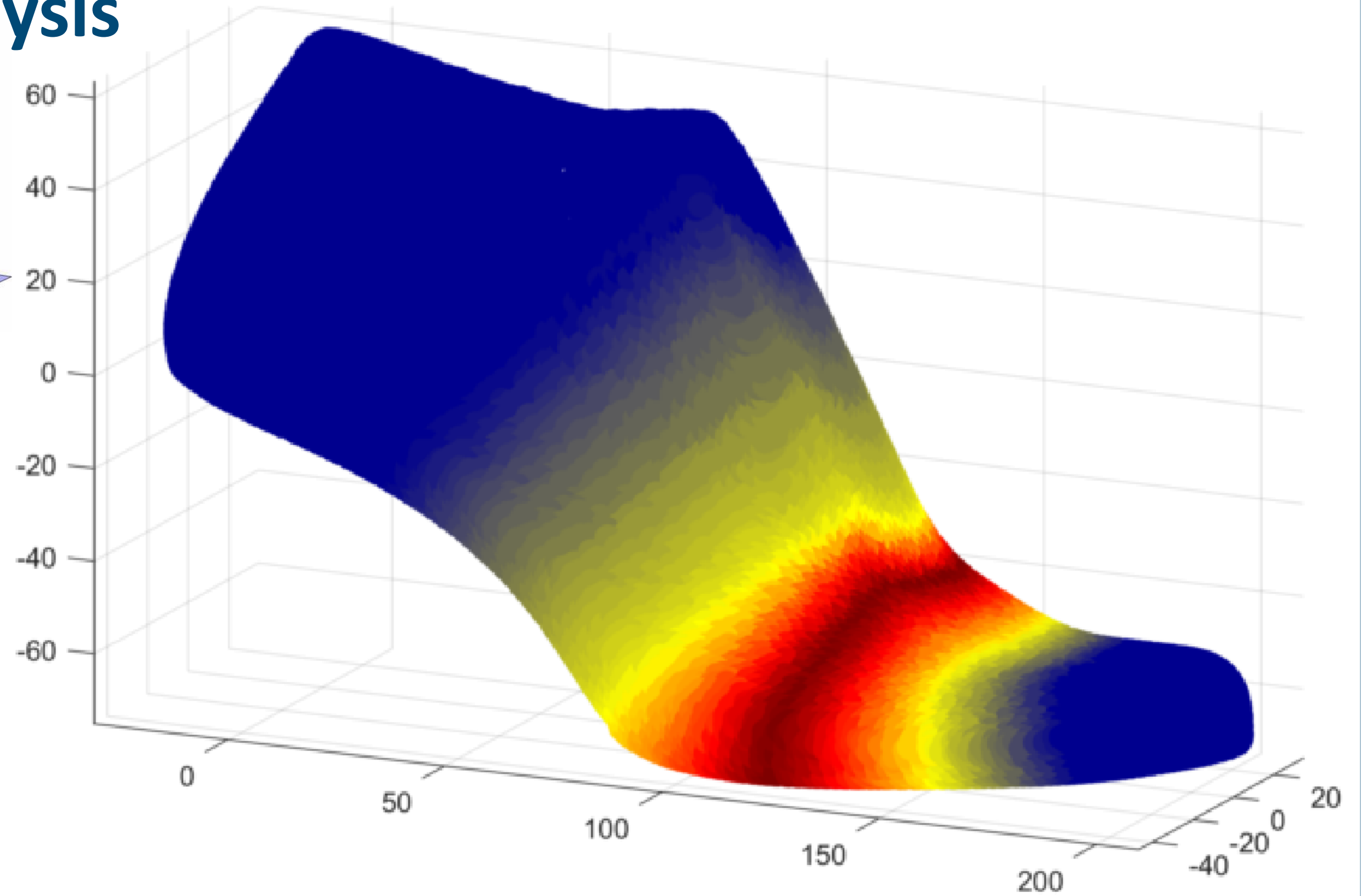
/10



Last Analysis



**100%
Automatic**



100%
Auto



inventaire
formes



banque
pieds



analyse
de forme



optimisation
de forme



comparaison
de forme



modification



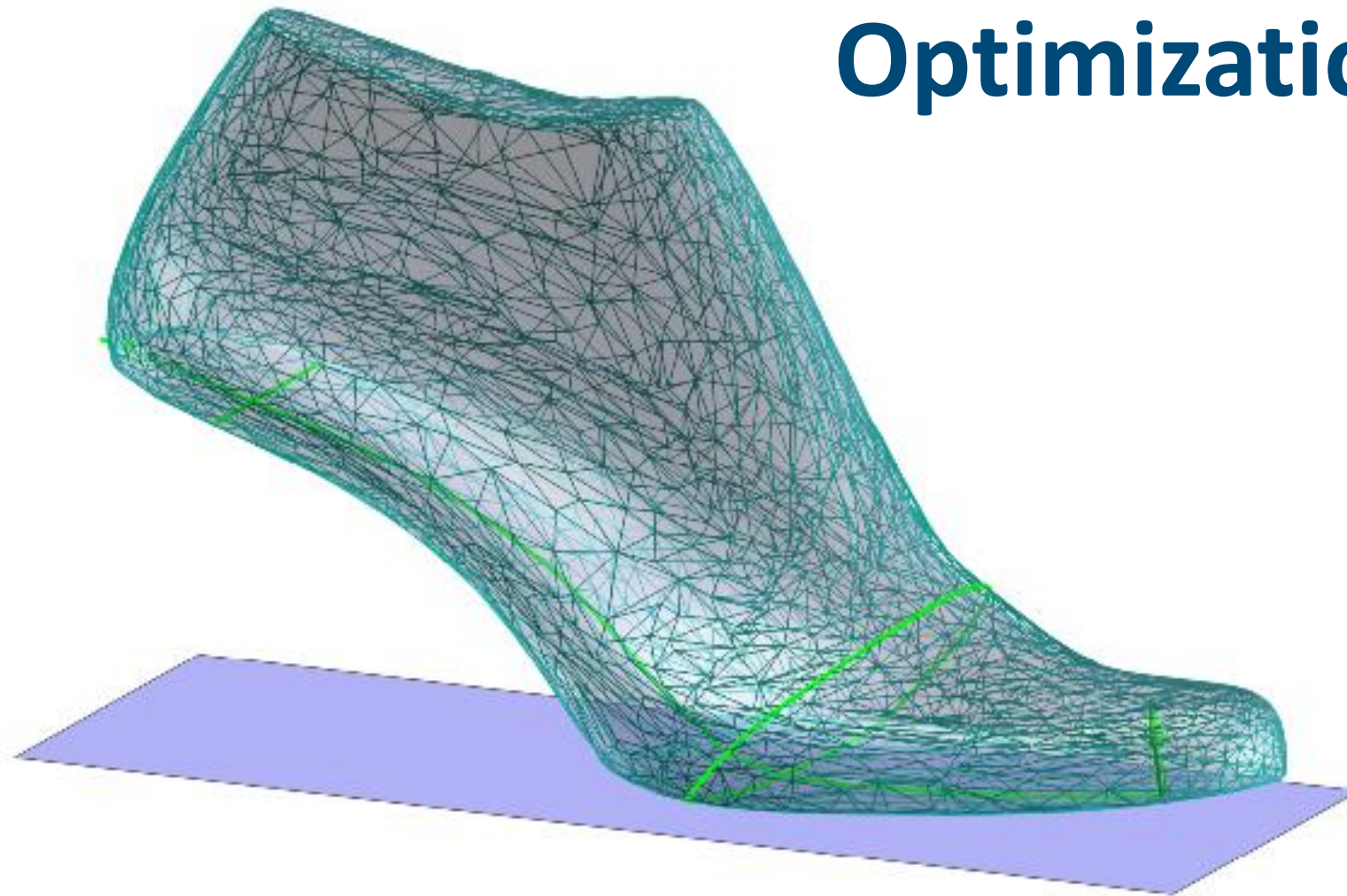
sur mesure



analyse
statistique



Last Optimization



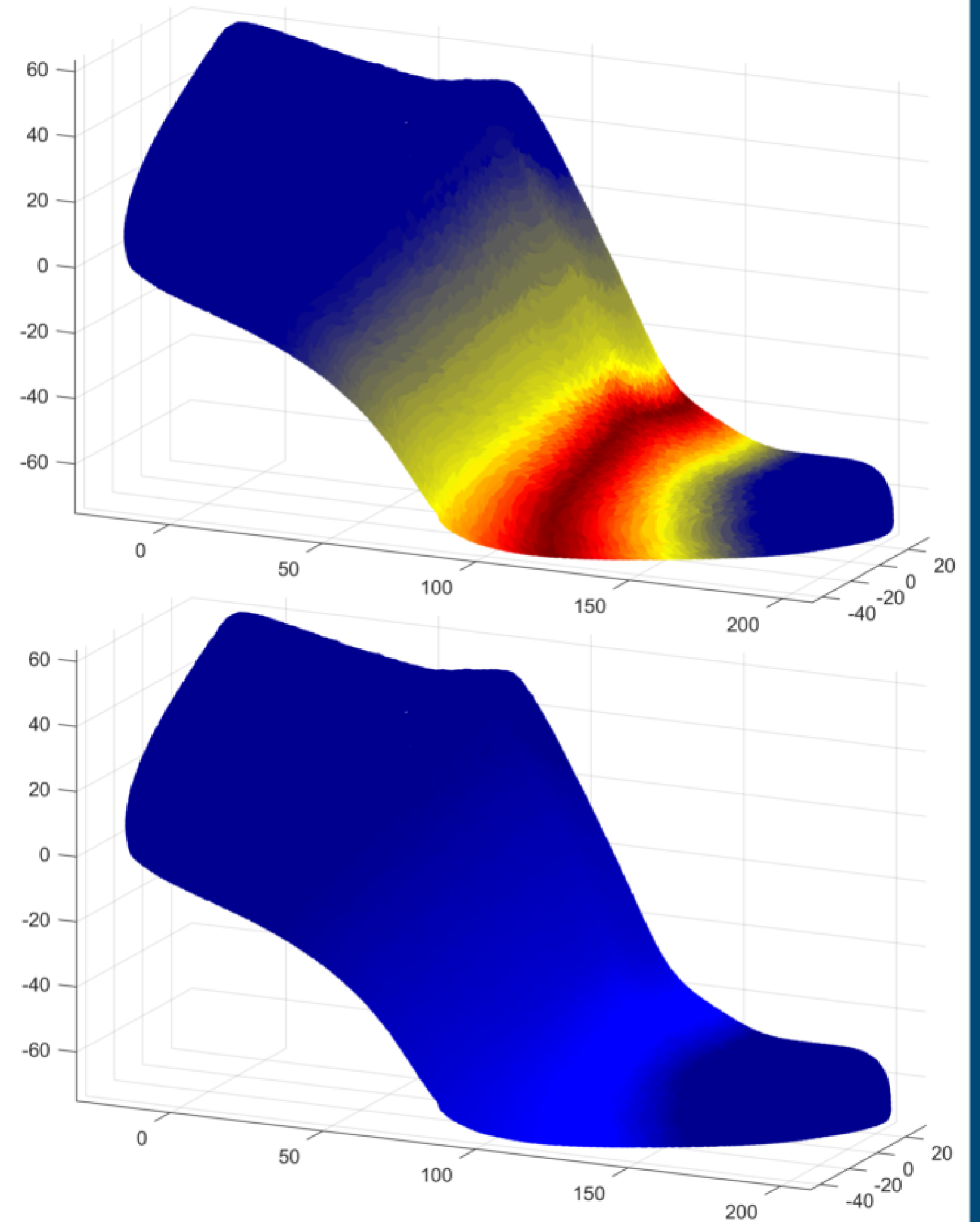
Mesure	Forme G	Optim.
Longueur de forme	239 mm	239 mm
Hauteur de talon	80 mm	80 mm
Pointure	36.4	37
Circonférence arrière-pied	220 mm	223 mm
Circonférence médio-pied	213 mm	208 mm
Circonférence avant-pied	145 mm	161 mm
Largeur talon	60 mm	56.5 mm
Largeur talon 1ère	50 mm	48 mm
Largeur métatarses	83 mm	80 mm
Largeur métatarses 1ère	83 mm	77 mm
Hauteur pouce	16 mm	16 mm
Angle assise talon	20°	20°
Relève	8 mm	8 mm
Angle de vrillage	0.4°	0.4°
Conformité des volumes	65 %	87 %

créer un rapport

4

8.5 / 10

Last Optimization



SOFTWARE



October 2018

Last Engineers - Online platform open to :
All footwear actors : manufacturers, brands and distributors
Requires no installation and no training



Futur target **BESPOKE**

- Customer fitting requirements
- Materials
- Foot scan





Our target

**Allow everyone to control their lasts and
adapt them to their customers**

CONCLUSION



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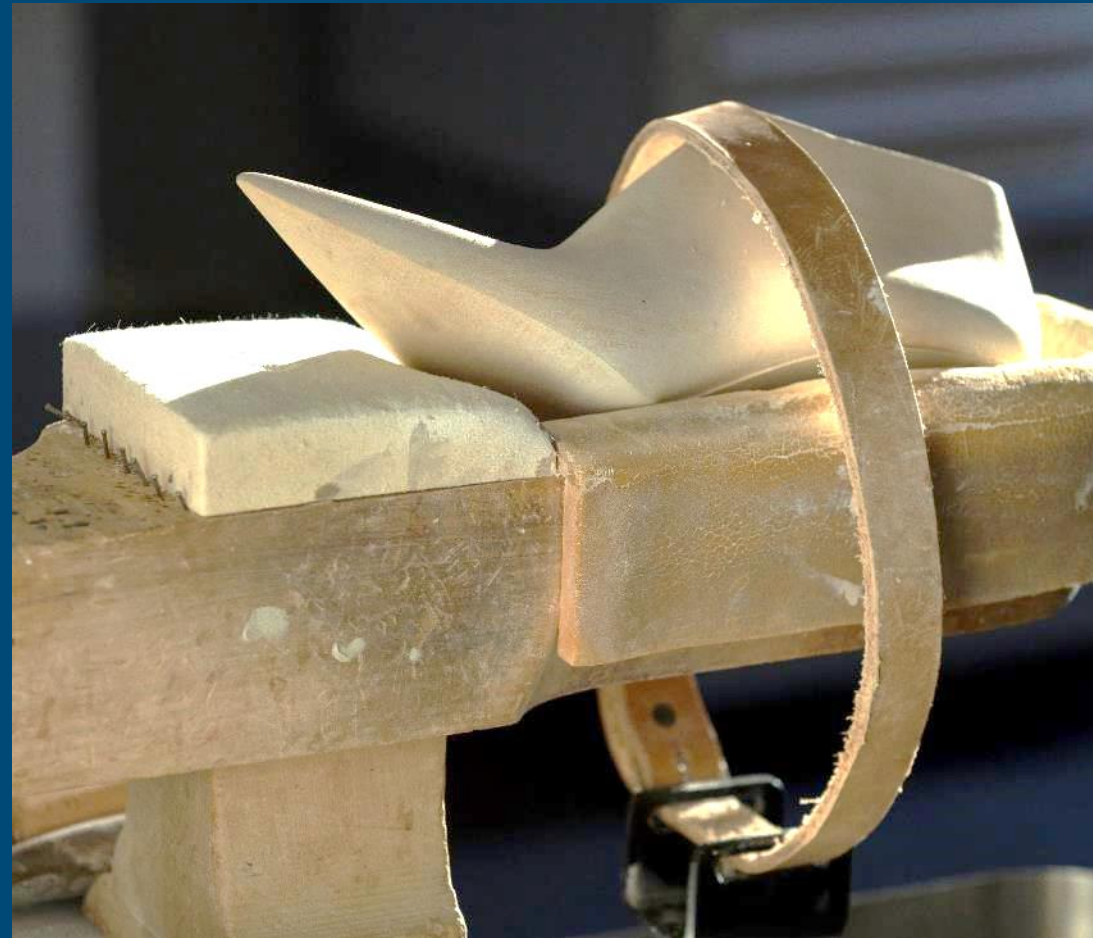
**By failing to prepare,
you are preparing to fail**

Benjamin FRANKLIN

**If you don't first make a good last
Your first shoe will be the last**

CTC and BLUE RIDGE

Thank you for your attention !



Christophe CUMIN - CTC - Head of shoe department
Thursday May 17th 2018