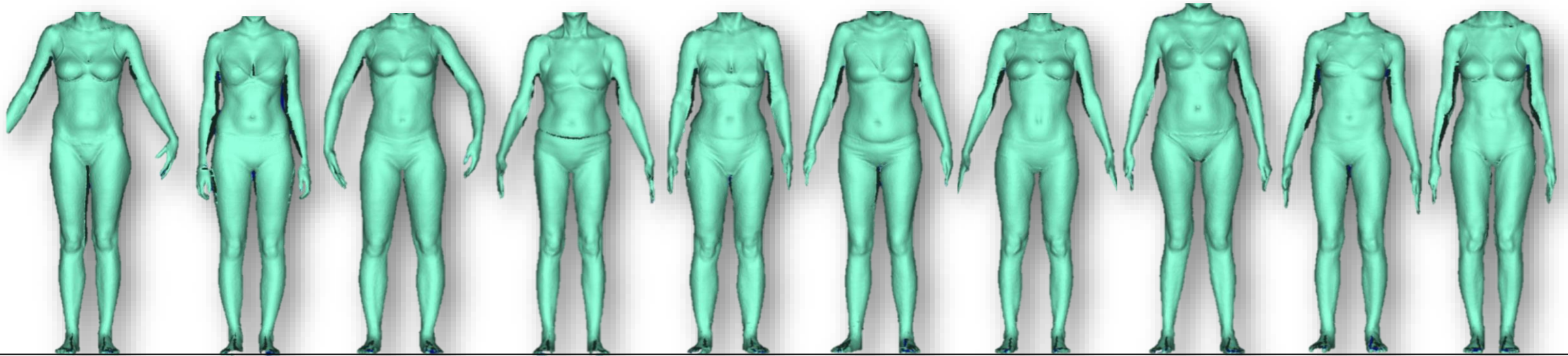




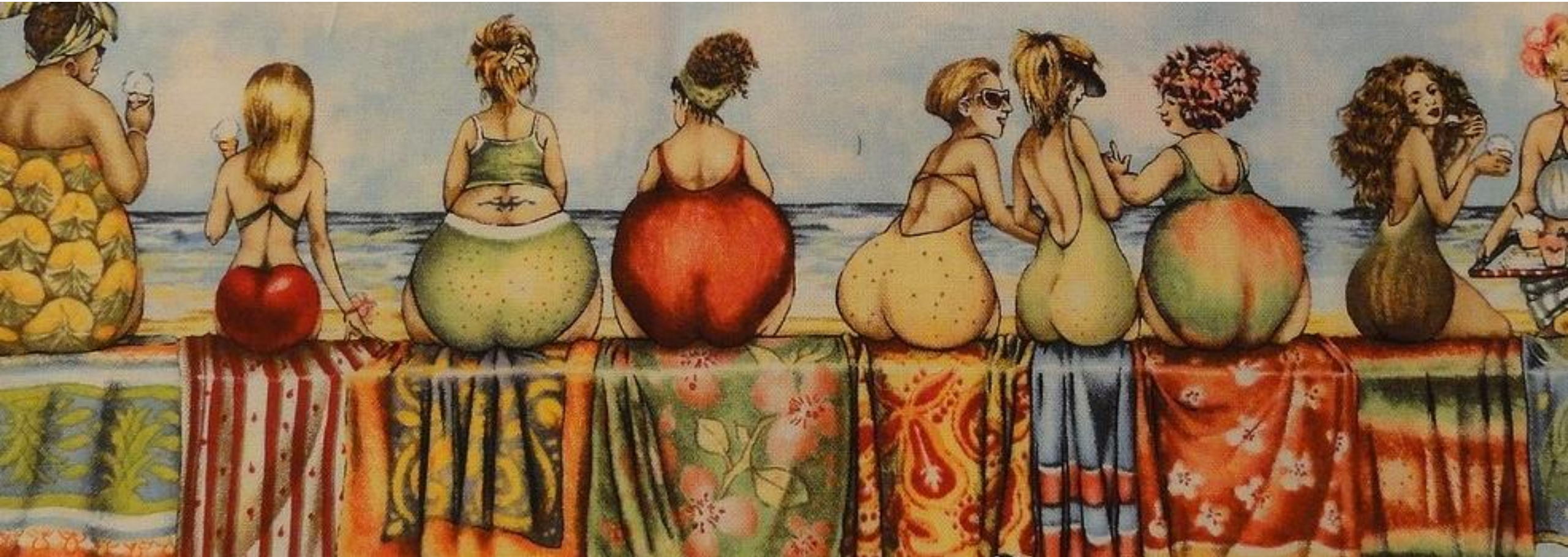
The relevance of apples and pears for apparel fitting - morphotypes in the field

Anke Rissiek, Manager Sizing & Fitting, Human Solutions GmbH

Size 38. Diversity of body shapes



Coco Chanel: Fashion is architecture: it is a matter of proportions.



AGENDA

- 1** Morphotypes for body shape specification
- 2** Methodological approach
- 3** Examples: Facts & Figures
- 4** Benefits and application areas
- 6** One approach for different targets
- 7** Future perspectives

Morphotypes. Specification of body shapes



MORPHOTYPE

Characteristics of different body shapes within one figure type, defined by proportions, relations, correlations

FIGURE TYPE

Describes the proportion between bust and hip or waist

SIZE

Defined by body measurements

FIT QUALITY

Example: Morphotype classification aspects for women



- > Differentiation between of full, upper and lower body
- > Analysis of various measurements, relations and correlations:
 - circumferences
 - widths
 - heights
- > Scalable system that allows the analysis of single classification levels (flexibility)
- > 10 classification levels
 - Full body: Basic Shape, Waist Shape, Posture, Waist Position
 - Lower body: Leg length, Leg Shape, Buttock Volume
 - Upper body: Arm Shape, Shoulder, Bust-Chest Relation

Methodological approach: How do we define morphotypes?

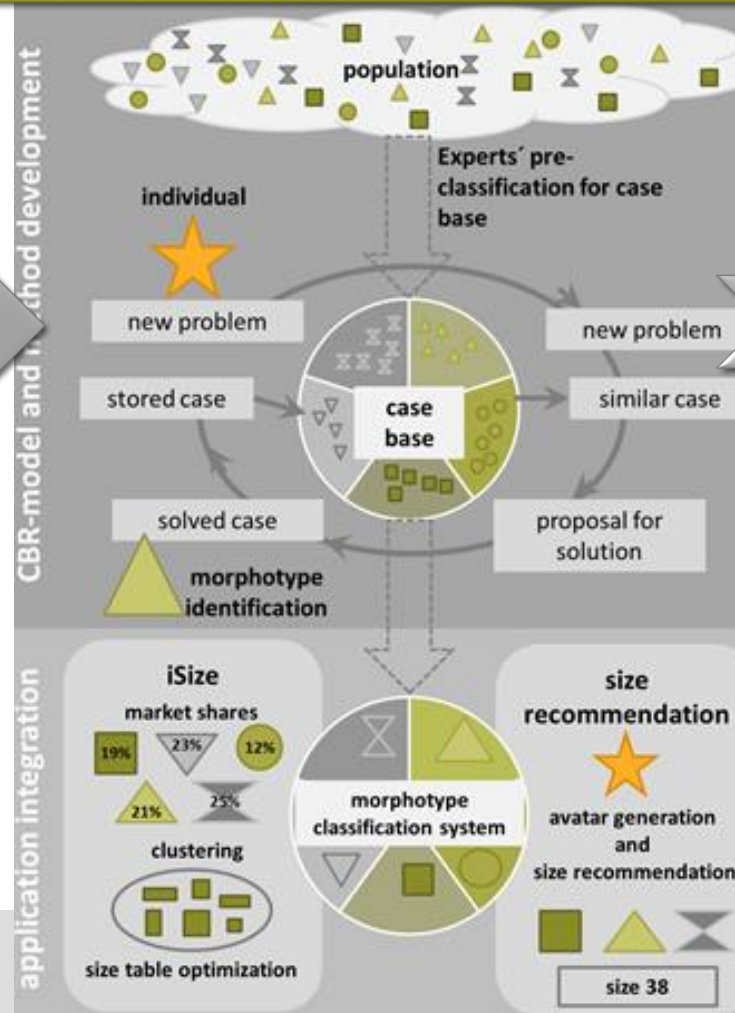
Input information

Body measurements and
3D bodyscans



Analysis process

Expert classification, transfer by experts to
complete data pools (developed with DITF)




Output information

Morphotype characteristics
for each scan



The **German female body shape** consists of

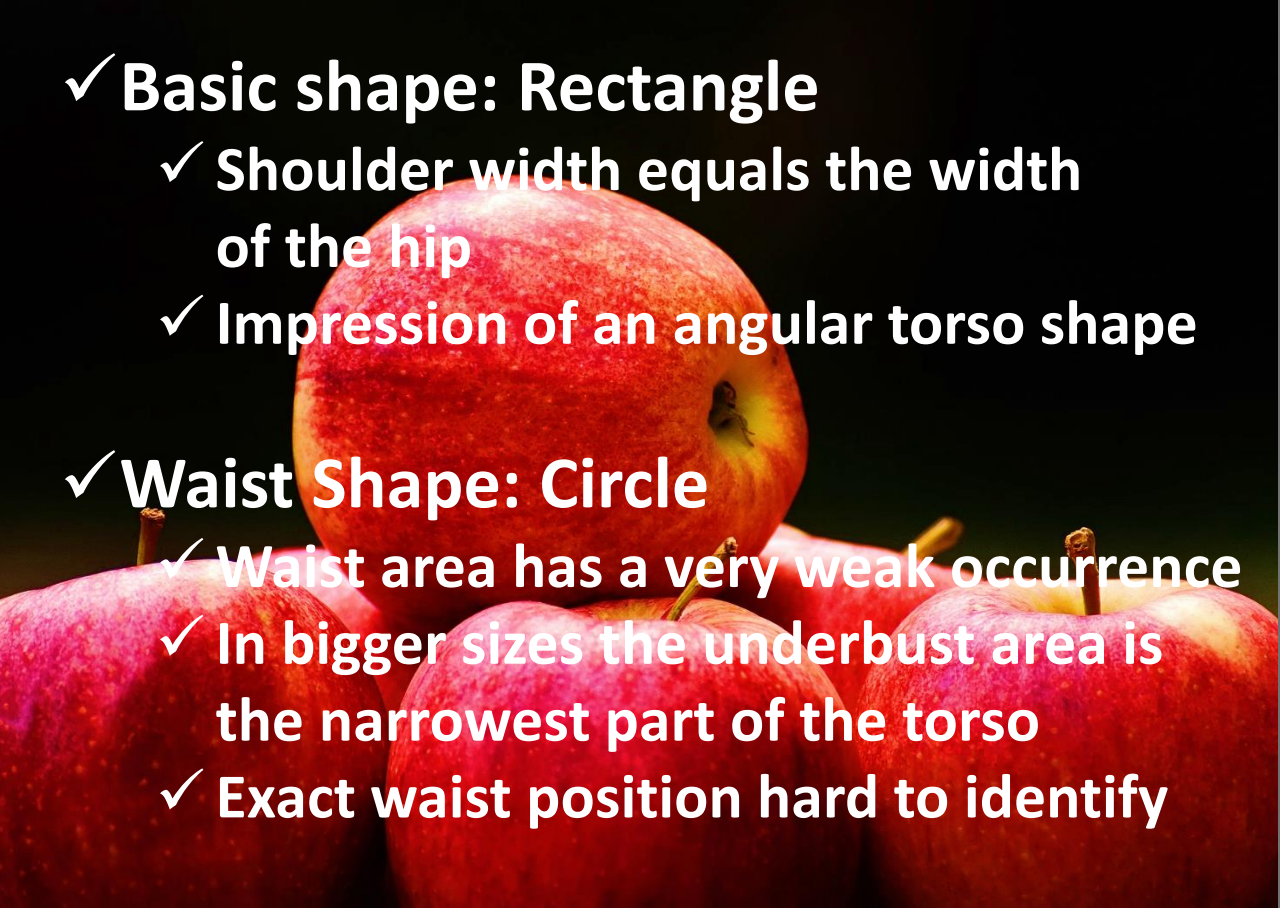
- ✓ 54,4 % with a Rectangle basic shape
- ✓ 30,6 % with a Triangle basic shape
- ✓ 15,0% with a Triangle inverted basic shape

- 
- ✓ 66,3 % of the German women have an **Hourglass waist shape** with a strong waist occurrence and visualisation
 - ✓ 33,7% of the German women have a **Circle waist shape** where the exact waist can hardly be identified

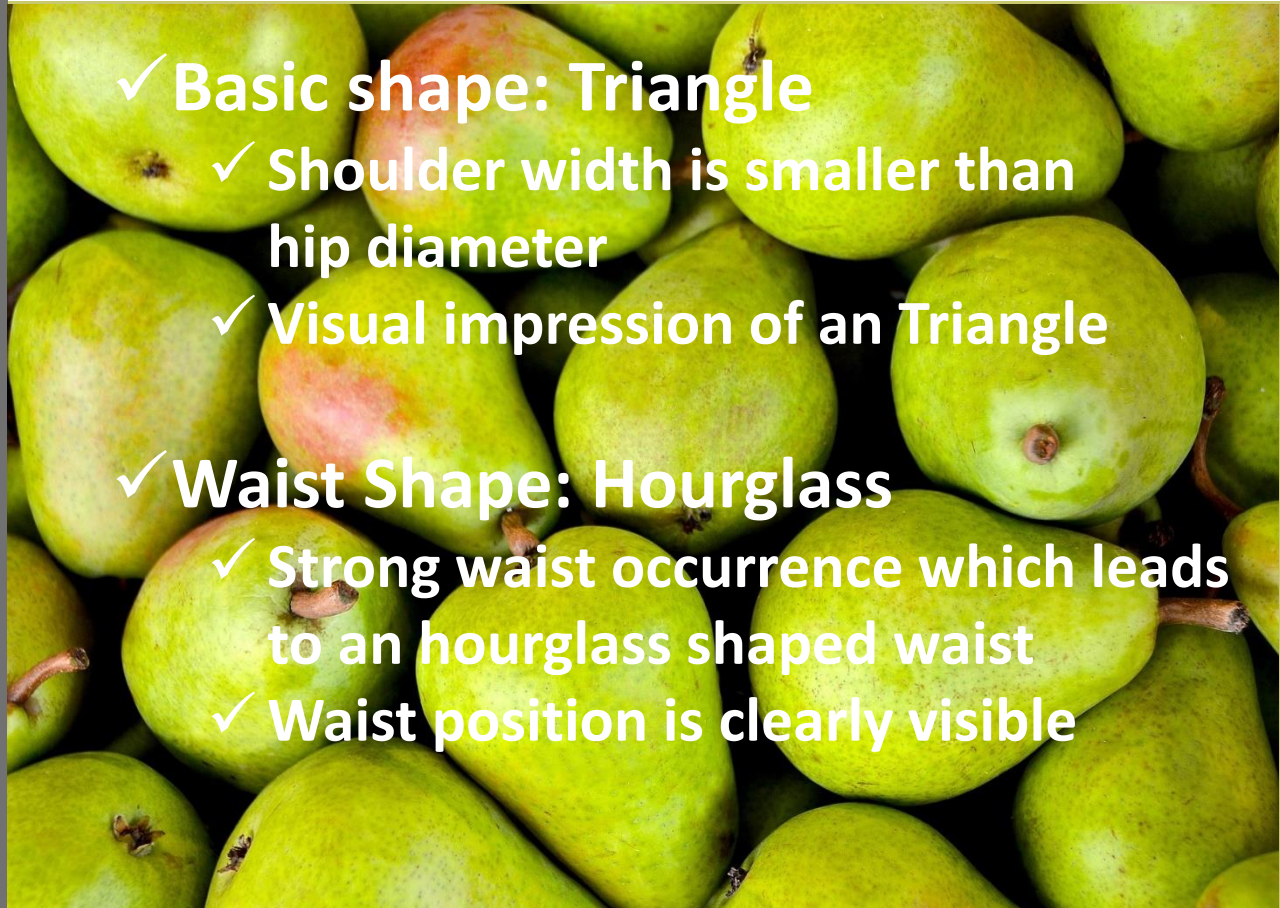
Characteristics and relative frequencies of combinations

(38,6% of the German female population)

apples: 47,4%

- 
- ✓ **Basic shape: Rectangle**
 - ✓ Shoulder width equals the width of the hip
 - ✓ Impression of an angular torso shape
 - ✓ **Waist Shape: Circle**
 - ✓ Waist area has a very weak occurrence
 - ✓ In bigger sizes the underbust area is the narrowest part of the torso
 - ✓ Exact waist position hard to identify

pears: 52,6%

- 
- ✓ **Basic shape: Triangle**
 - ✓ Shoulder width is smaller than hip diameter
 - ✓ Visual impression of an Triangle
 - ✓ **Waist Shape: Hourglass**
 - ✓ Strong waist occurrence which leads to an hourglass shaped waist
 - ✓ Waist position is clearly visible

Why do we need to regard morphotype characteristics in the collection development process?

Morphotype analysis

Differentiation regarding size

How do the market shares of the most common morphotypes shift from size to size (comparison normal sizes and plus sizes)?

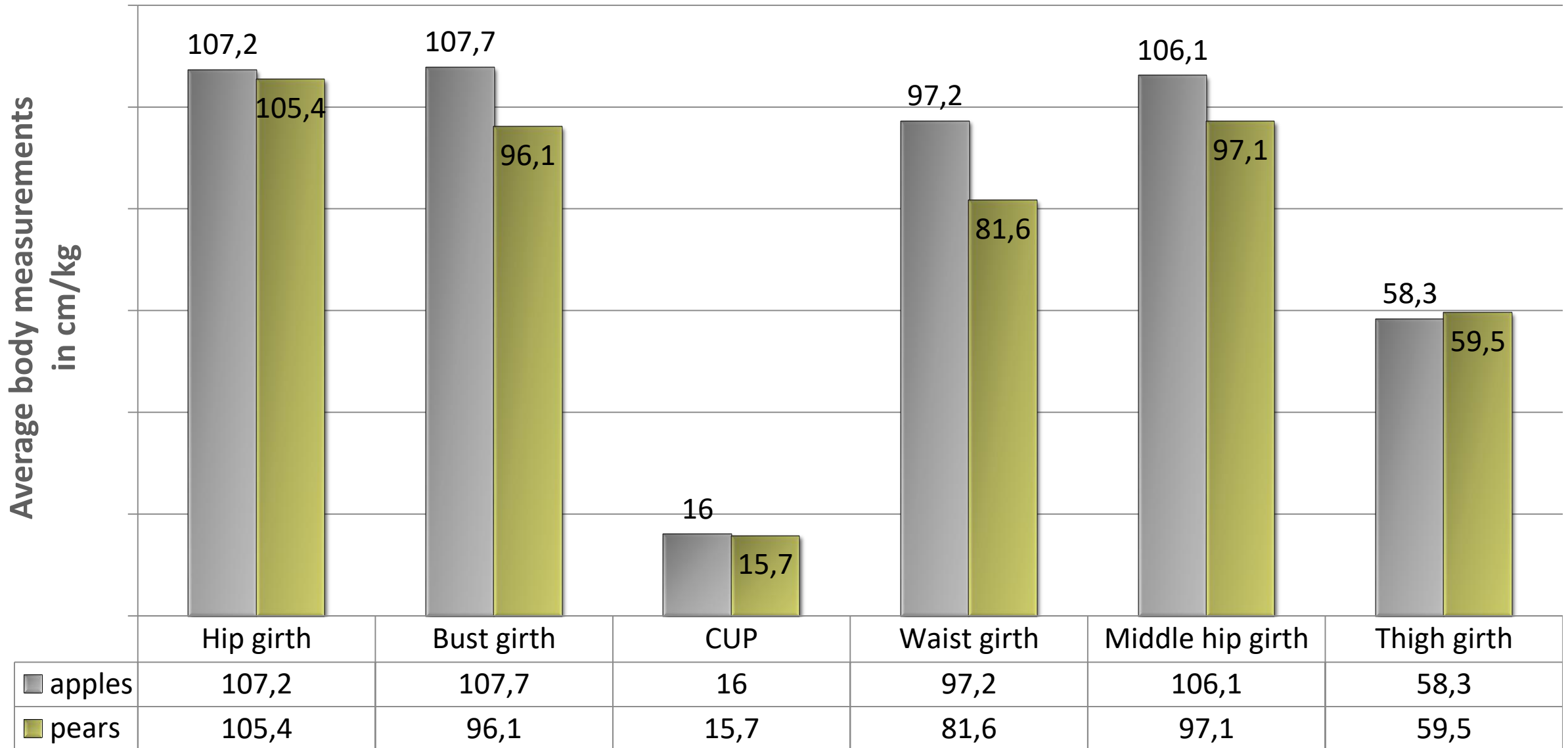
Differentiation regarding target group

Are there any morphological differences regarding age groups and other socio-demographics?

Differentiation of collection structure

Is there a need to structure the collection and the silhouettes with regards to morphotypes frequencies?

Differences in average body measurements between apples and pears



Apples & pears in sizing – morphotypes differences sizes, age groups and regarding correlations

65,3 % of the pears have strong thighs, whereas only 50 % of the apples have strong thighs

46,4 % of the apples have strong upper arms, but only 25,4 % of the pears have strong upper arms

The relation of posture characteristics is nearly identical at apples and pears

Approx. 1/4 of apples and pears have sloped shoulders

The German standard size table (normal sizes) covers twice as much pears as apples

Morphotypes for size selection and recommendation: Different fit on size DOB 42



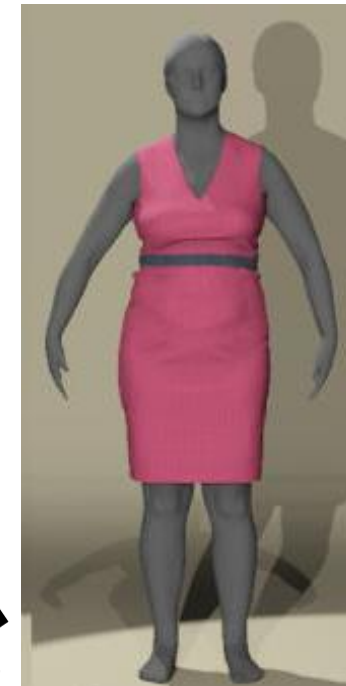
size 42 fits ✓



size 42 quite tight at bust and waist ✓✗




size 42 does not fit, lower body part is too tight ✗



size 42 does not fit, poor waist position ✗

Different body types within same size and age group lead to different sizes



Future collection
development processes
and online retail shops
need to regard
morphotypes and their
frequencies for
structuring the designs
and products

FUTURE PERSPECTIVE. Morphotype classification for men – AVAILABLE



Access to morphotype approach

iSize morphotype analysis for use in projects

- Morphotype classification for women is part of target definition
- Frequency analysis of morphotypes with respect to age group
- Size table optimization and market share calculation with regards to morphotype characteristics
- Coming soon: Morphotype-specific avatar generation

Standard project

- Use of the available classification of the SizeGERMANY data pool
- Selection of relevant morphotypes and target group specific characteristics
- Analysis is done by HS within a project
- Documentation of results

Individual customer project

- Provision of individual data for classification is possible
- Integration of individual classification system
- Development of individual project concept
- Analysis is done by HS with close collaboration with the customer and with regards of experiences from further projects
- Documentation of results

Morphotypes in use – benefits of knowledge about apples and pears

- ✓ Optimized fit for different morphotypes
- ✓ Morphotype-specific grading allows to regard the different proportions and relations of the human bodyshapes
- ✓ Higher market coverage by morphotype-specific fits and design
- ✓ Support in collection development processes and structuring
- ✓ Retail offer online/offline with respect to morphotype frequencies
- ✓ Optimized size recommendation for web shops support return reduction

Higher customer satisfaction !

Hightech
CAD, PLM
& ERP



Thank you!

www.human-solutions.com, www.assyst.de, www.avm-solutions.de