Appendix 14 – Chapter 6's heatmaps of object placement

This appendix accompanies chapter 6 of F. Lippok's PhD thesis entitled "Death and all its customers. Changing burial rites in Northern Gaul (450-600 CE)". The data used in the chapter is based on a twofold methodology. First, the heatmaps were generated through the Rural Riches database. Second, the detailed analysis regarding site- gender and age patterns in placement. Both will be explained below.

Explaining heatmaps

The heatmaps used throughout the chapter and in this extensive appendix illustrate where certain objects were placed and how this changed throughout the late 5th and 6th centuries CE. During data input in the database, the placement of objects was registered where this was possible. This enabled the creation of heat maps that displayed what places a particular object was found. Figure 1 details how the heatmaps should be read. Comparing differences between the heatmap's phases enabled me to differentiate objects that were consistently placed in the same areas from those that showed change in placement over time. The visualisation in schematic graves conveys the placement of the discussed objects and is undertaken for all types of objects. The visualisation was done for all case studies as a whole and per cemetery. This appendix is the result of that work.

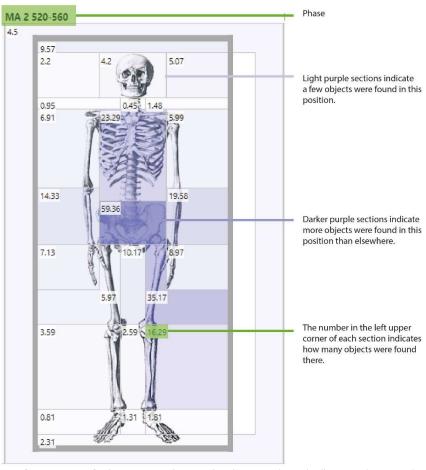


Figure 1. Overview of one section of a heatmap. At the top, the phase is indicated: all graves dating to this phase and that contain that particular object, are included in this section of the heatmap. The schematic grave is divided into sections with which the object's positioning was recorded. The number in each section indicates how often an object was found there. The colour of the section indicates how frequent the placement was compared to other sections. Dark purple indicates a higher number of the object placed there, lighter purple indicates a smaller number of that object placed there.

The heatmap analysis enabled the categorisation of objects and object groups. Some objects were heavily normed, meaning they were placed in similar positions in all 16 case studies. Others were normed but with some differences between case studies. If there was little conformation between sites, the object positioning is called varied. An overview of which objects showed particular patterning is displayed in Table 1.

Table 1. Overview of the types of patterning in placement of objects and what objects fall into those categories. The categories are as follows: Heavily normed, little change: Objects whose placement is heavily normed and whose placement didn't change much throughout the 6th century. Heavily normed, some change: Objects that are heavily normed and display some change over time. Normed, no change: This category of objects has a mostly consistent placement throughout all case studies, with a few sites diverging from the overarching tendency. Normed, some change: This category of objects has mostly normed placement, but the placement changes over time. Varied, some change: Objects that display locally diverse placement. No norming possible: A select number of object types were not numerous enough to establish the norming of their placement.

| Category | Object types in this category |
|---|--|
| Heavily normed, little change | Ceramic pots, bracelets, finger rings and earrings, beads, buckles and mounts, footwear, finger rings, hair pins, bells, chains, comb cases, cowry-shell, crystal balls, fiche à bélière, knives, silex and glass beakers. |
| Heavily normed, some change | Brooches, lances, axes, swords, decorative disks and keys. |
| Normed, no change | Ceramic bowls and ceramic jugs. |
| Normed, some change | Glass bowls, glass flasks, awls, chests, cleavers, fire steel. |
| Varied, some change | Purses, coins and combs. |
| No norming possible (number of objects in brackets) | Buckets (21), knife sheaths (20), copper bowls (17), ceramic beakers (17), glass pots (15), glass palm cups/tumblers (13), mosaic-pieces (12), ceramic flasks (10), spouted pots (9), gaming pieces (8), glass jugs (3), ceramic jar (1), Hercules club (1). |

Detailed data analysis

In addition to the heatmaps, the computer program Visone was used to create detailed grave sketches with a visualisation of the individual object placement per grave. This method was used to answer more detailed questions regarding site, gender and age- dependent patterning of placement (Lippok 2025, Chapter 6). Most objects were not very numerous, and so all graves from all phases that contained that object were projected onto the grave scheme simultaneously. Figure 2 illustrates what a grave scheme for site-specific use of a certain object looks like, as well as what the scheme looks like for gender-specific placement of an object. Both images show clear patterning. This type of information was used to write chapter 6.

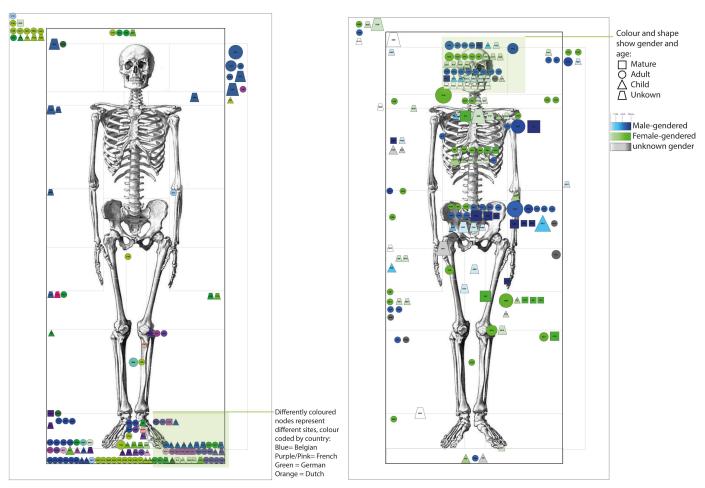
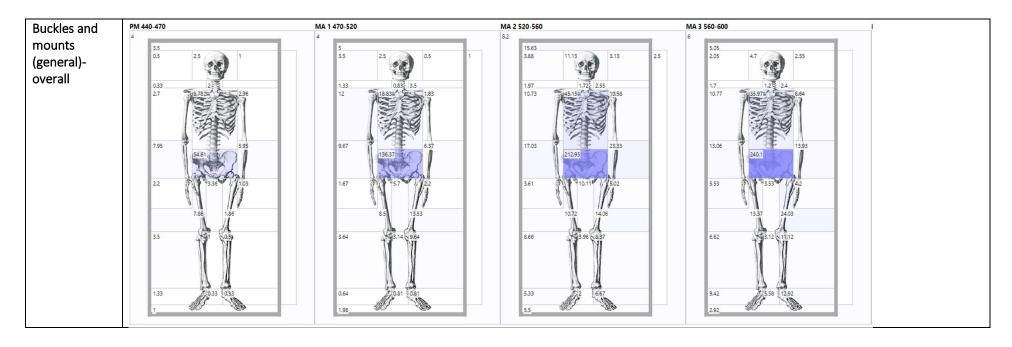
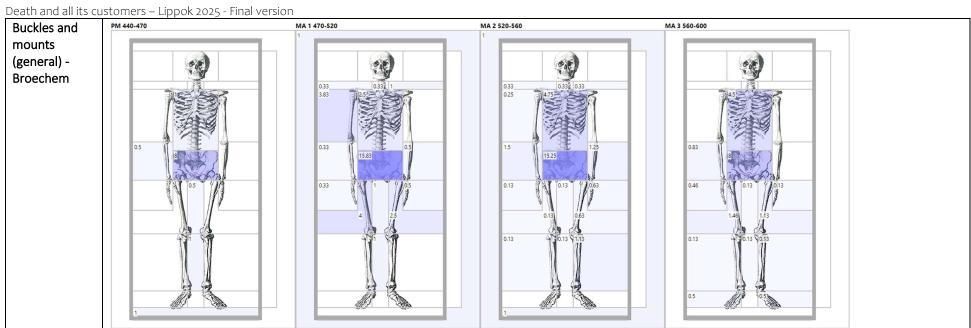


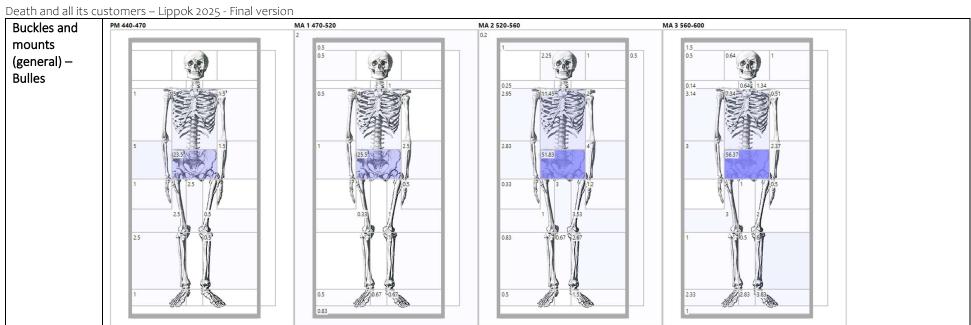
Figure 2. Left: example of the grave scheme with site-specific patterning. Right: example of the grave-scheme with gender-specific patterning.

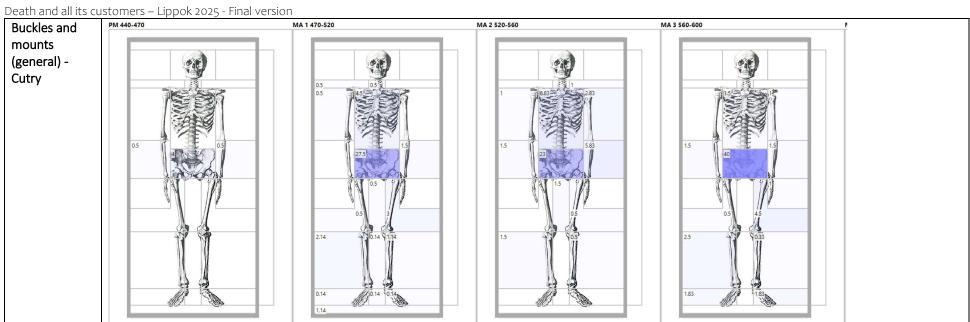
Heatmaps

Buckles and mounts - General



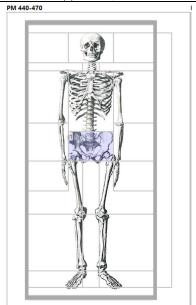


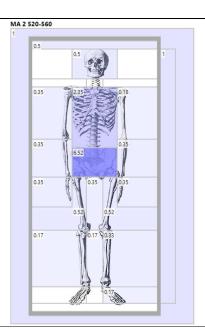


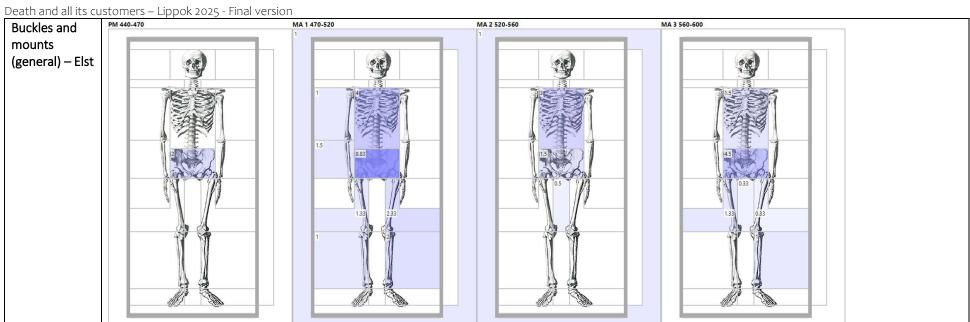


Death and all its customers – Lippok 2025 - Final version **Buckles and**PM 440-470

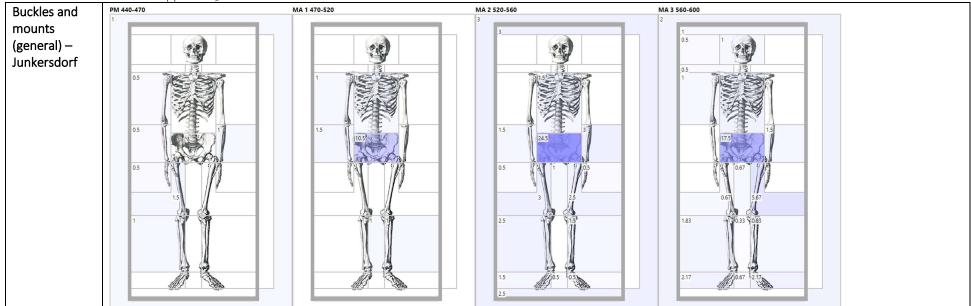
Buckles and mounts (general) – Eick

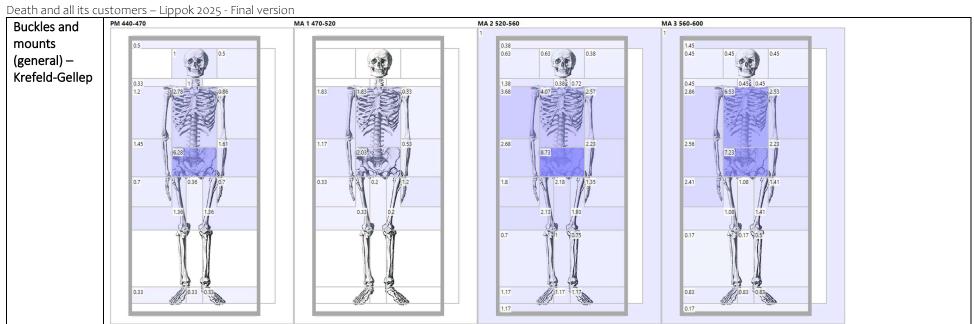


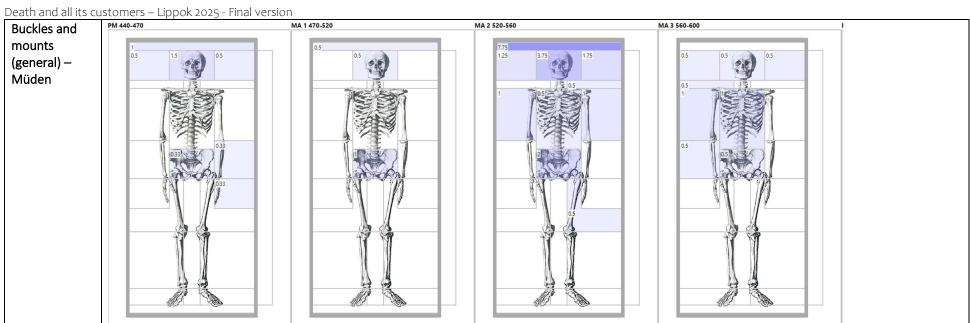


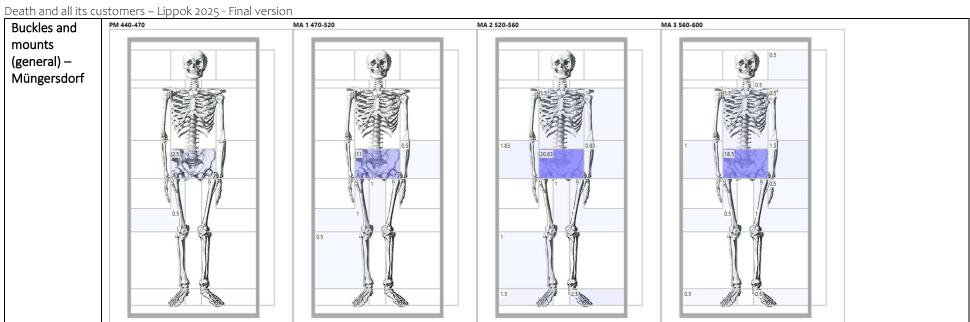


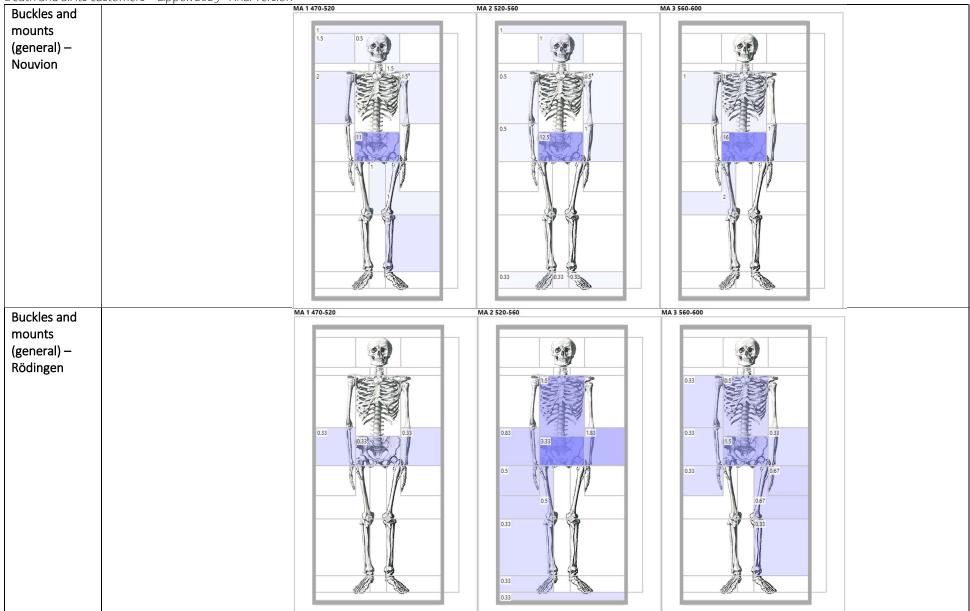
MA 2 520-560 MA 3 560-600 Buckles and mounts (general) -Goudelancourt MA 1 470-520 Buckles and PM 440-470 mounts (general) -Haillot

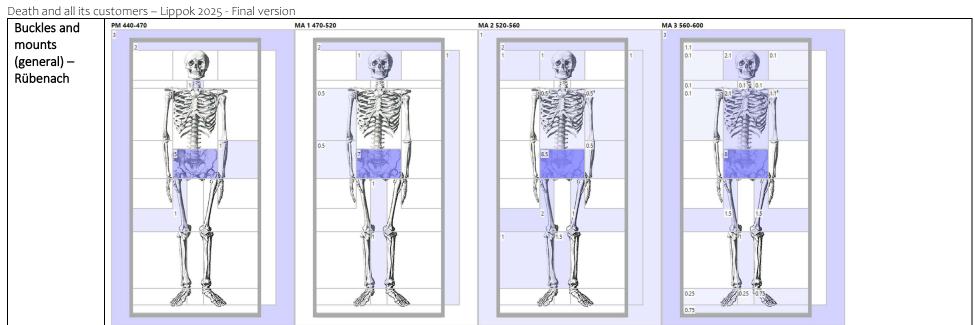


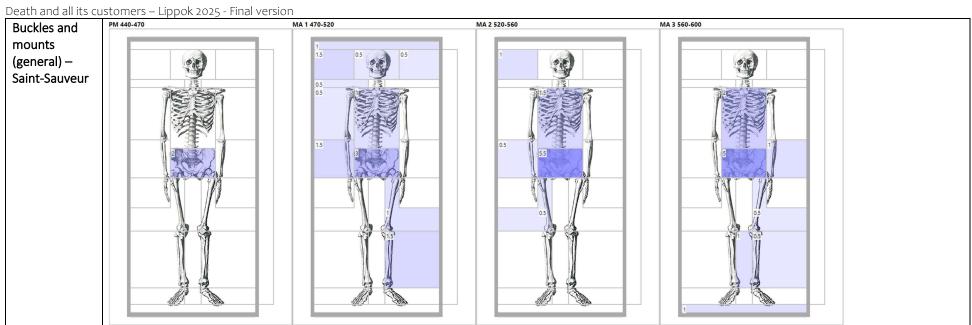


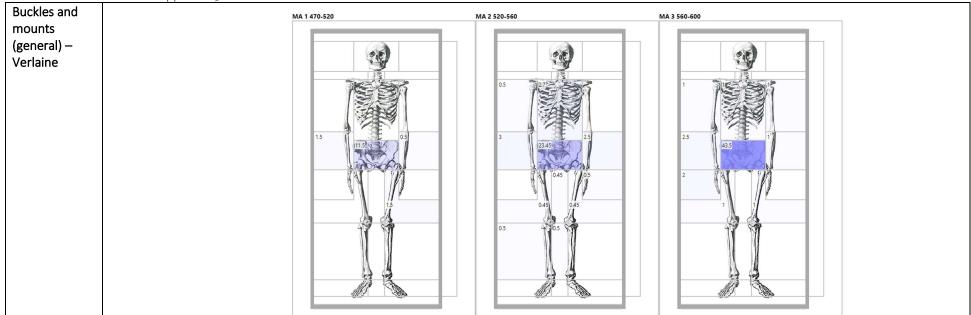




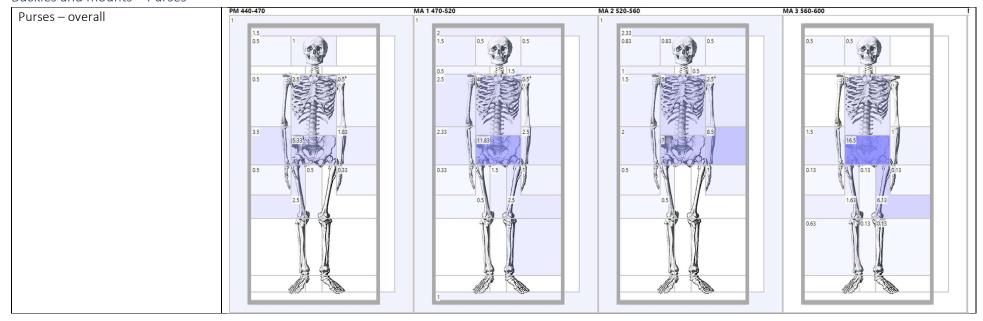


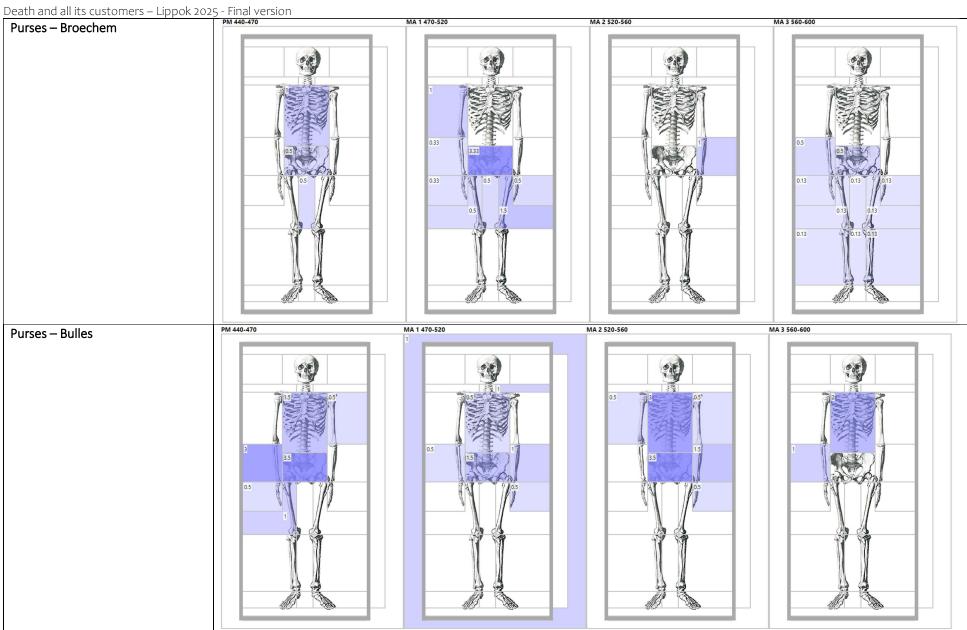


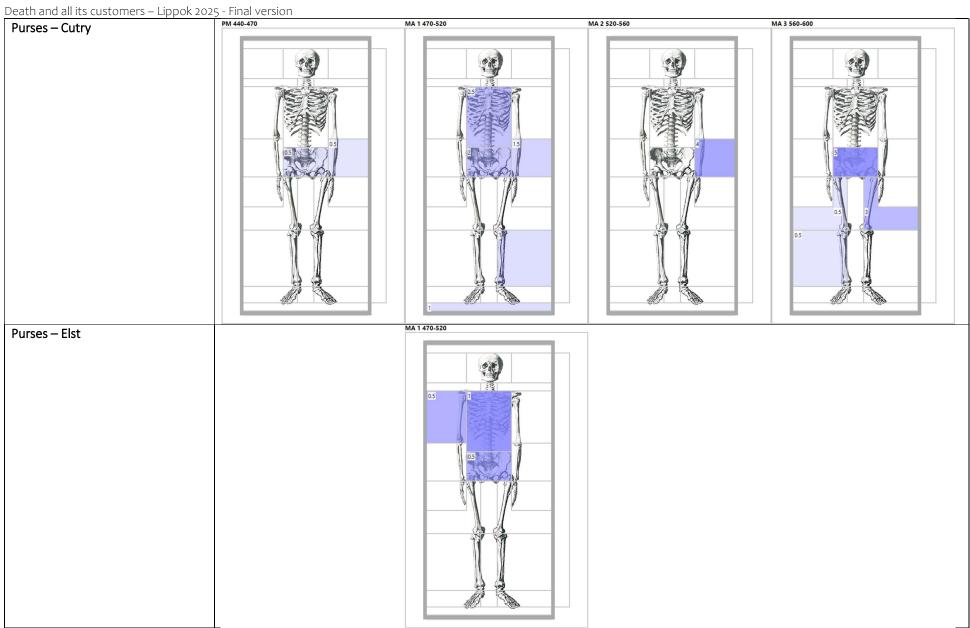


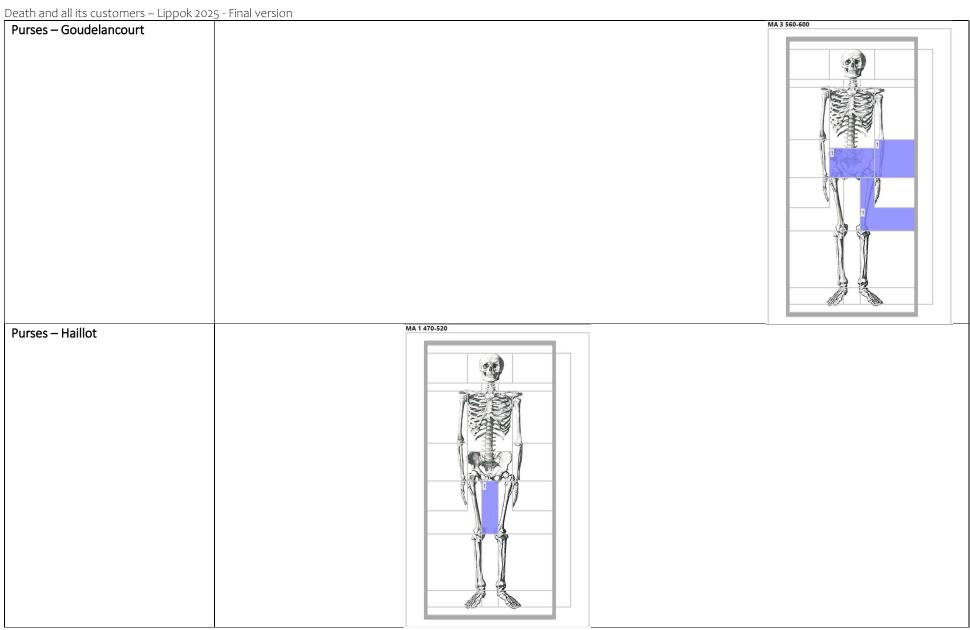


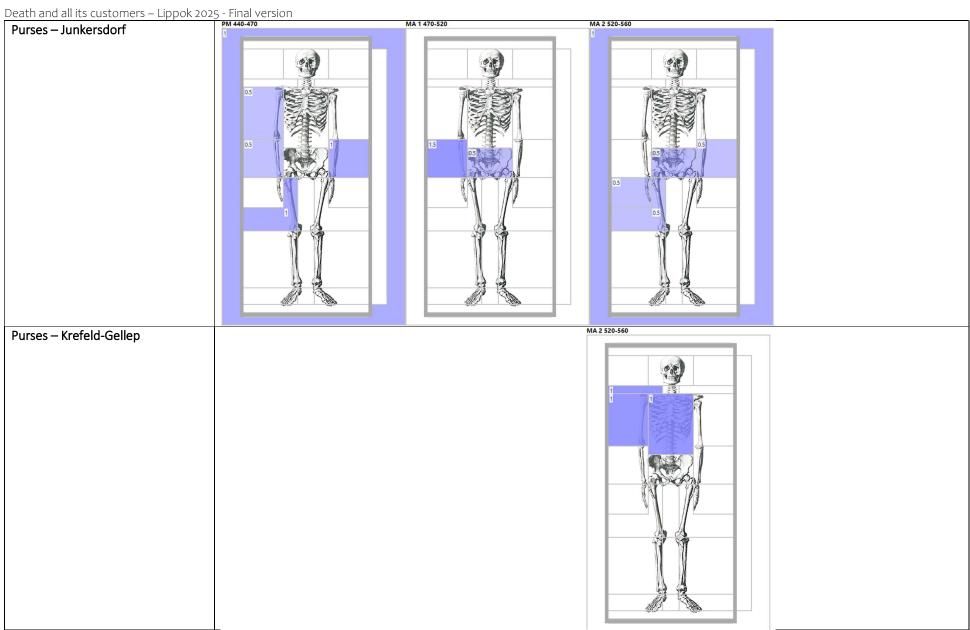
Buckles and mounts – Purses

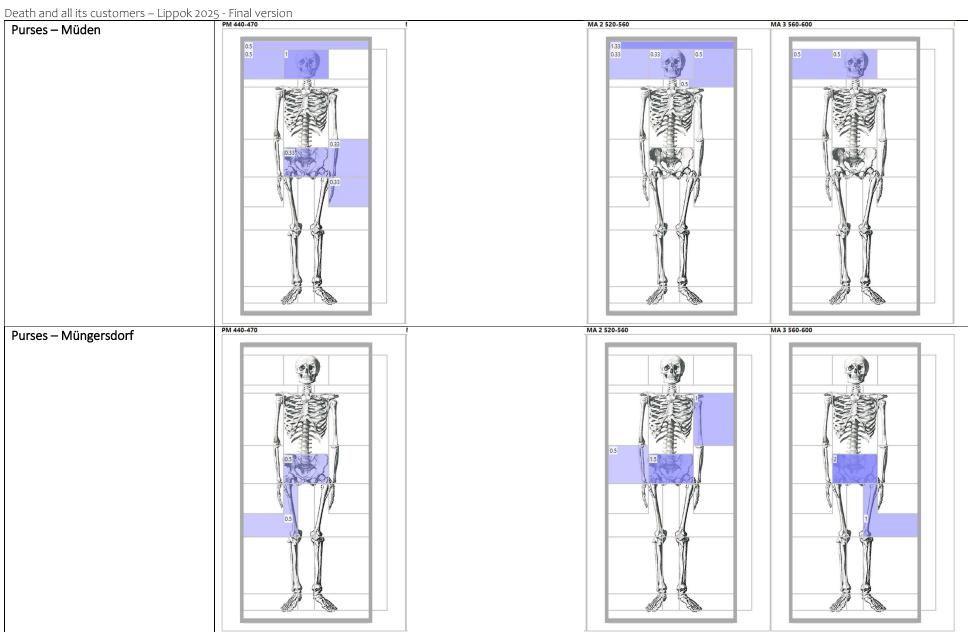


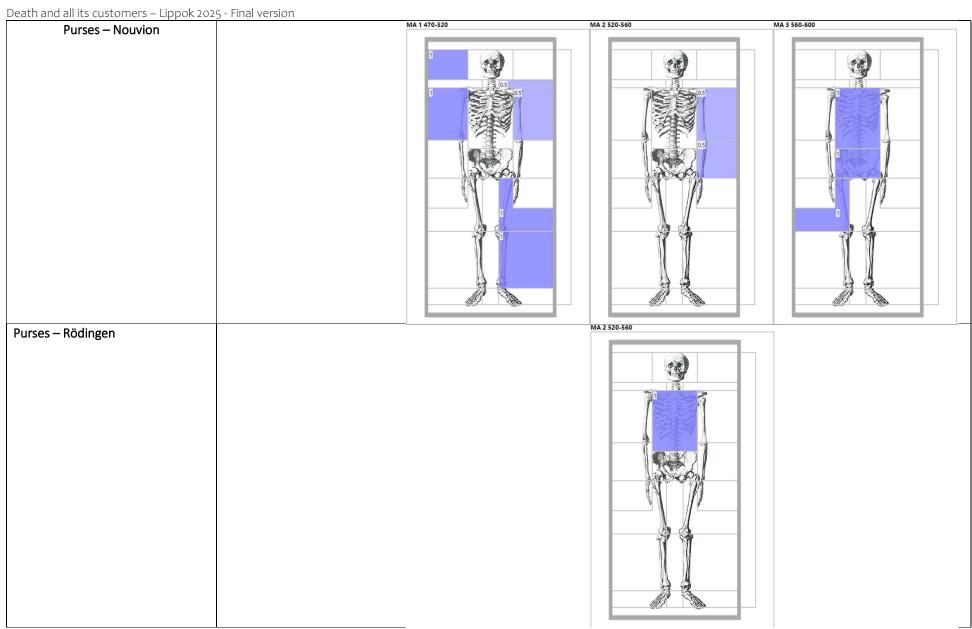


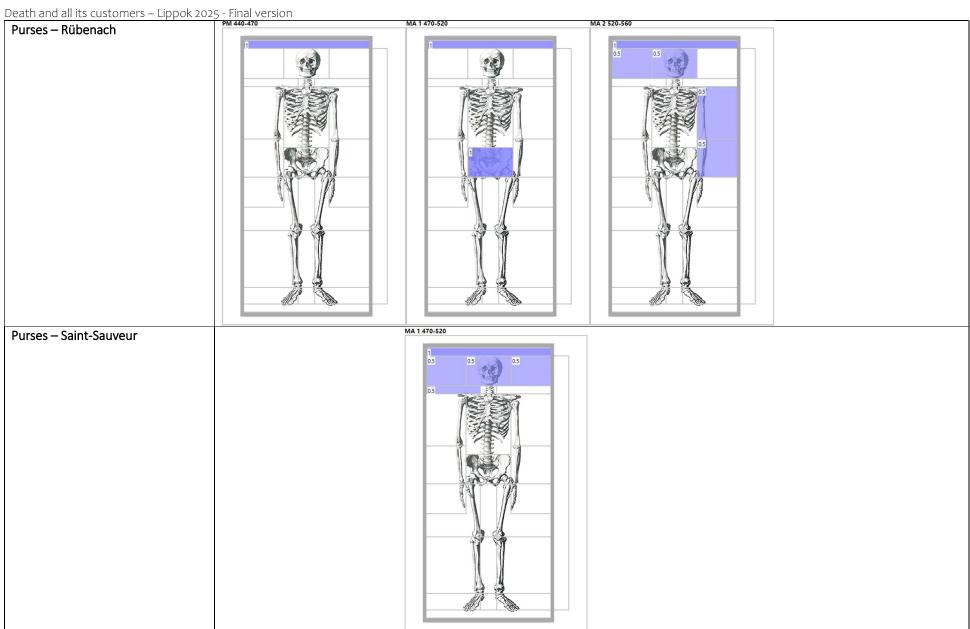


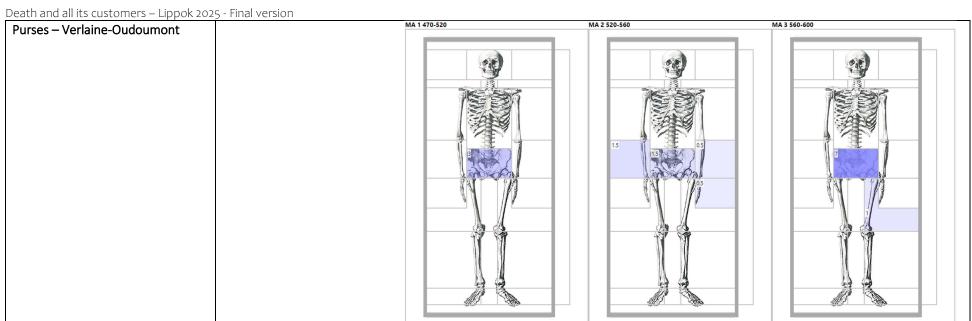


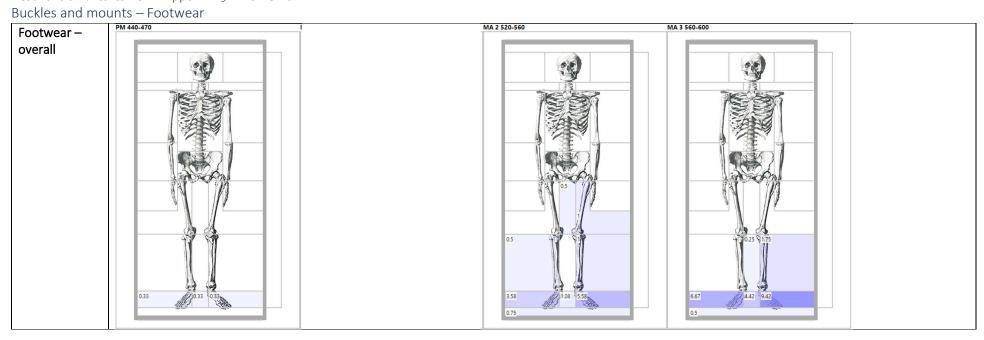


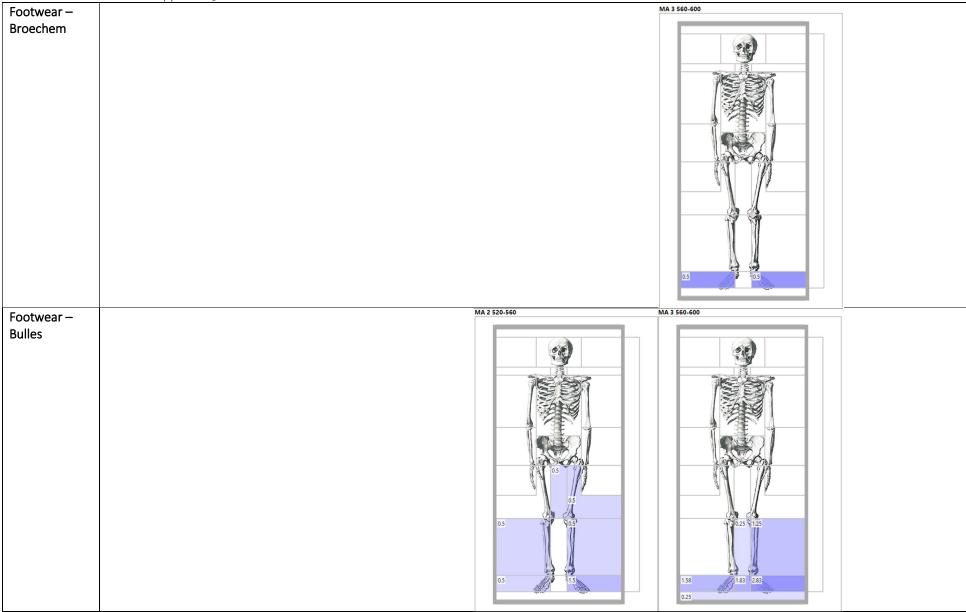


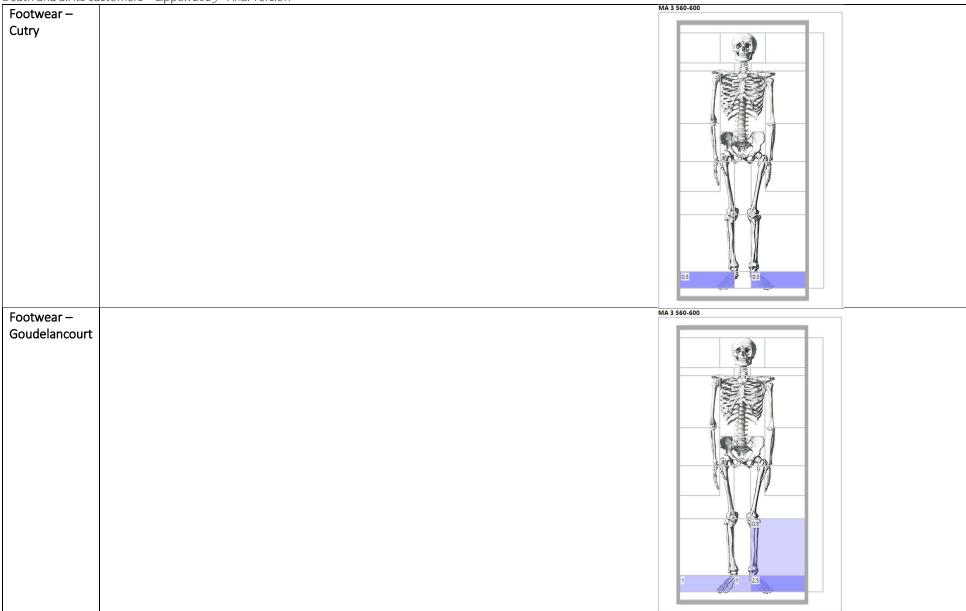


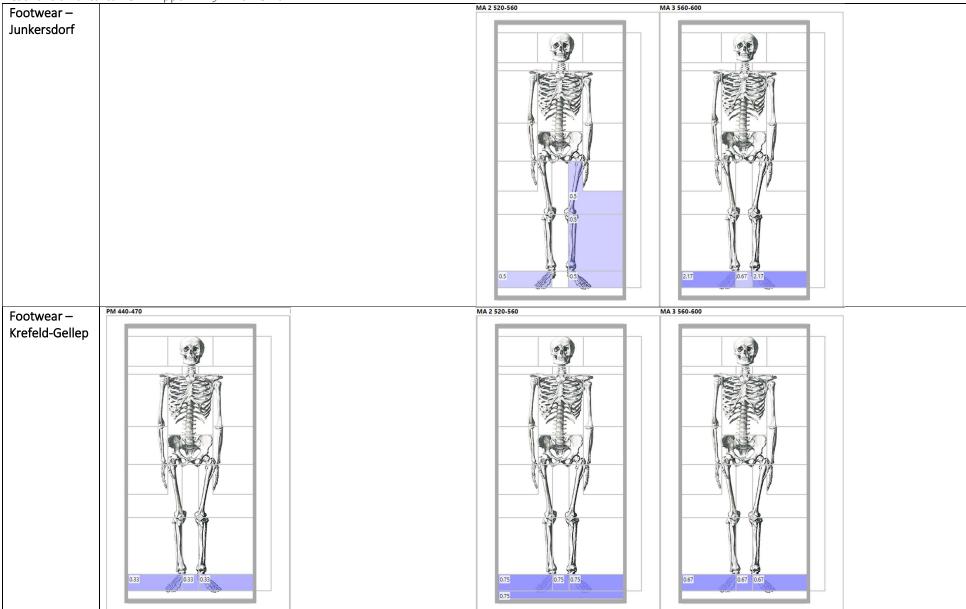


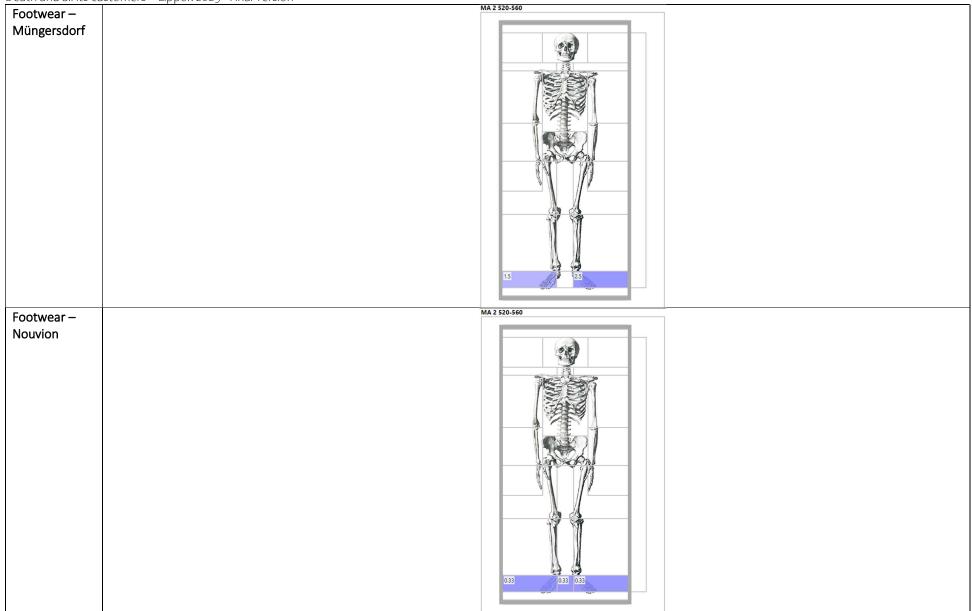


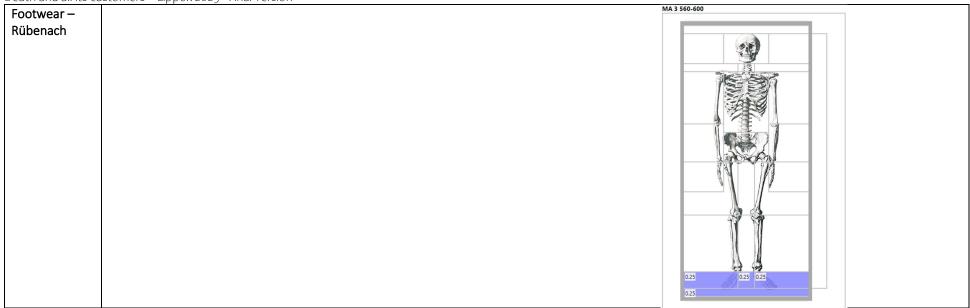




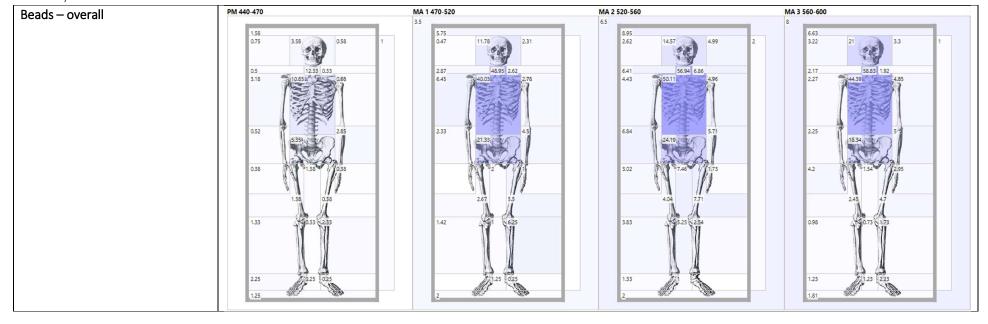


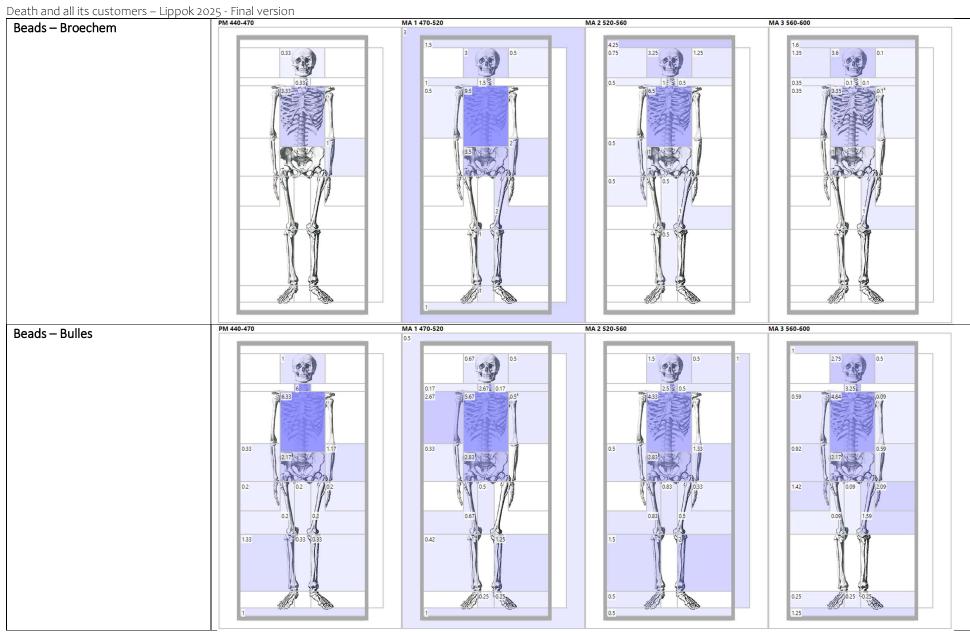


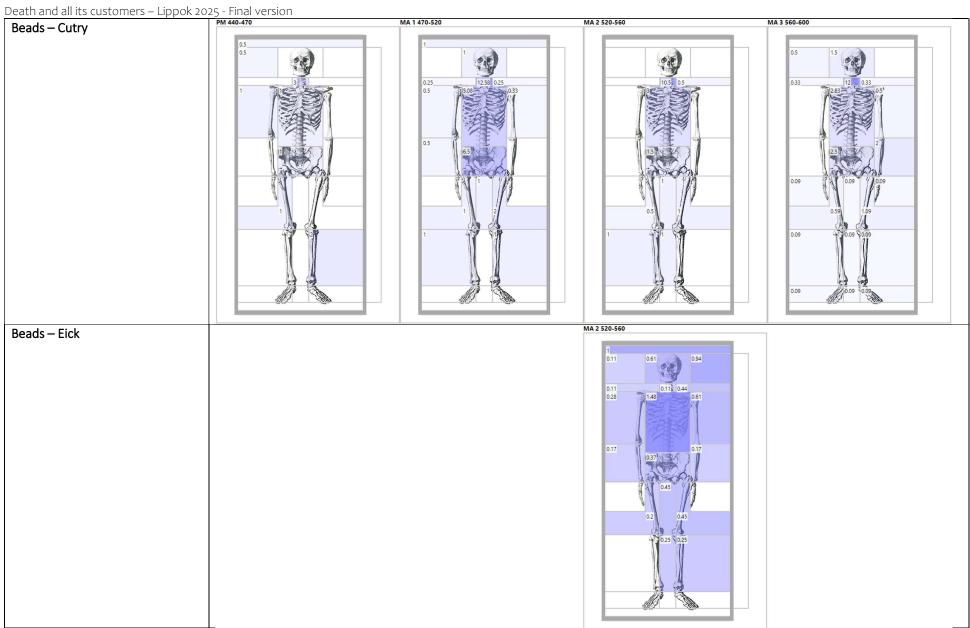


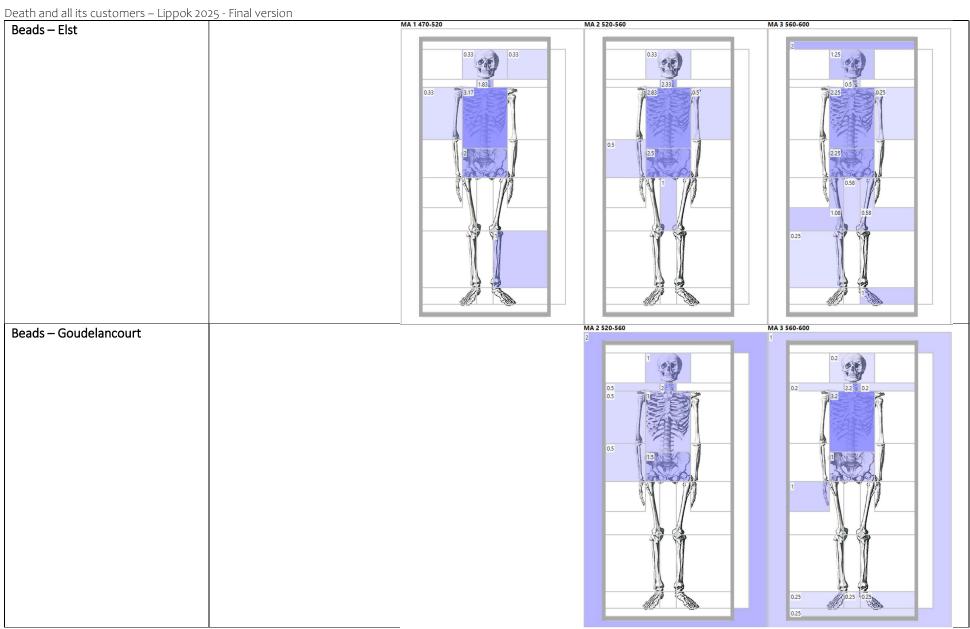


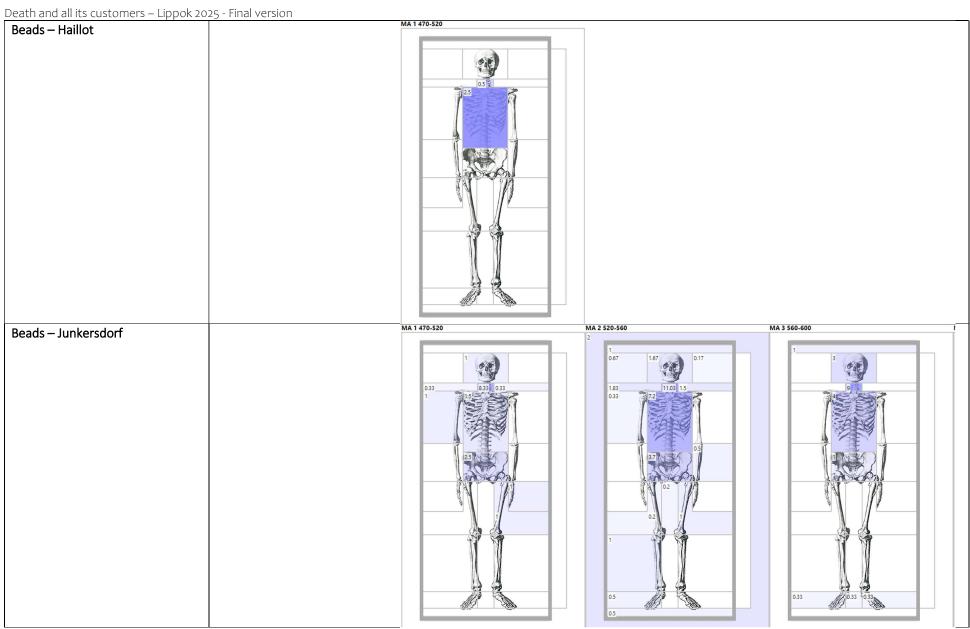
Jewellery – Beads

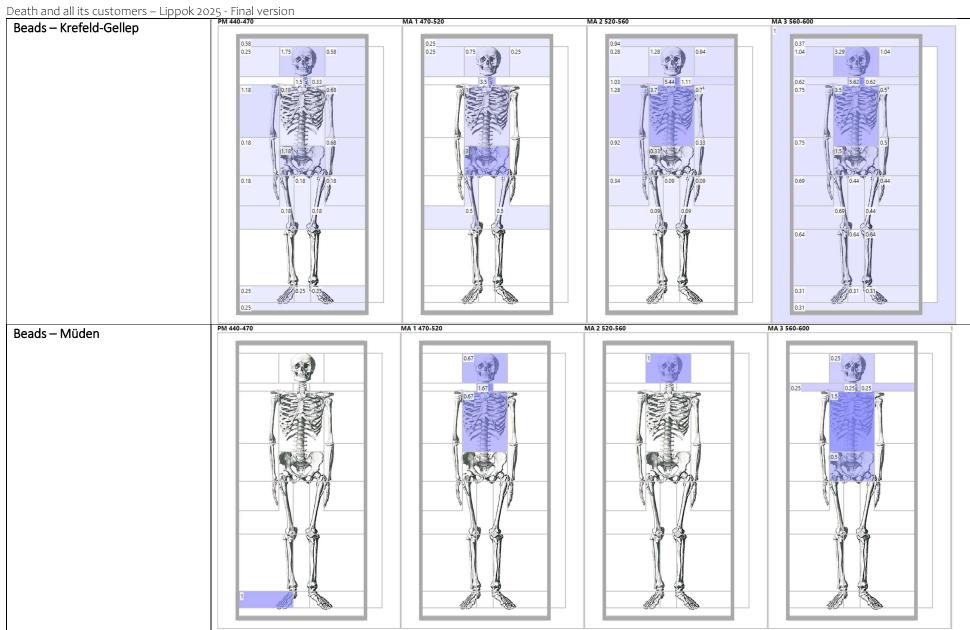


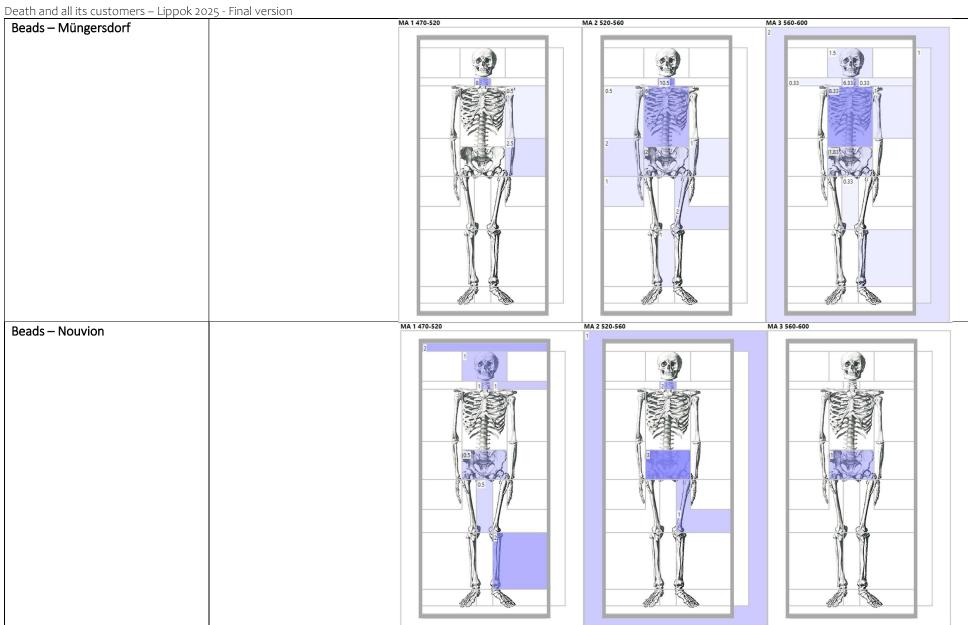


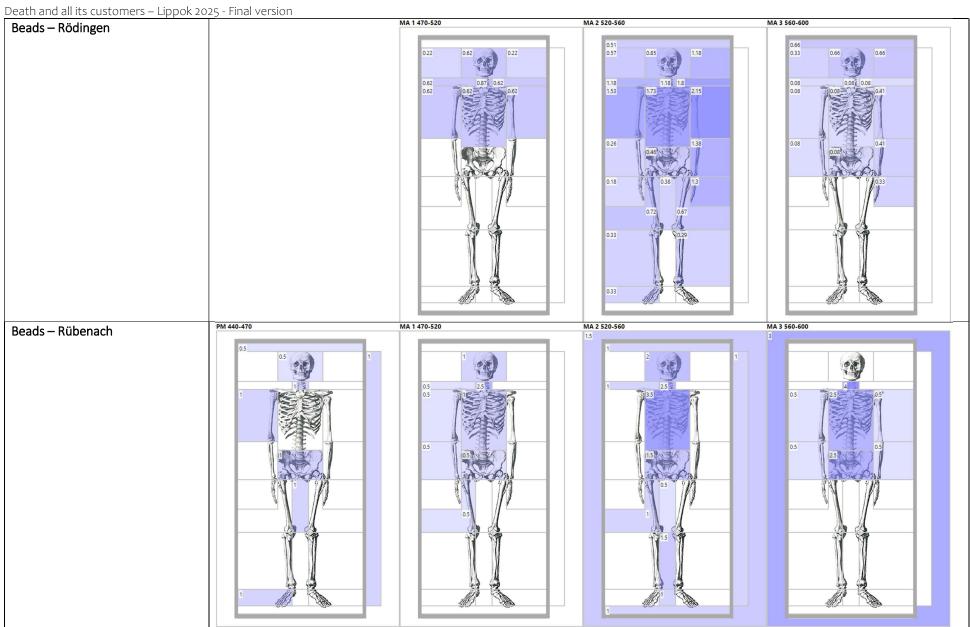


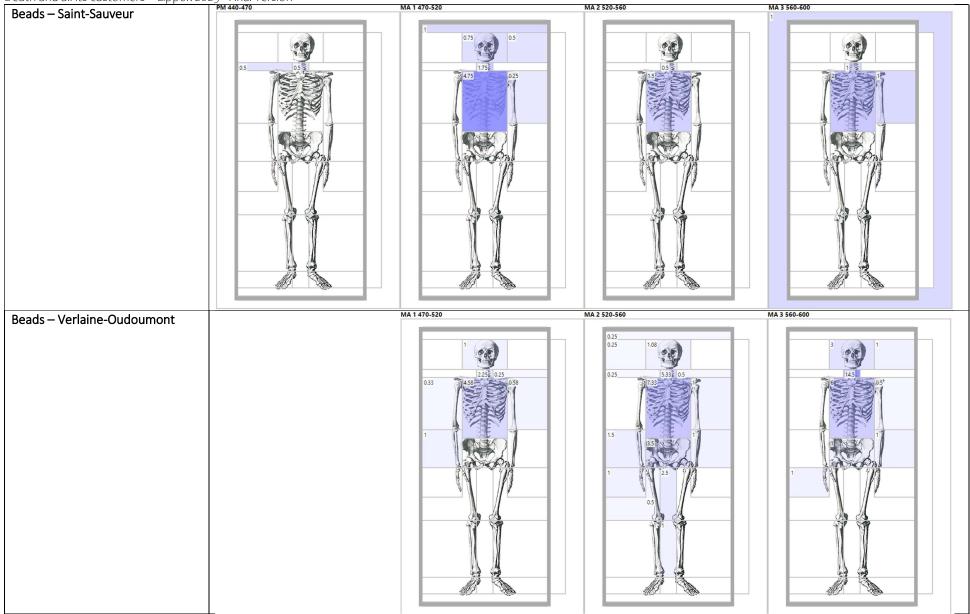






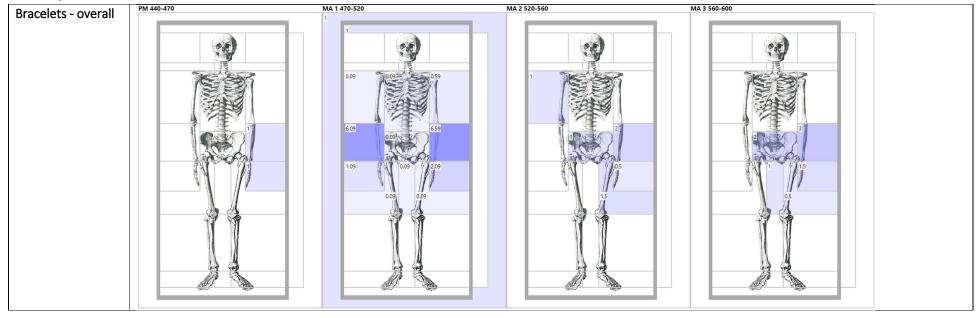


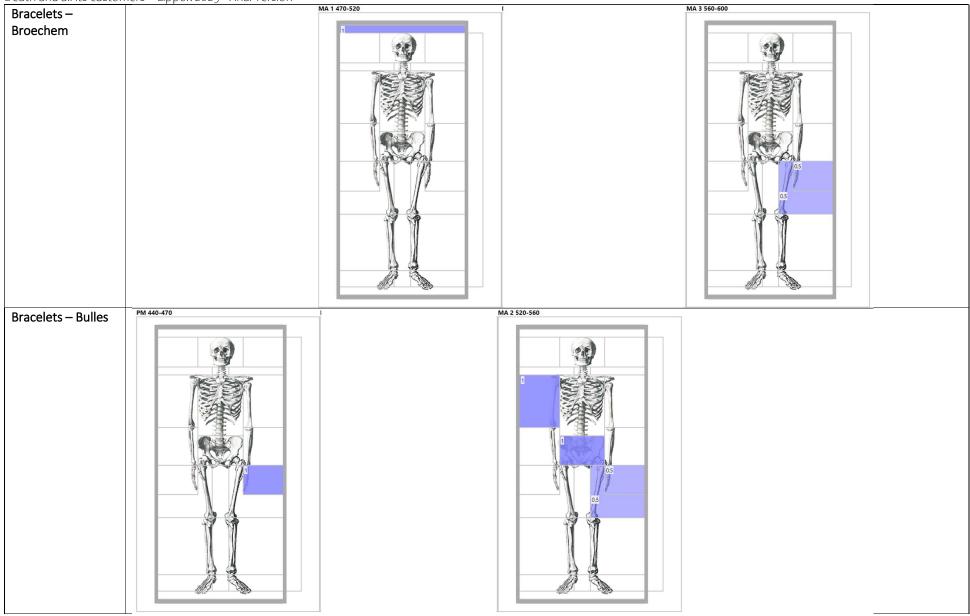


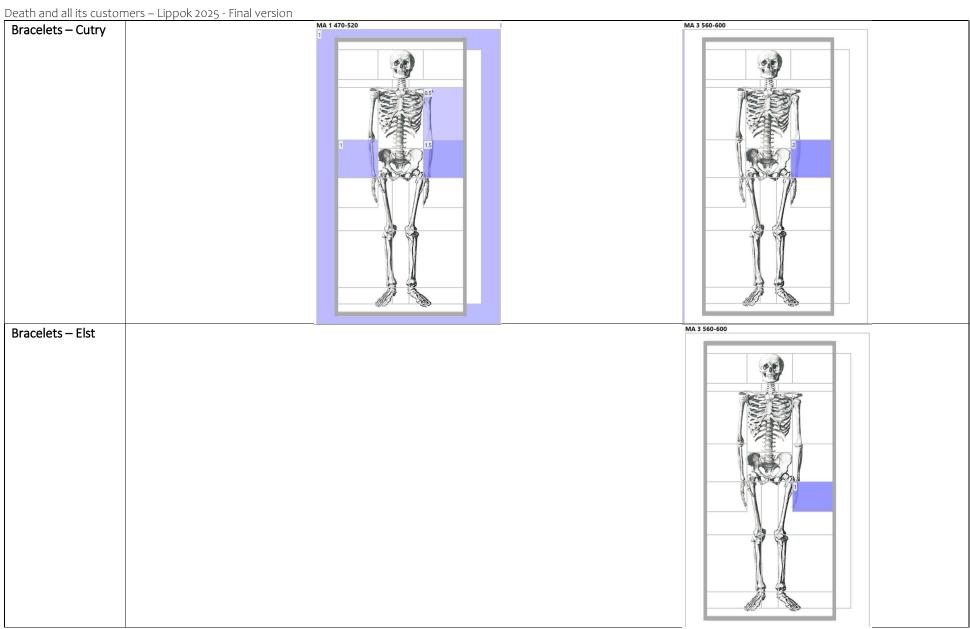


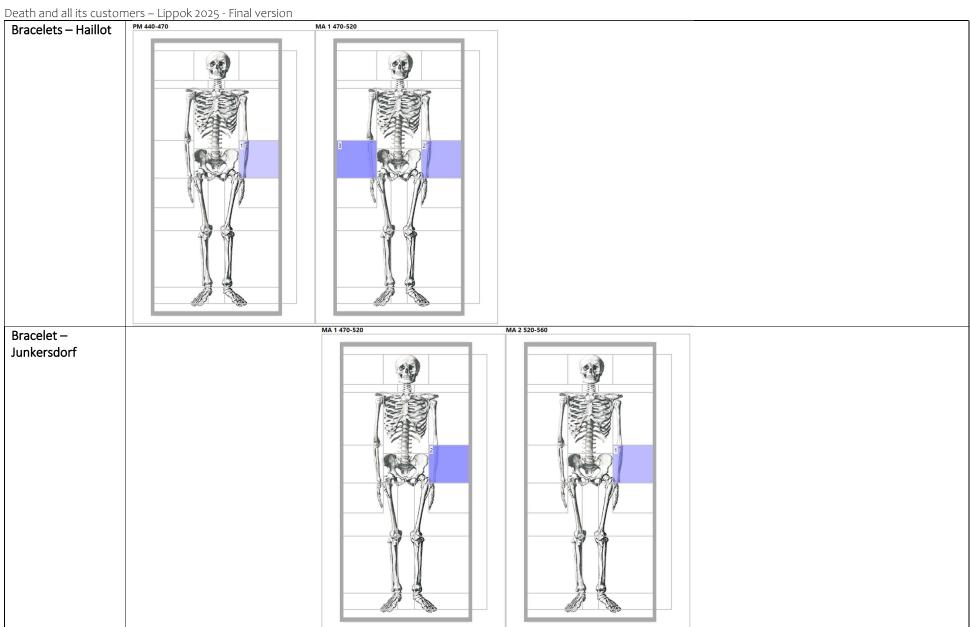
43

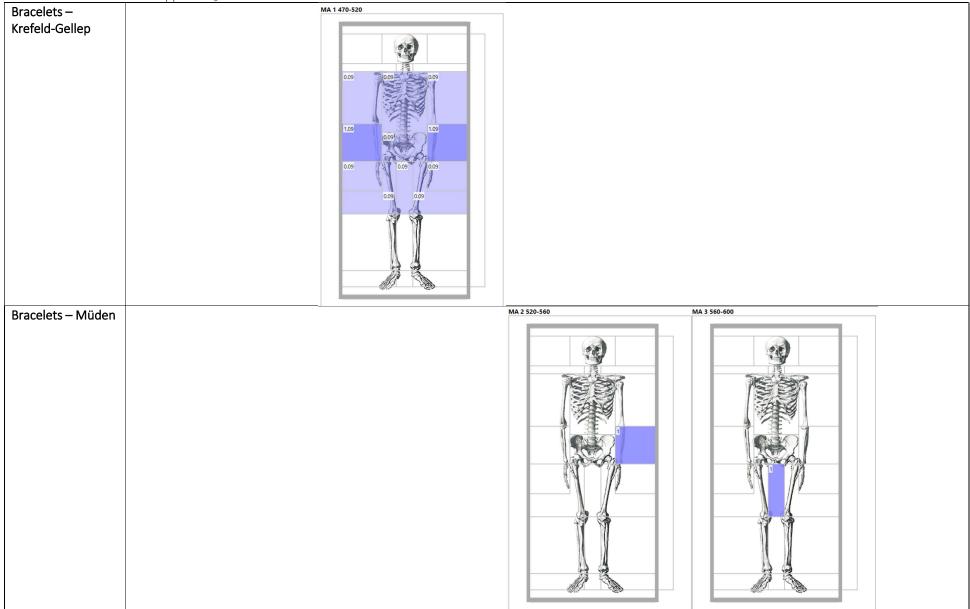
Jewellery – Bracelets

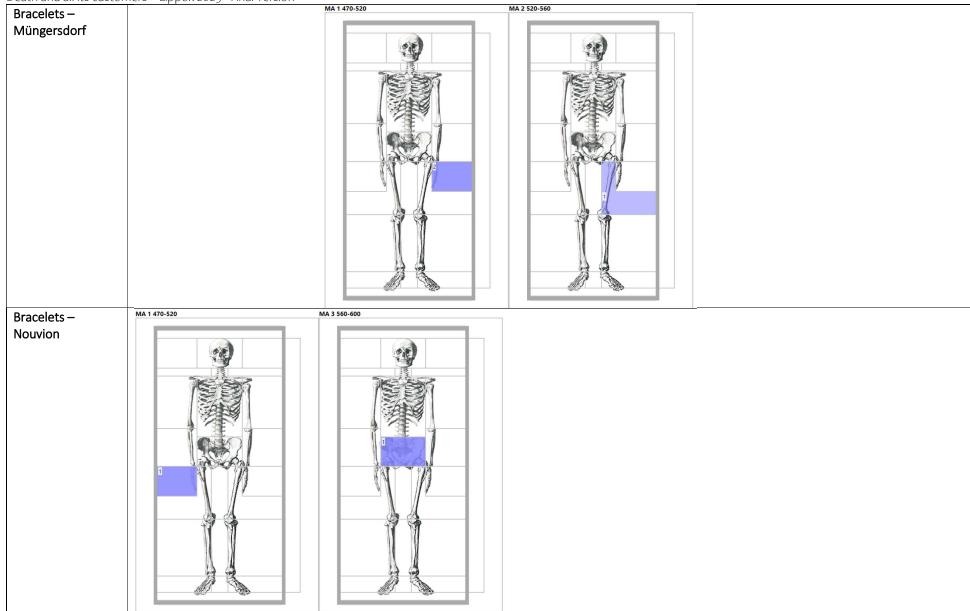


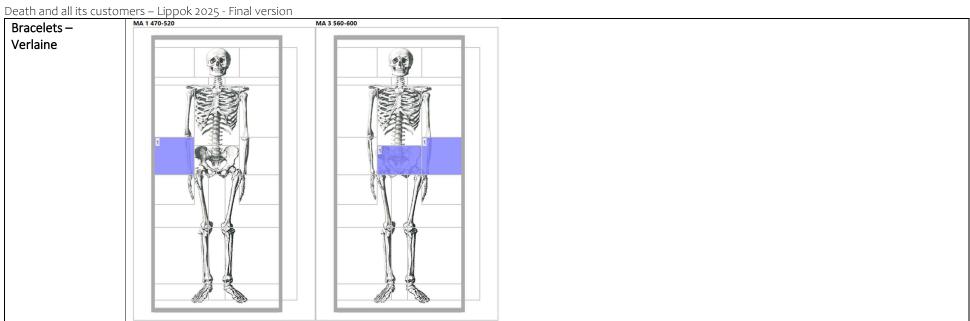




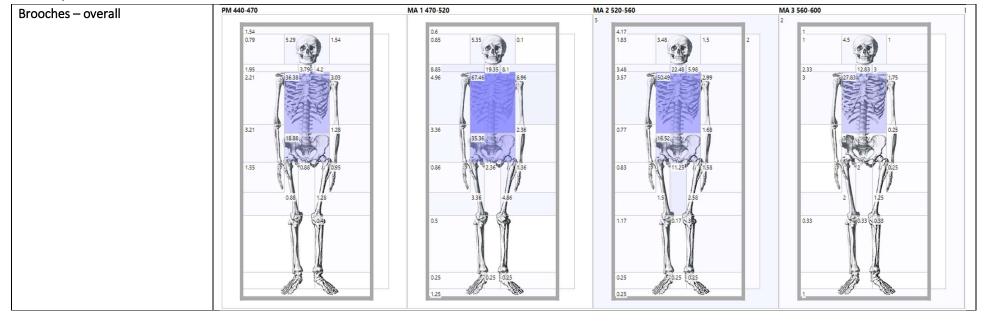




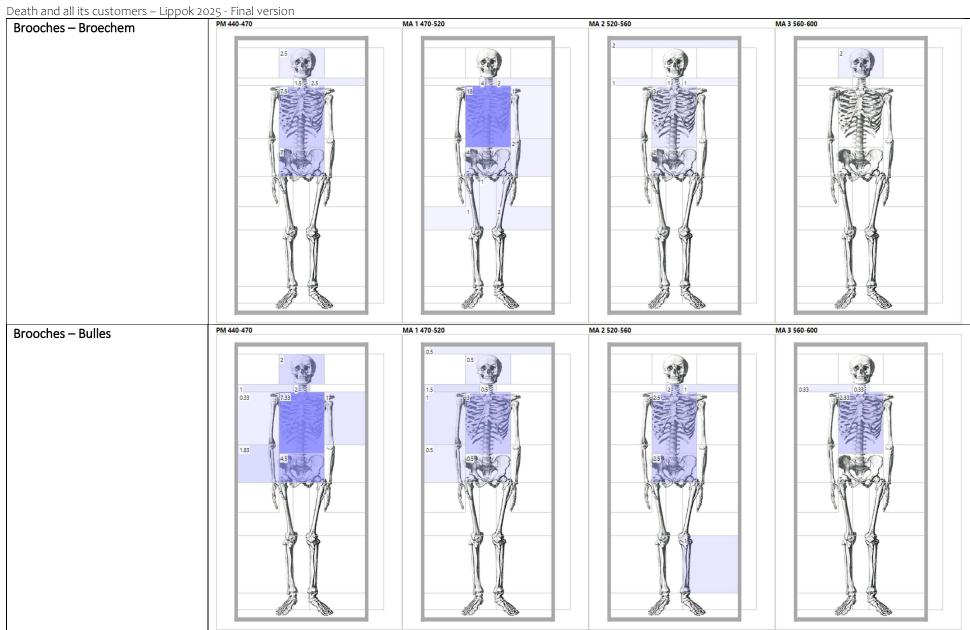


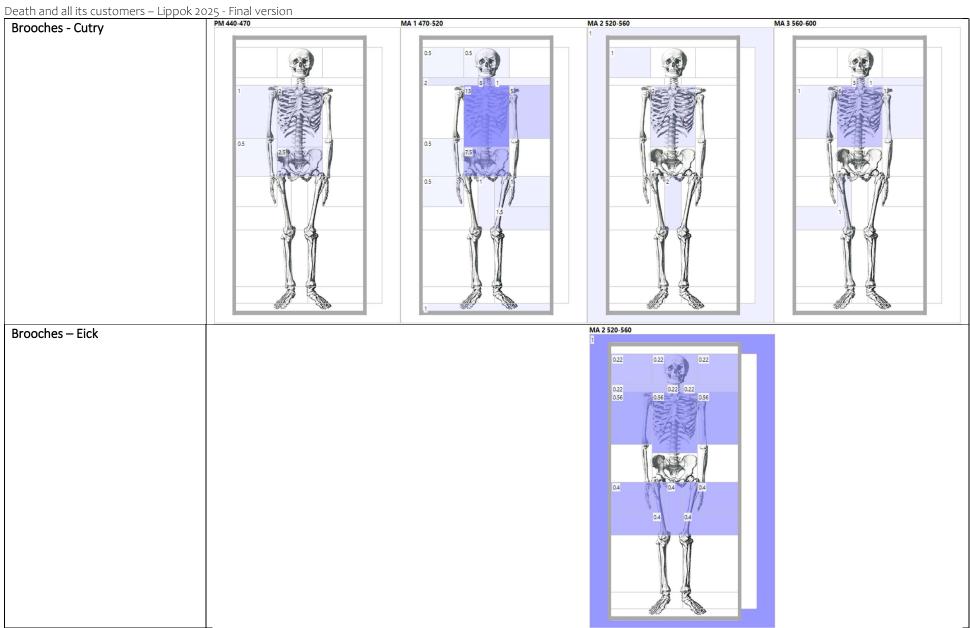


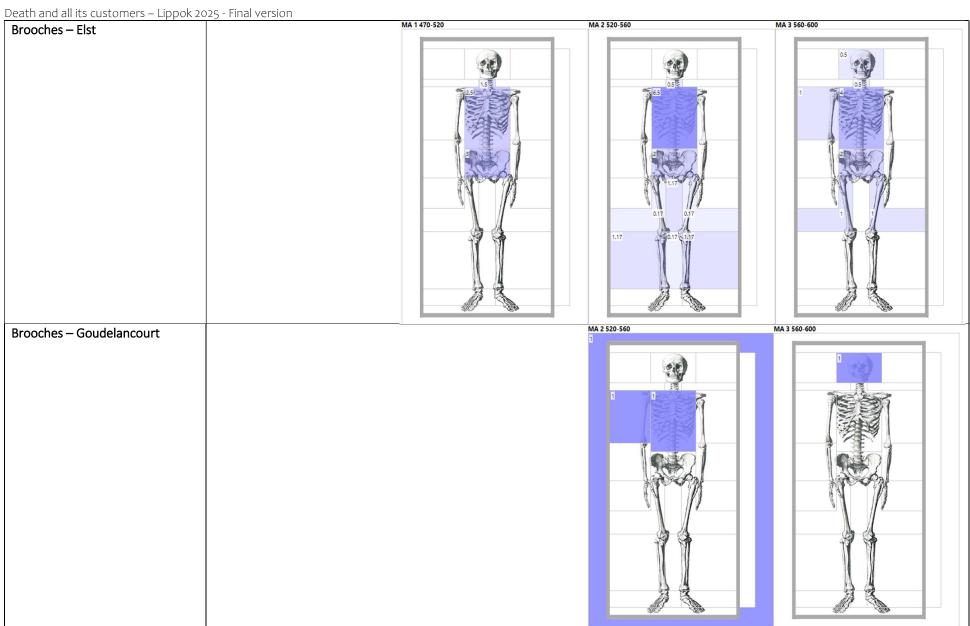
Jewellery – Brooches

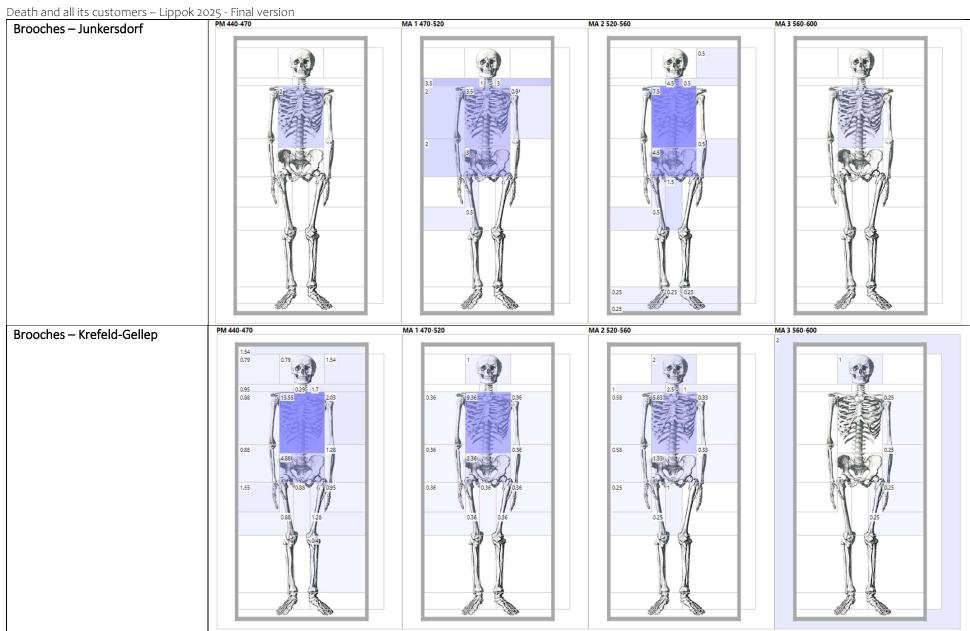


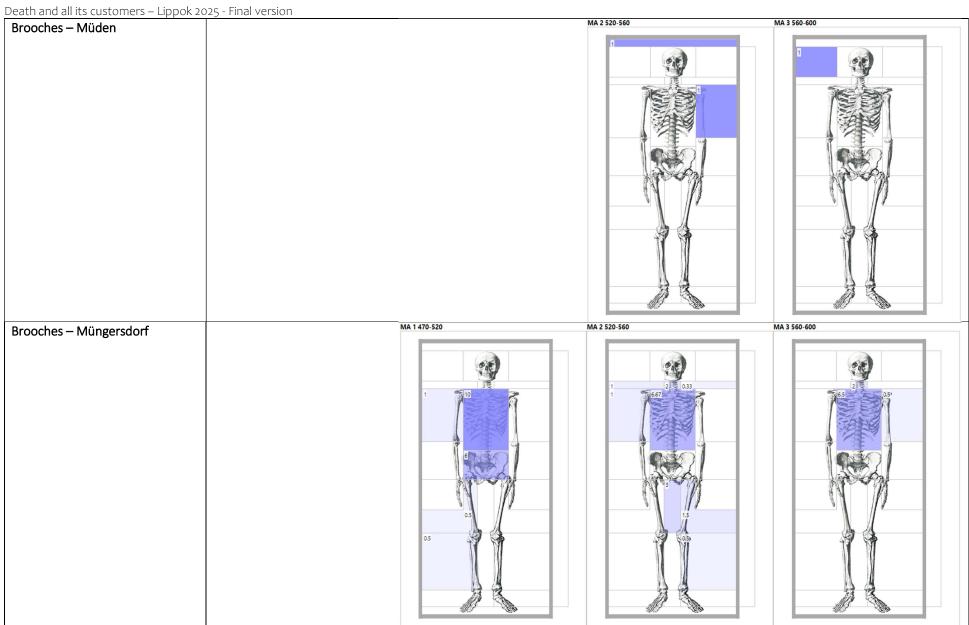
51

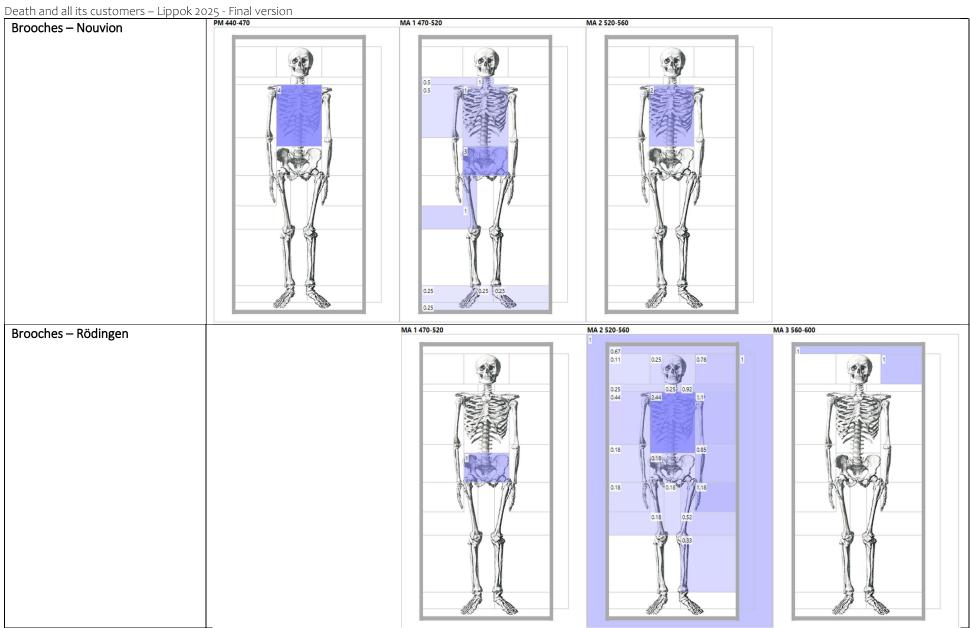


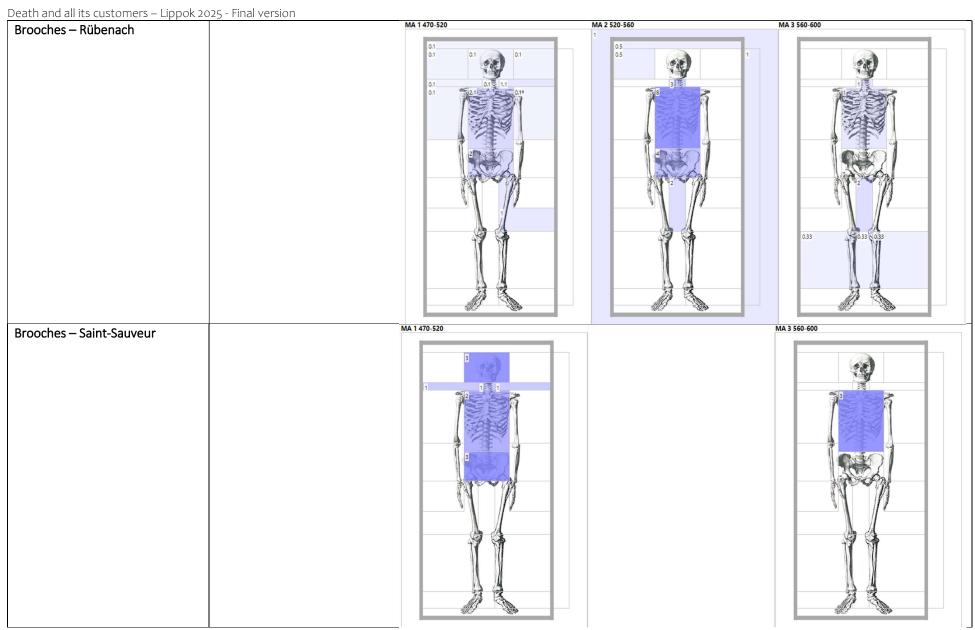


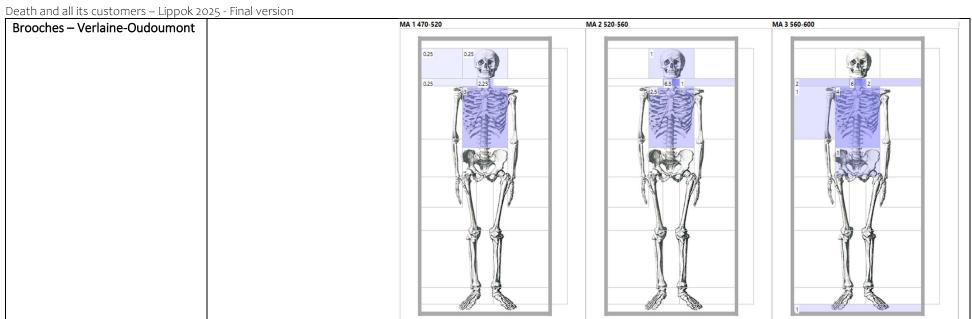




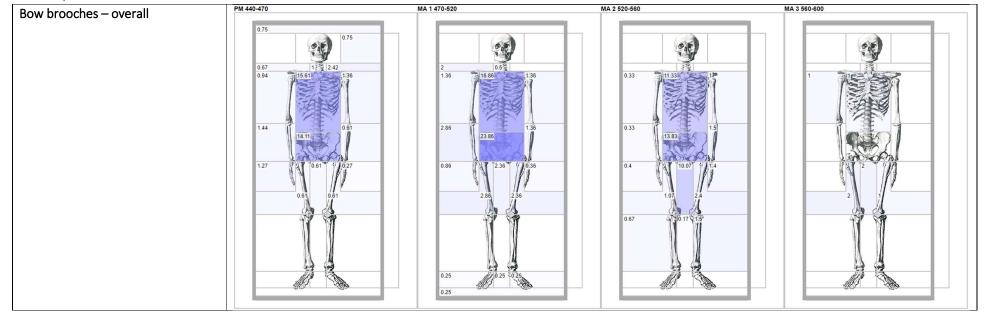






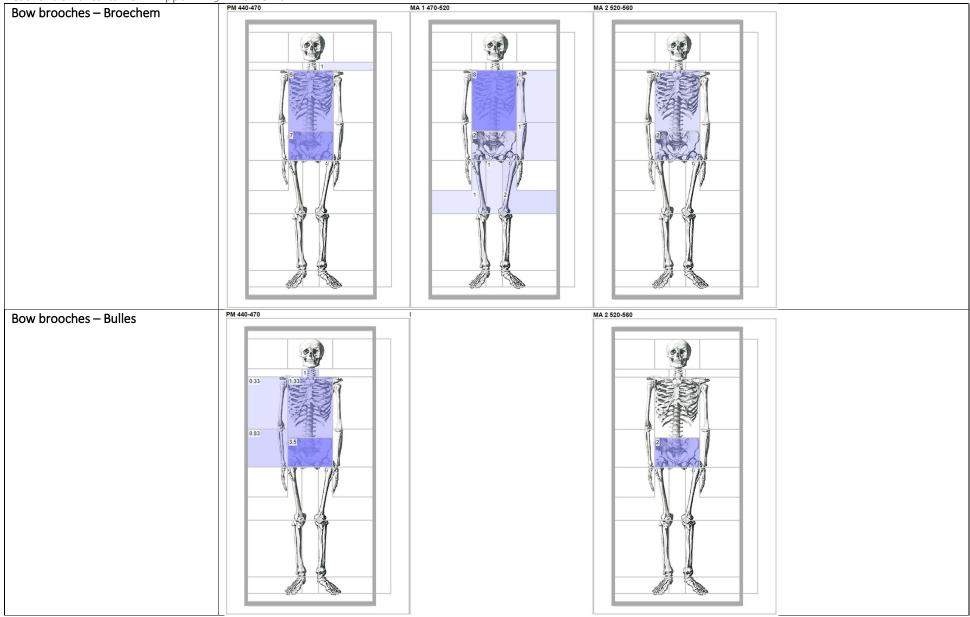


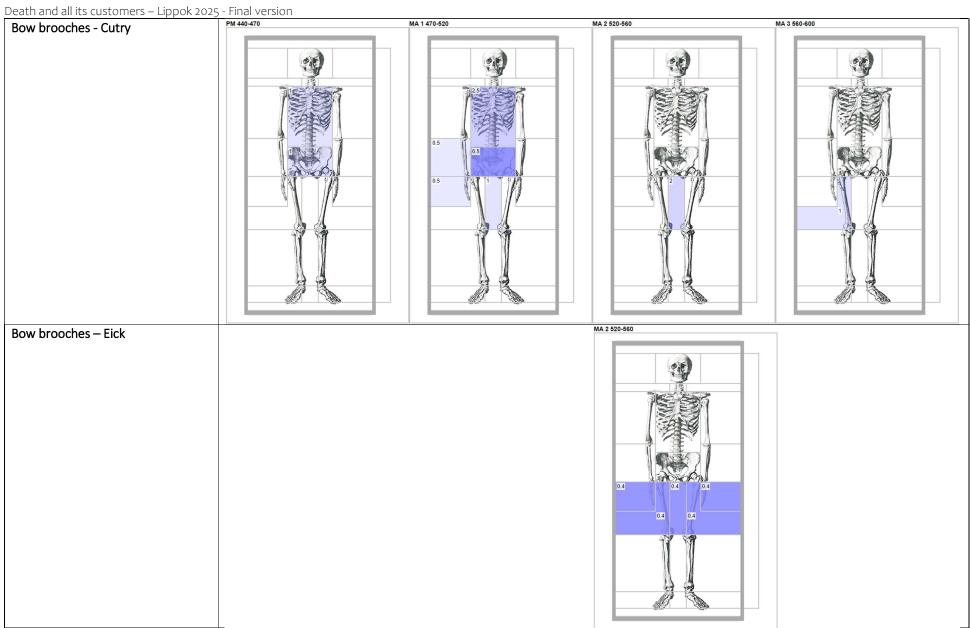
Jewellery – Brooches – Bow brooches

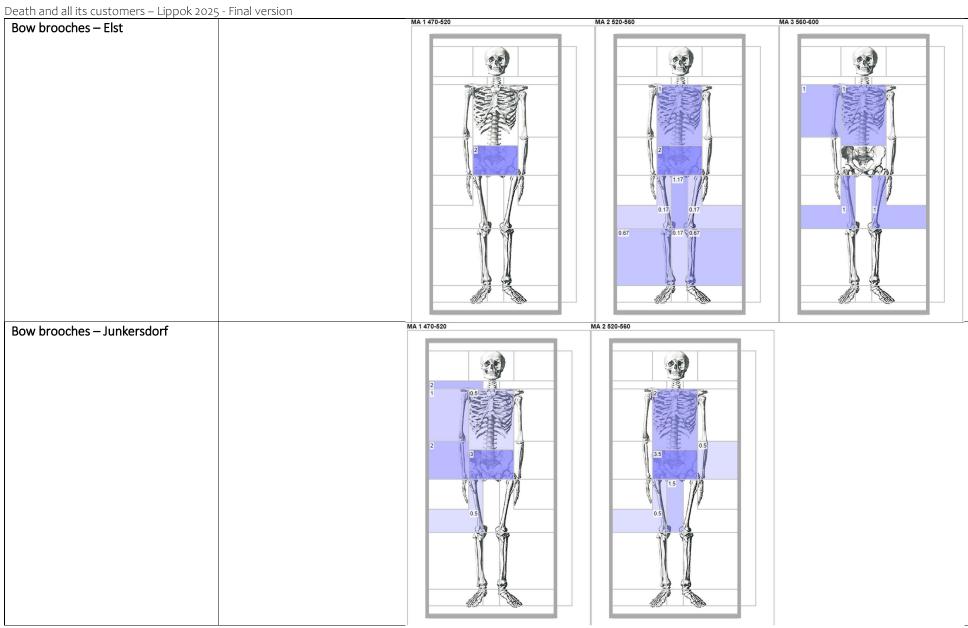


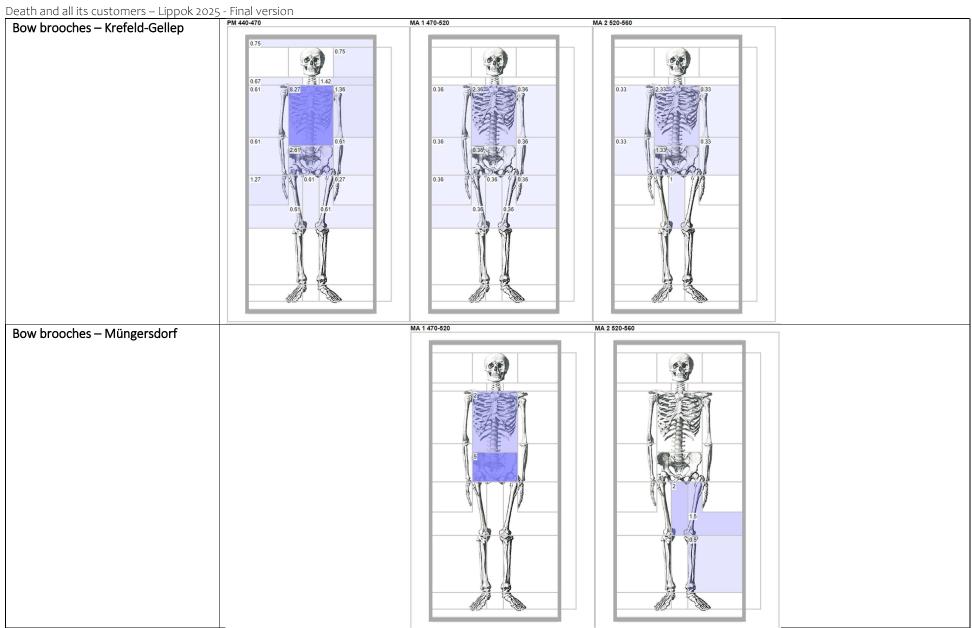
Death and all its customers – Lippok 2025 - Final version

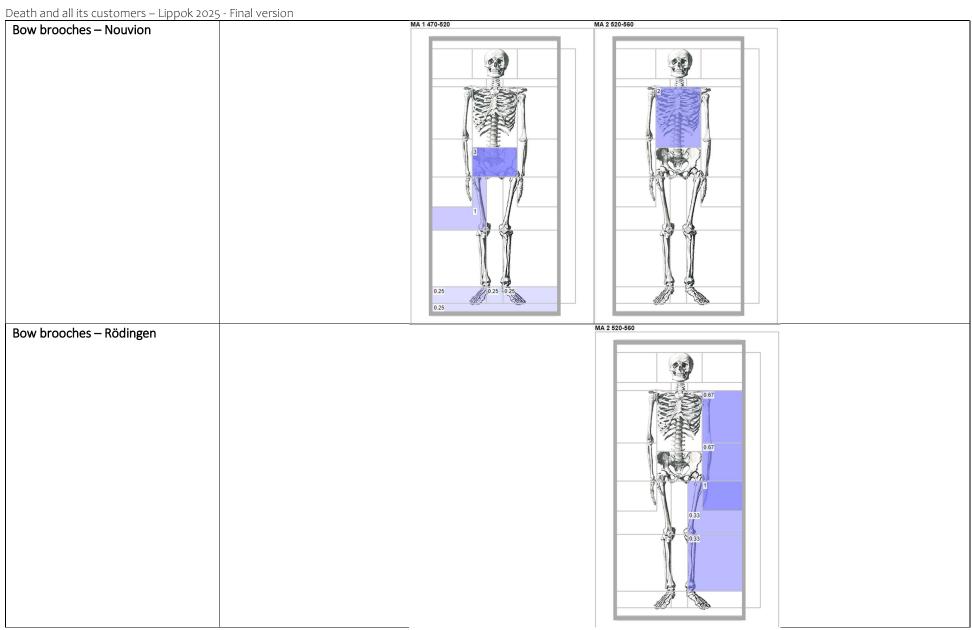
Row brooches – Procedum | PM 440-470

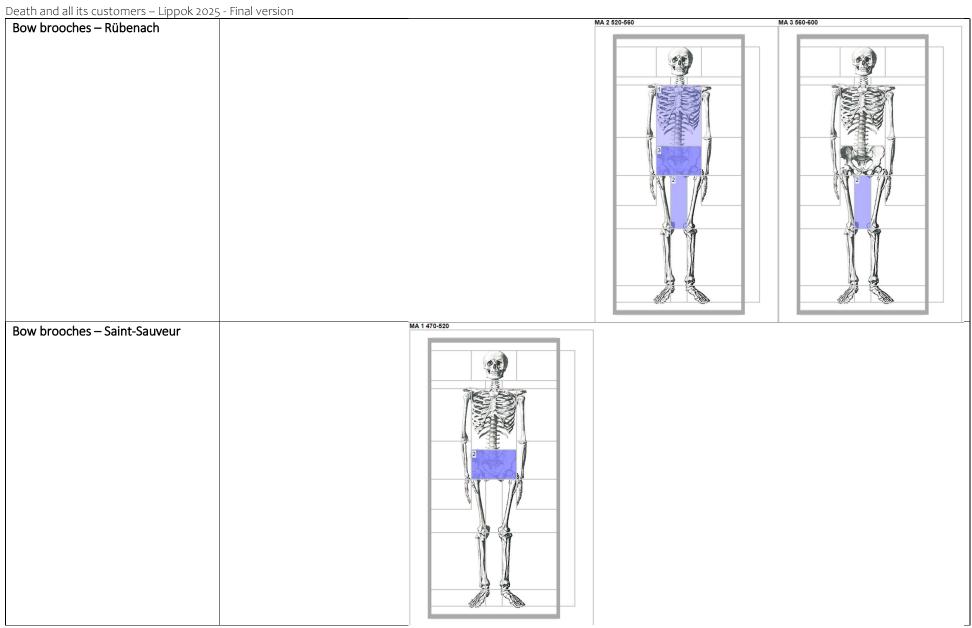


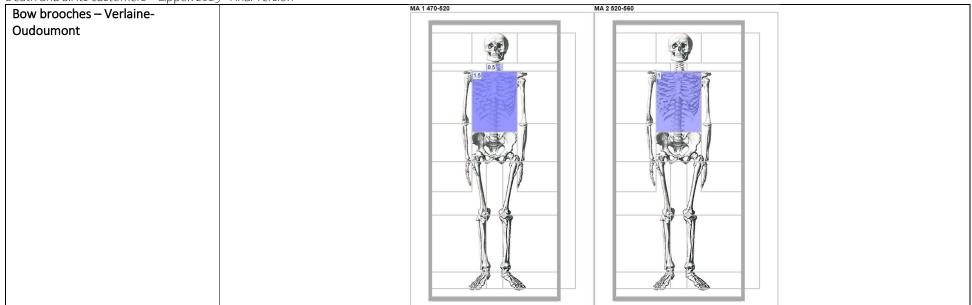






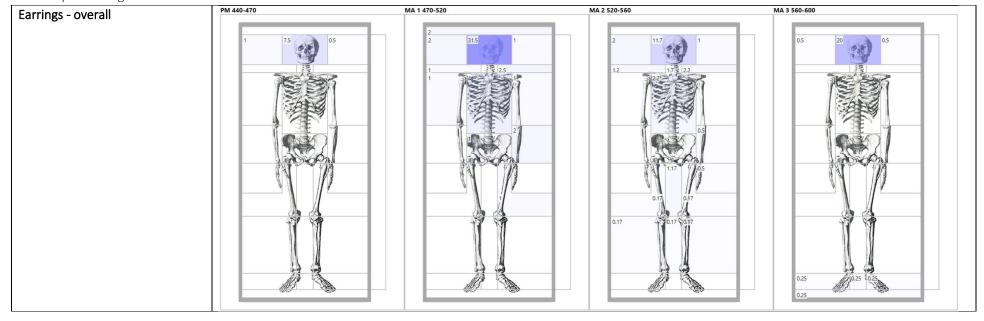


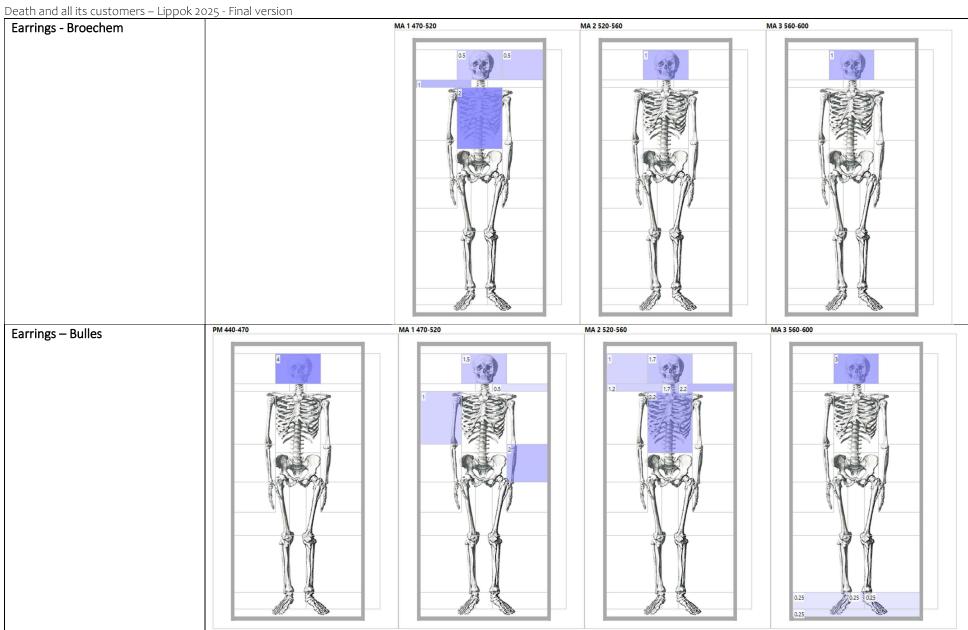


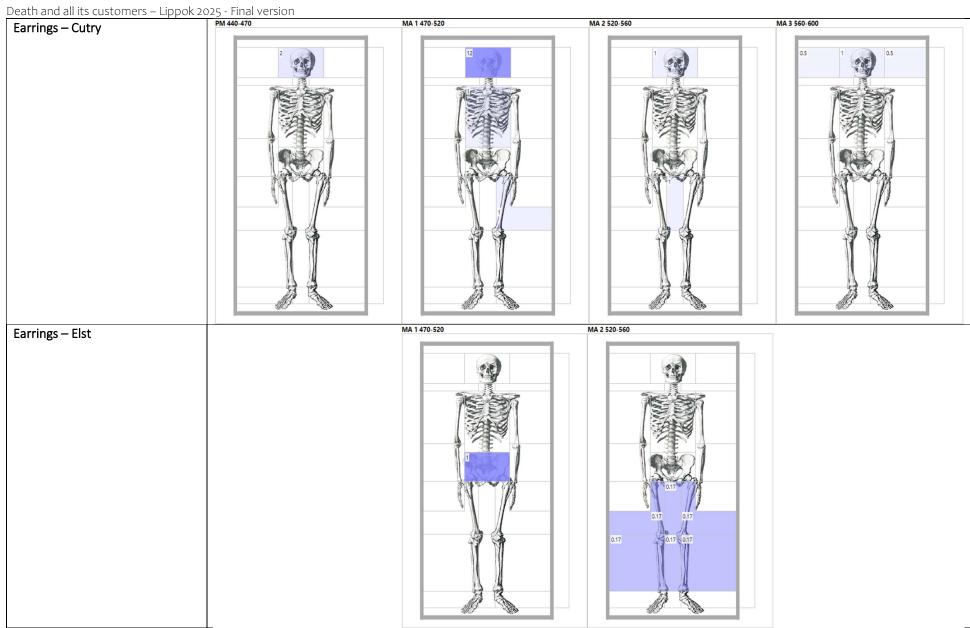


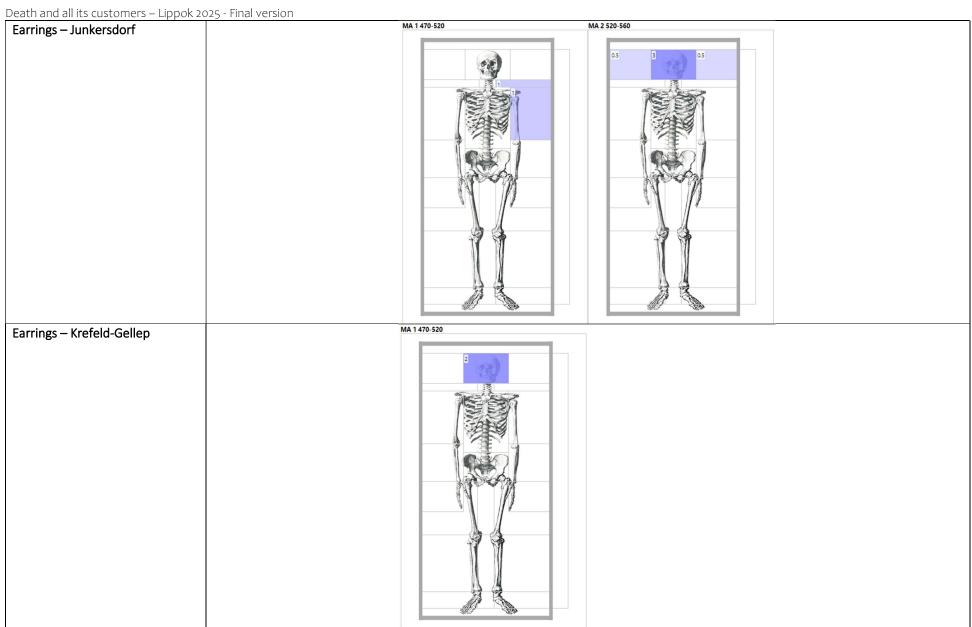
67

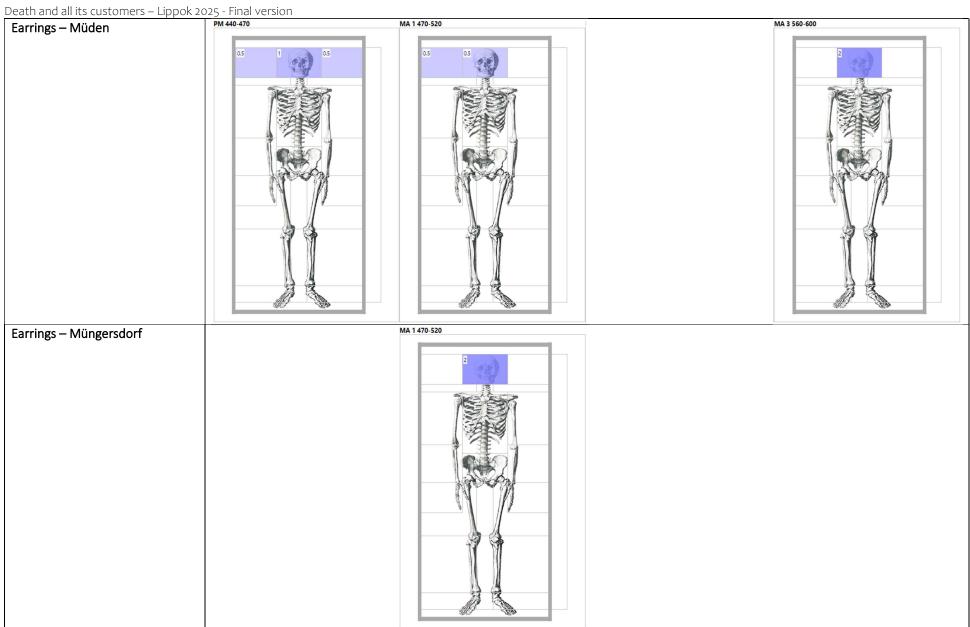
Jewellery – Earrings

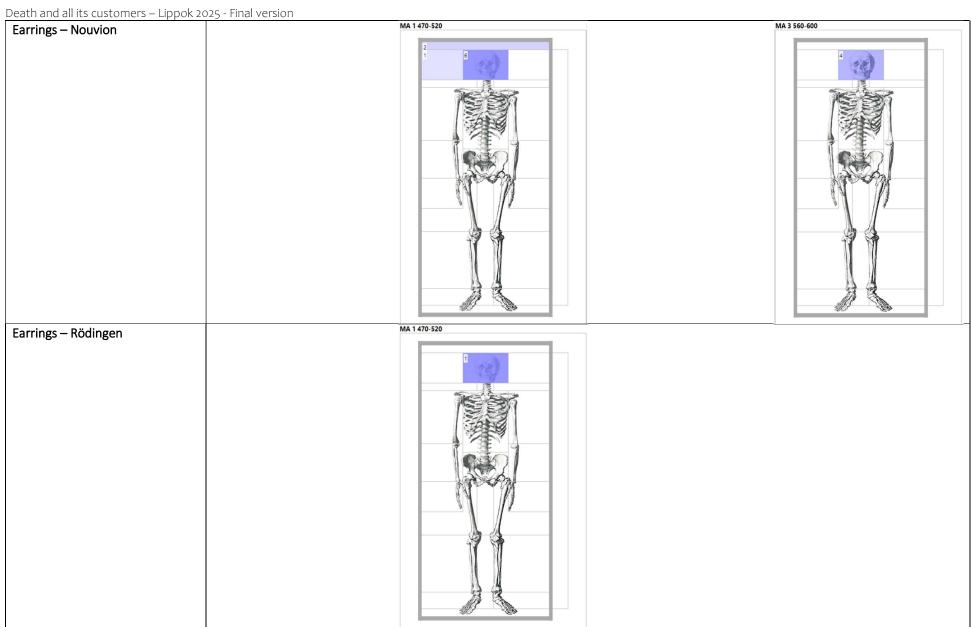


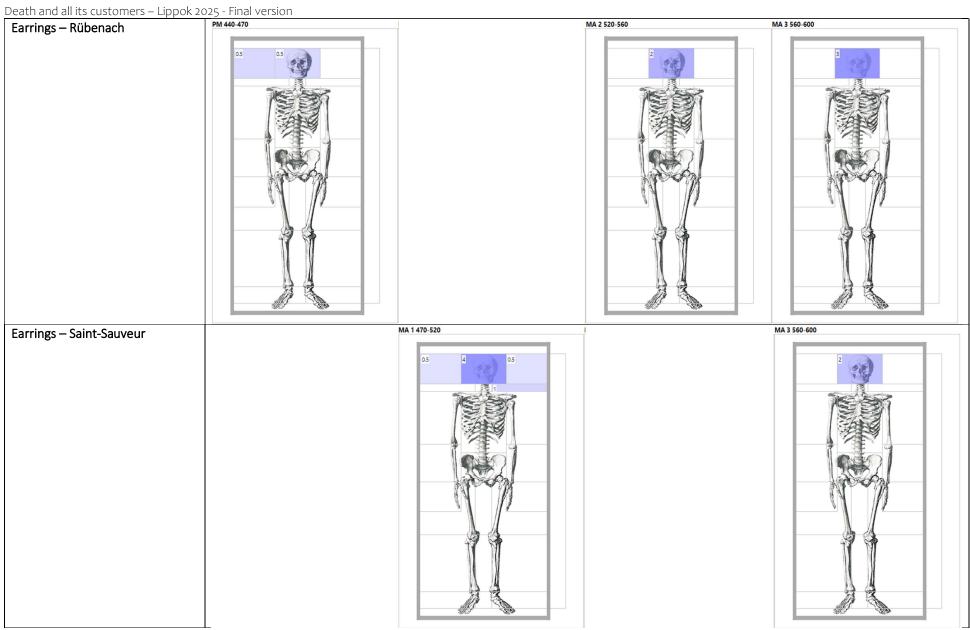


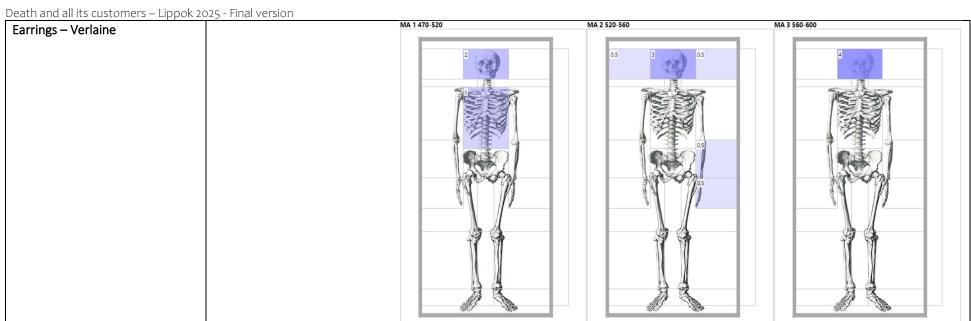






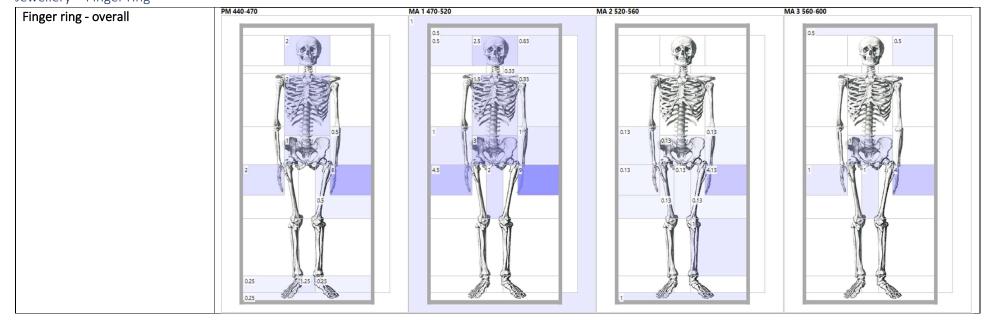


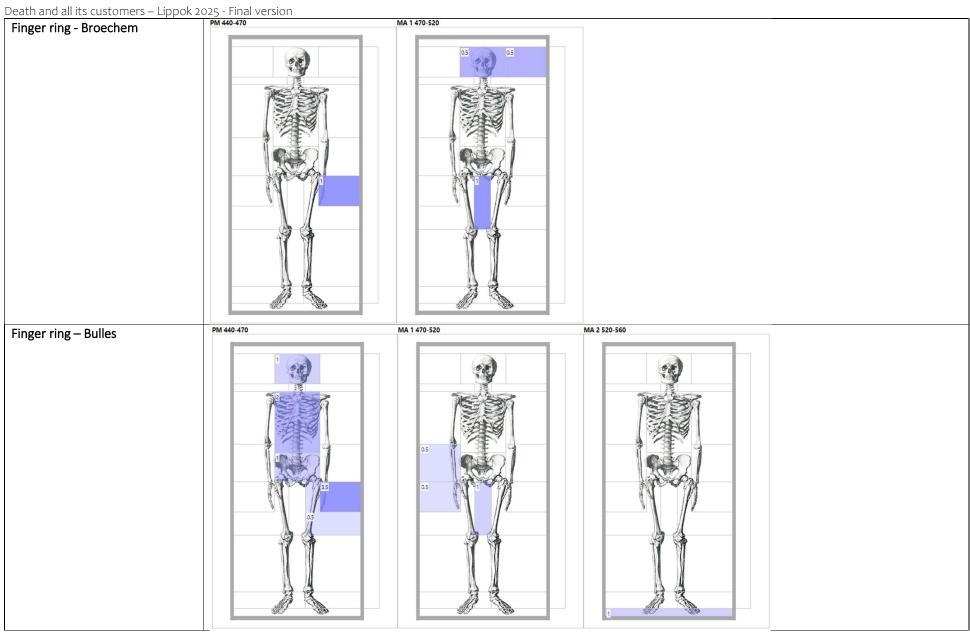


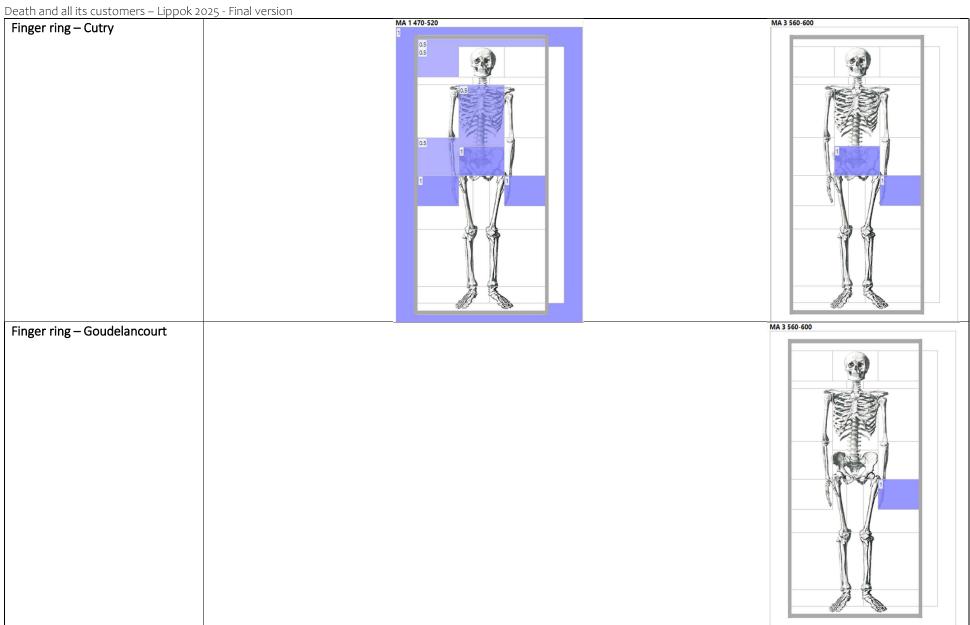


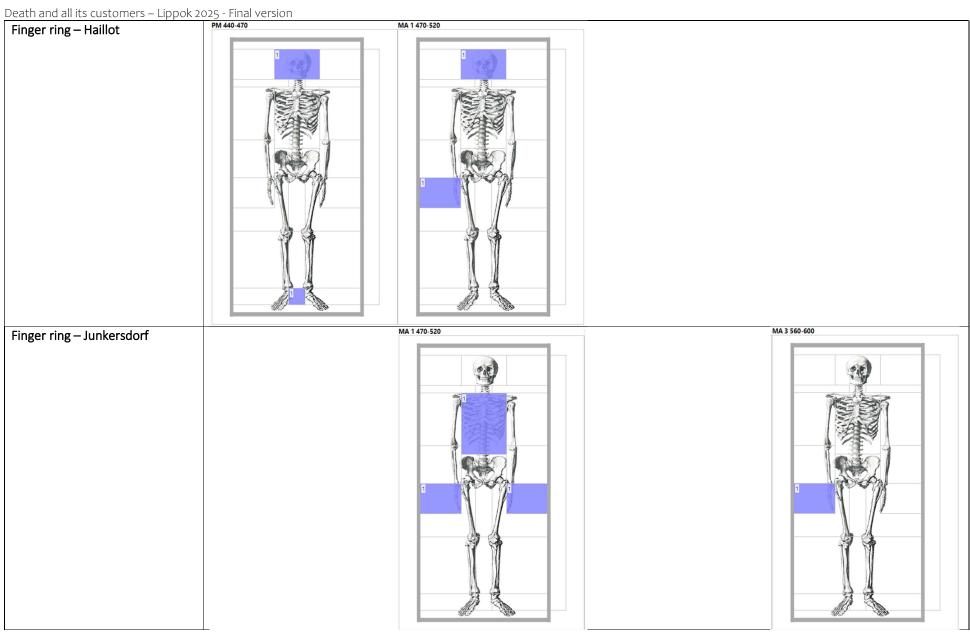
75

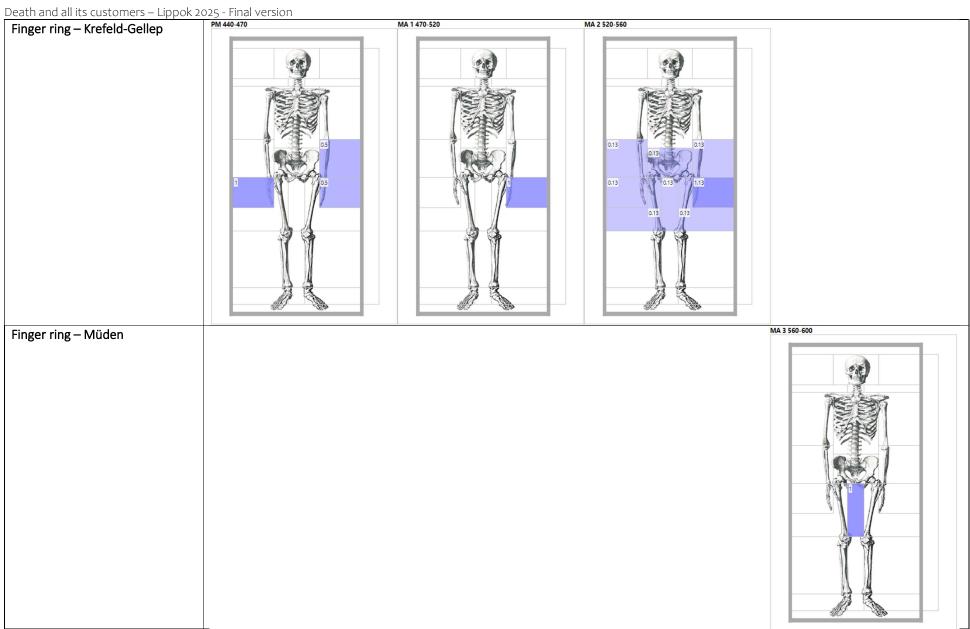
Jewellery – Finger ring

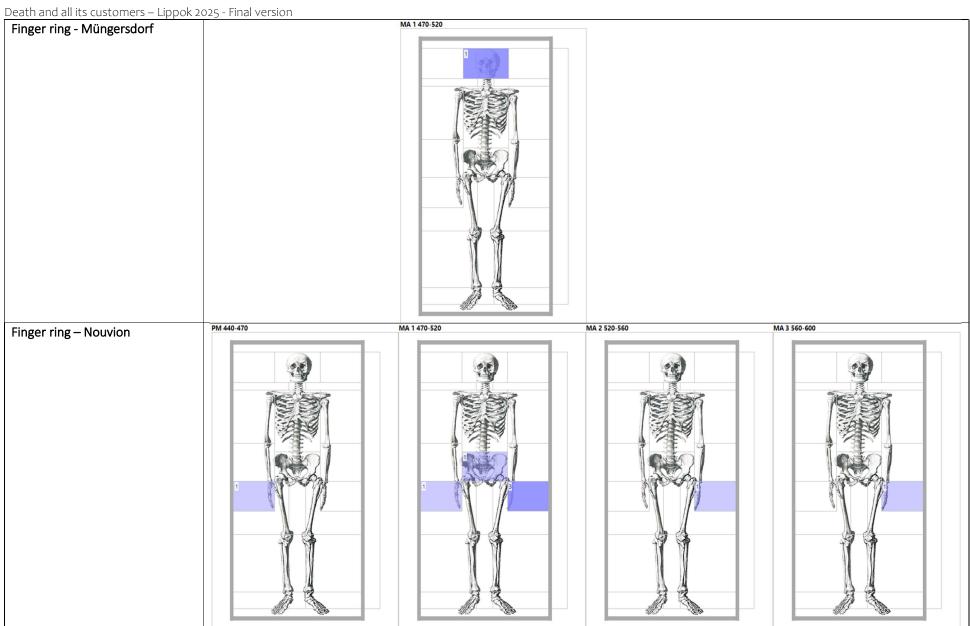


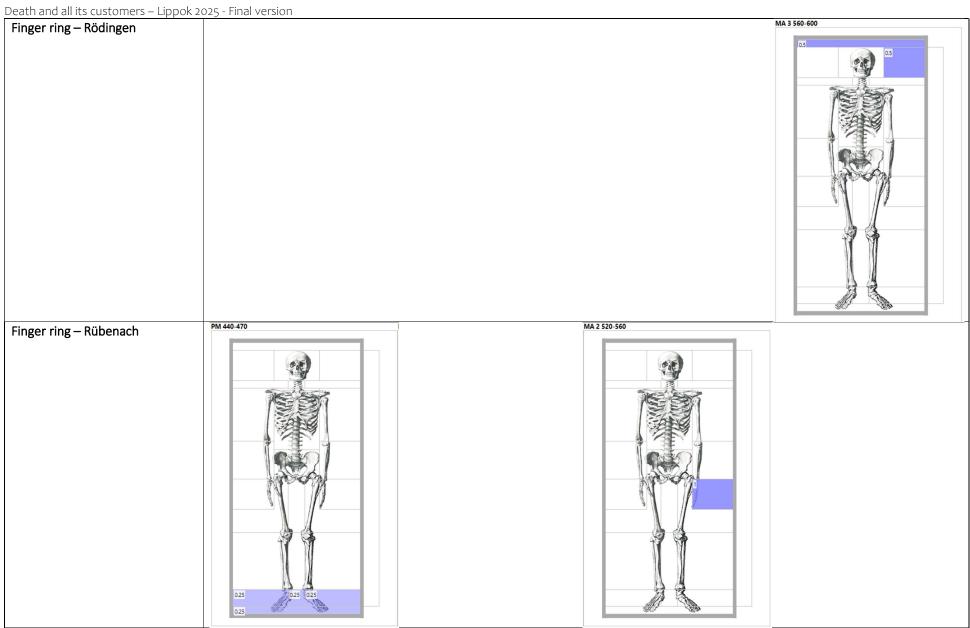


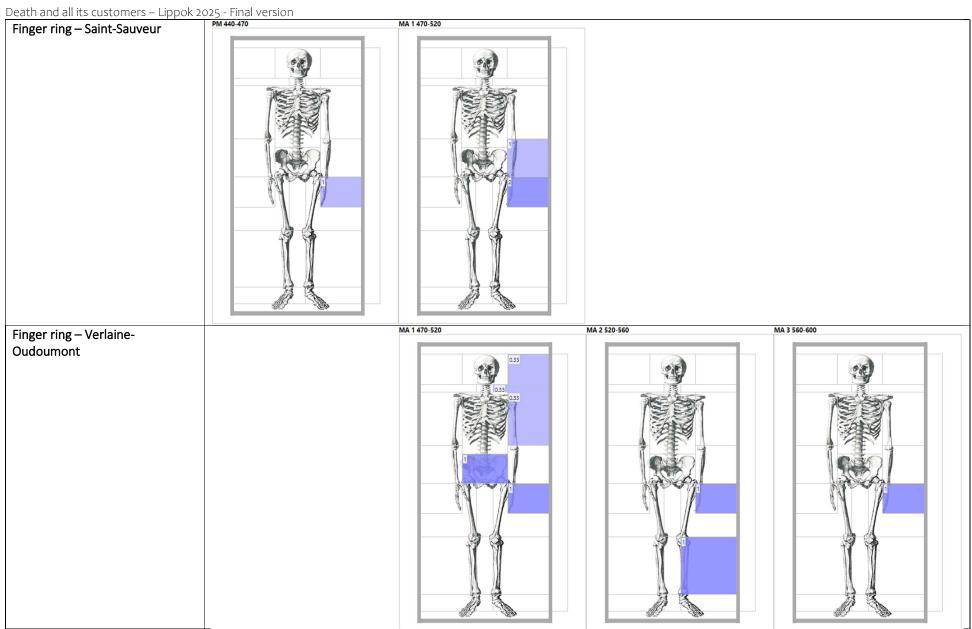


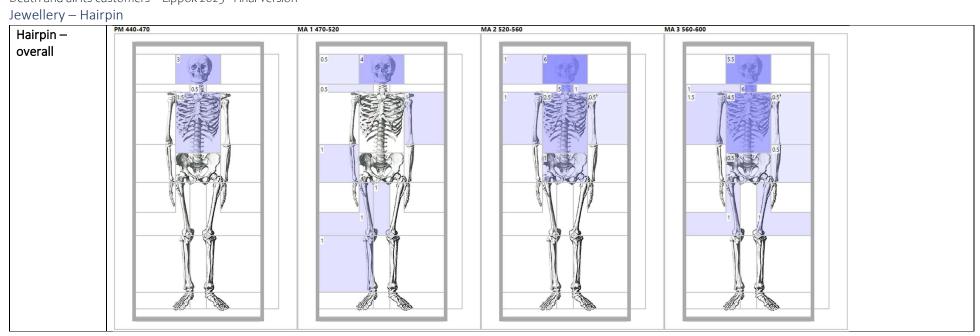


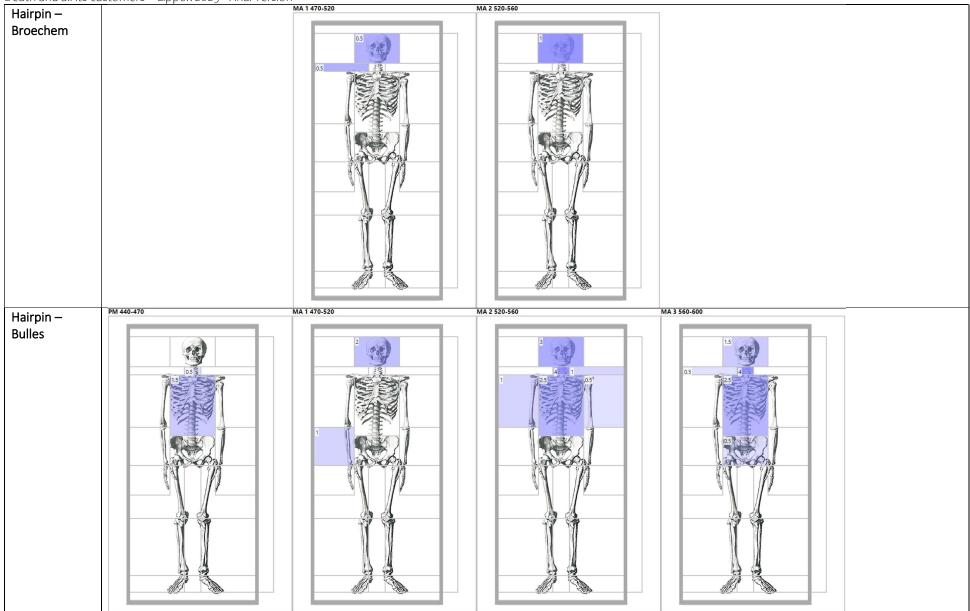


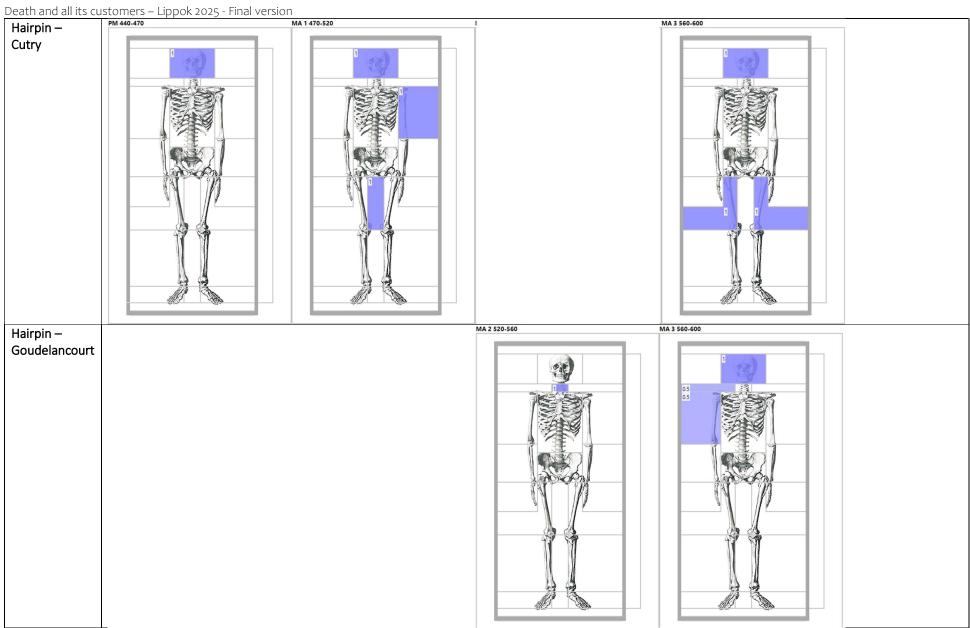


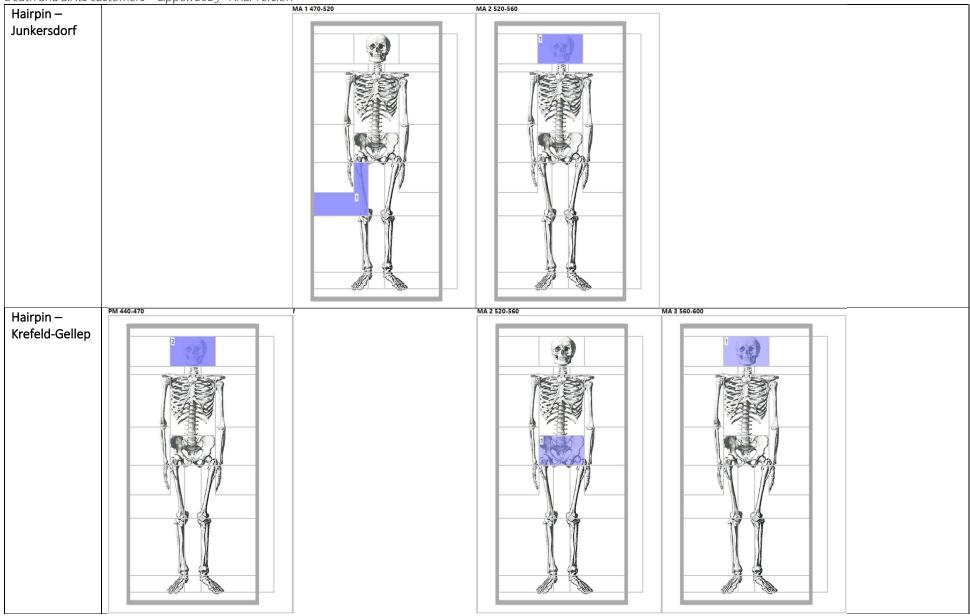


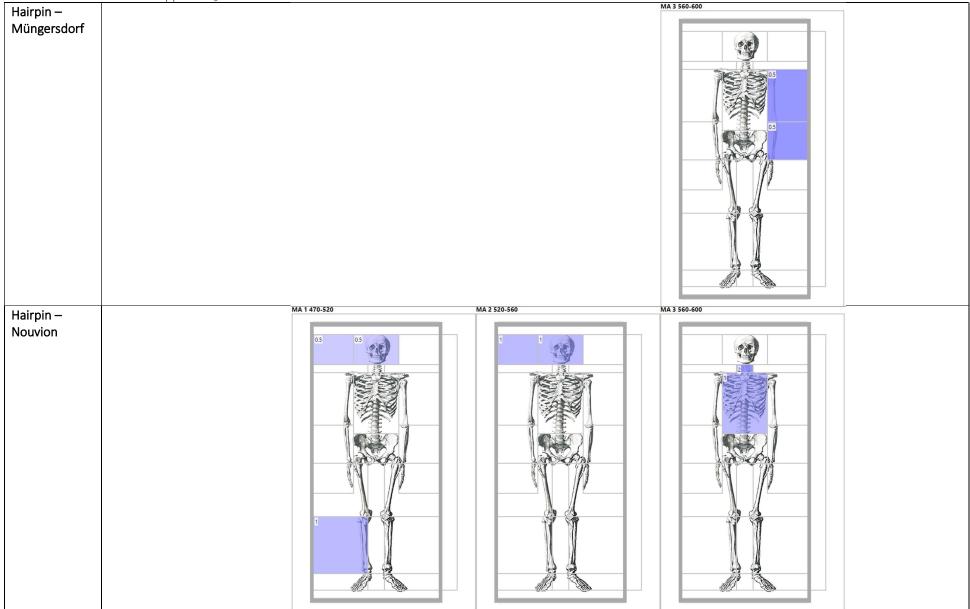


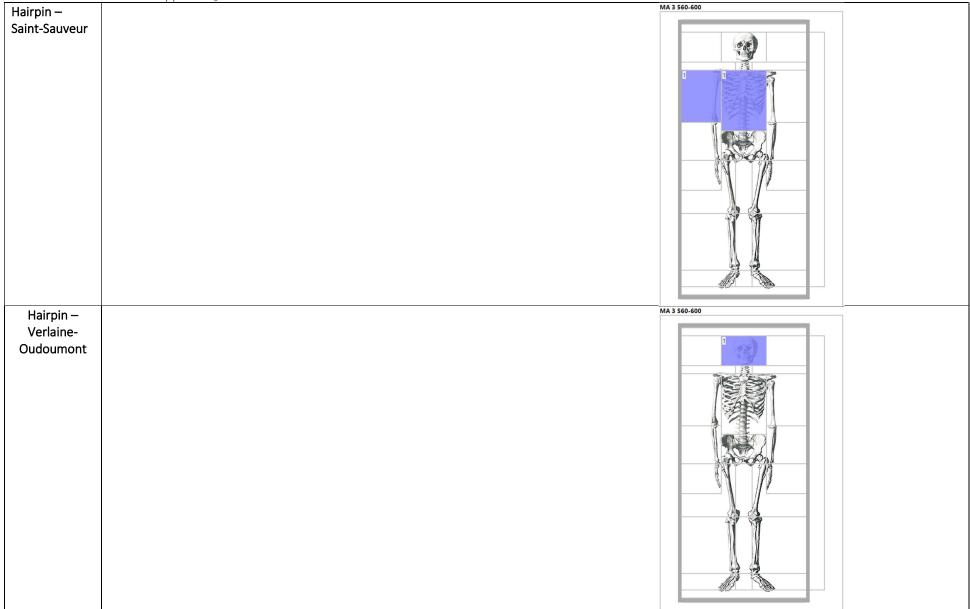






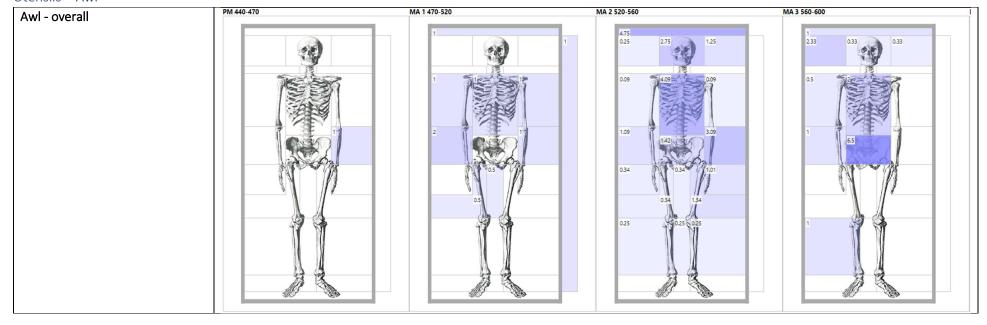


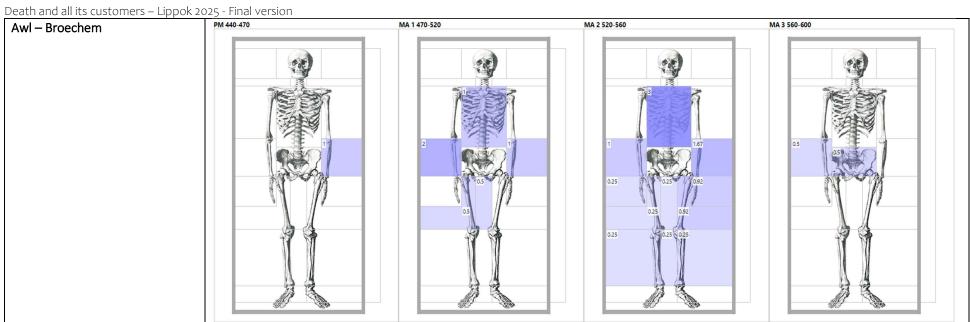


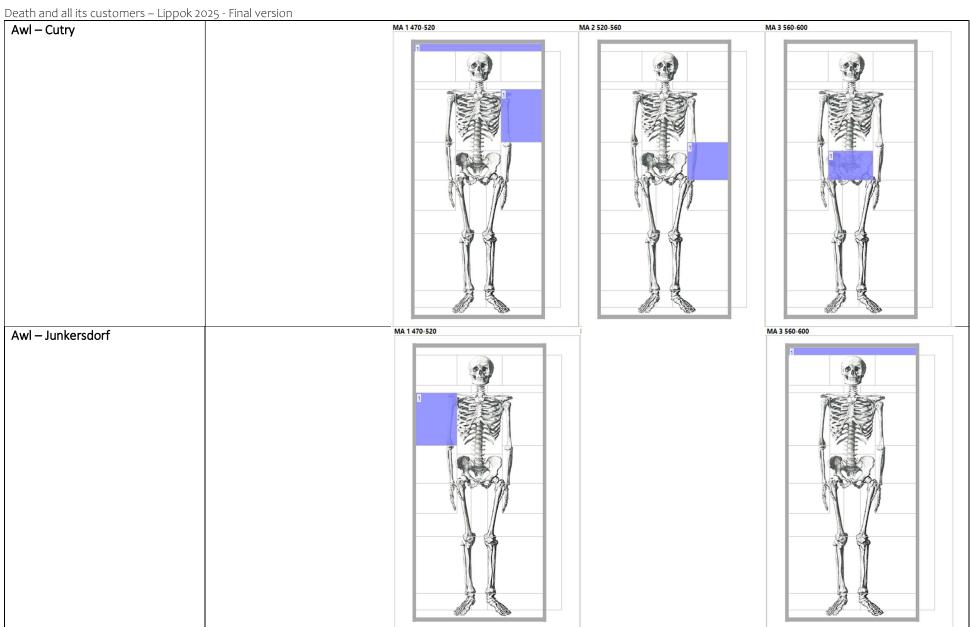


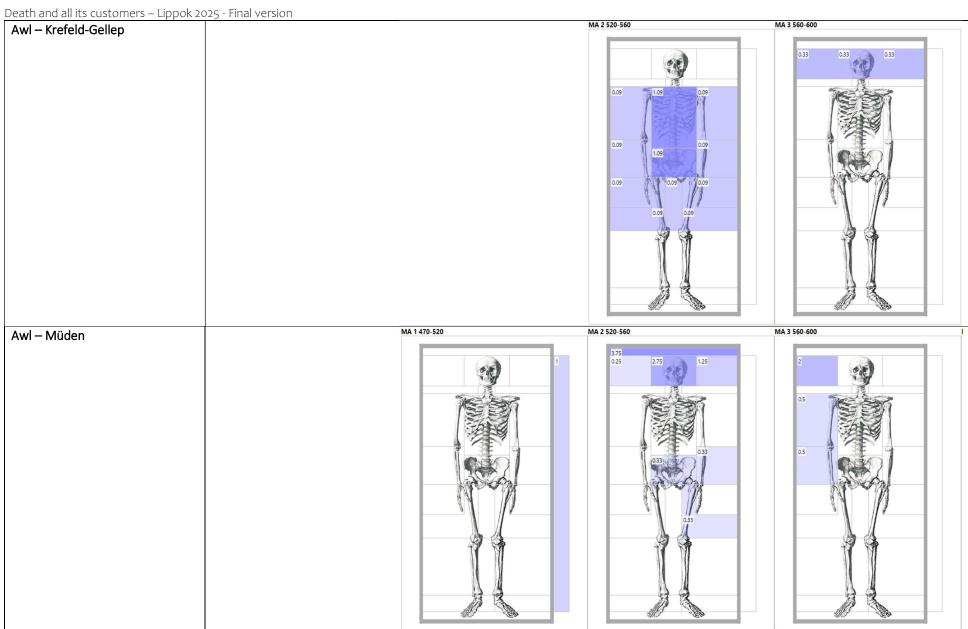
91

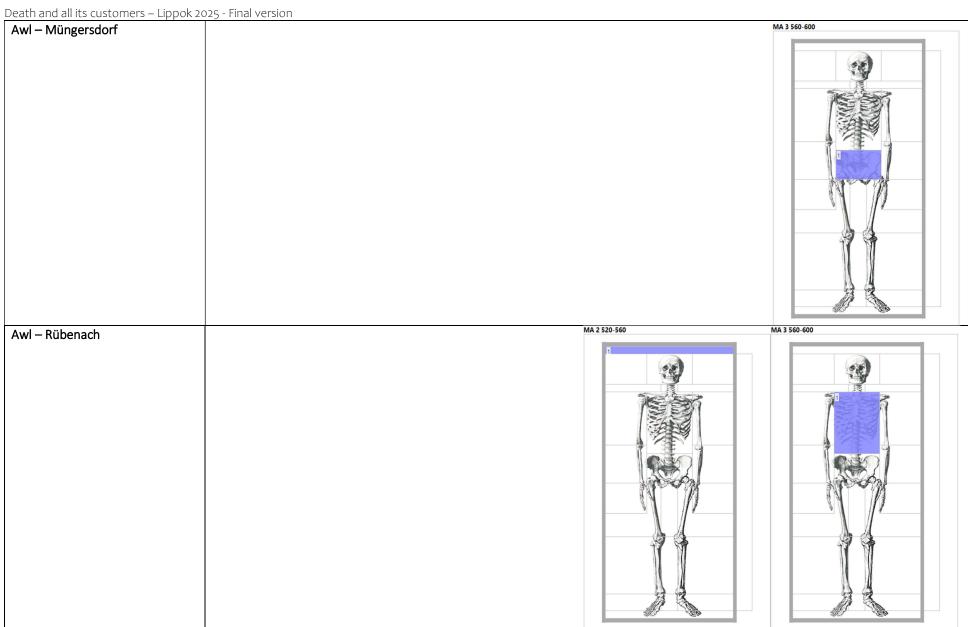
Utensils – Awl







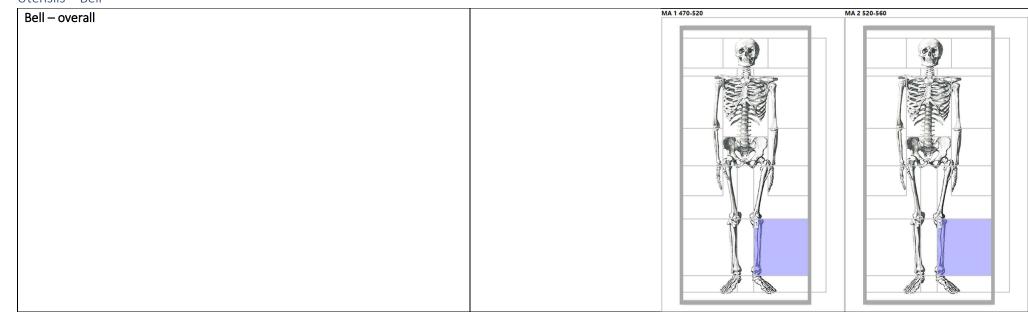




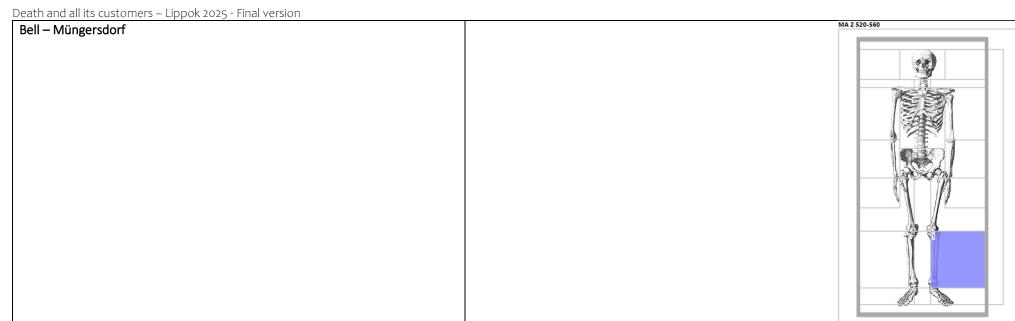
| Awl – Verlaine-Oudoumont | MA 3 560-600 |
|--------------------------|--------------|
| | |
| | |
| | |
| | |
| | |
| | |

97

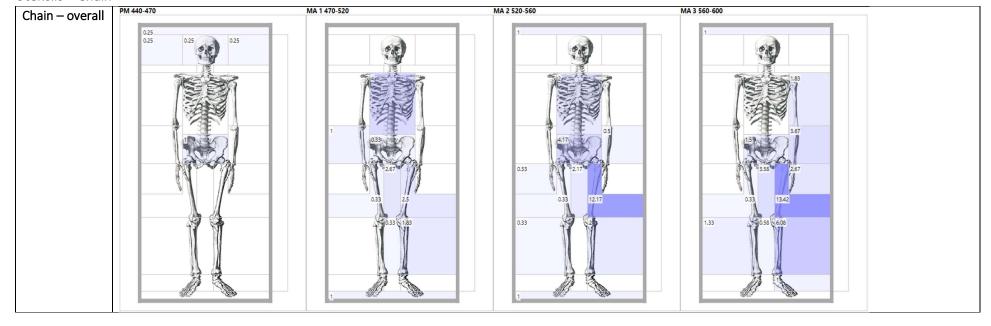
Utensils – Bell

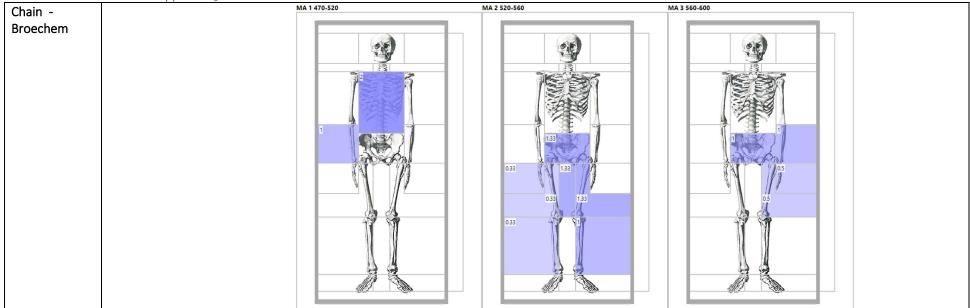


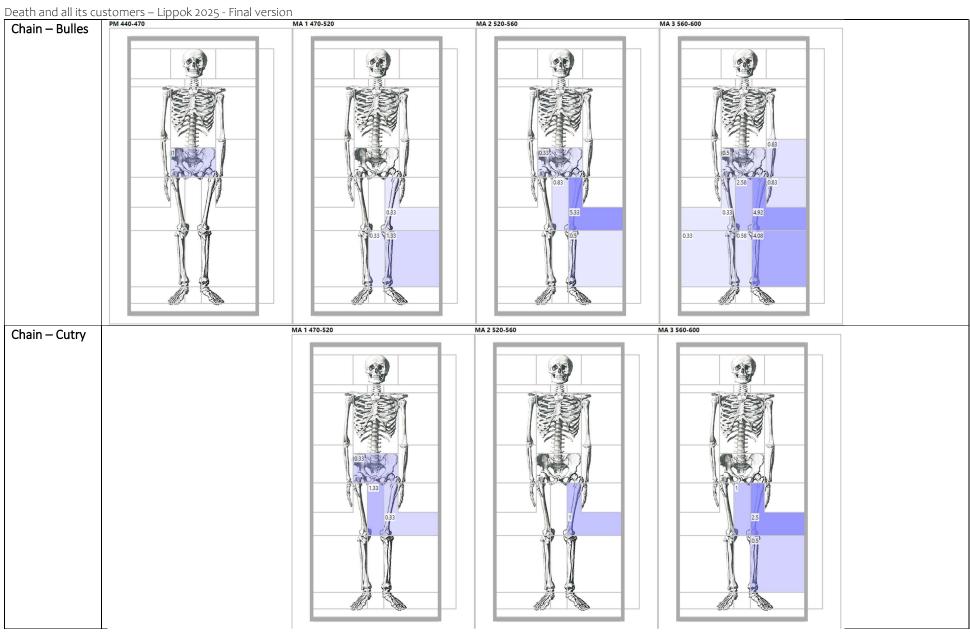
Death and all its customers – Lippok 2025 - Final version **Bell – Broechem** MA 1 470-520 Bell – Cutry

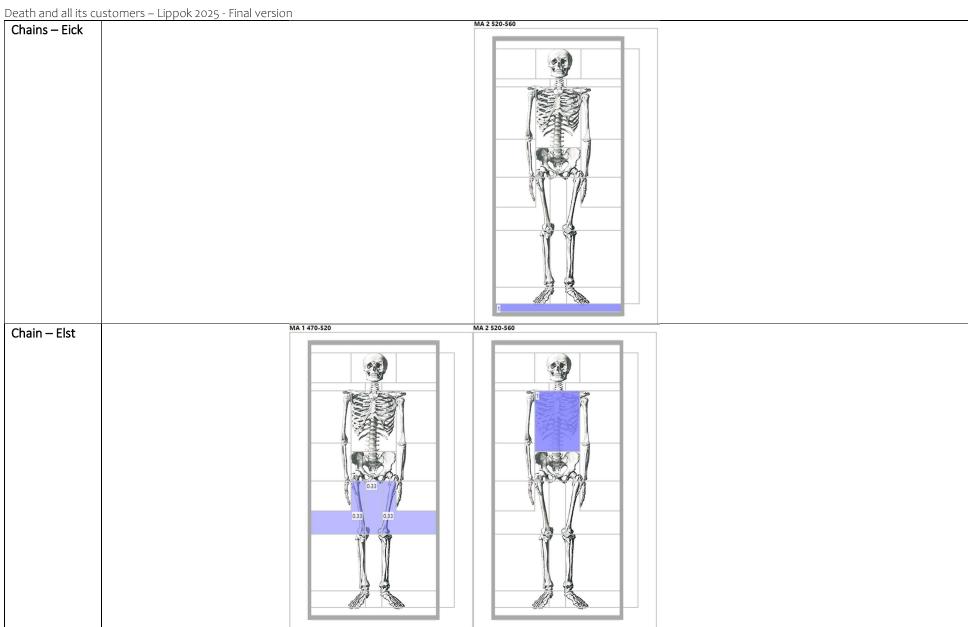


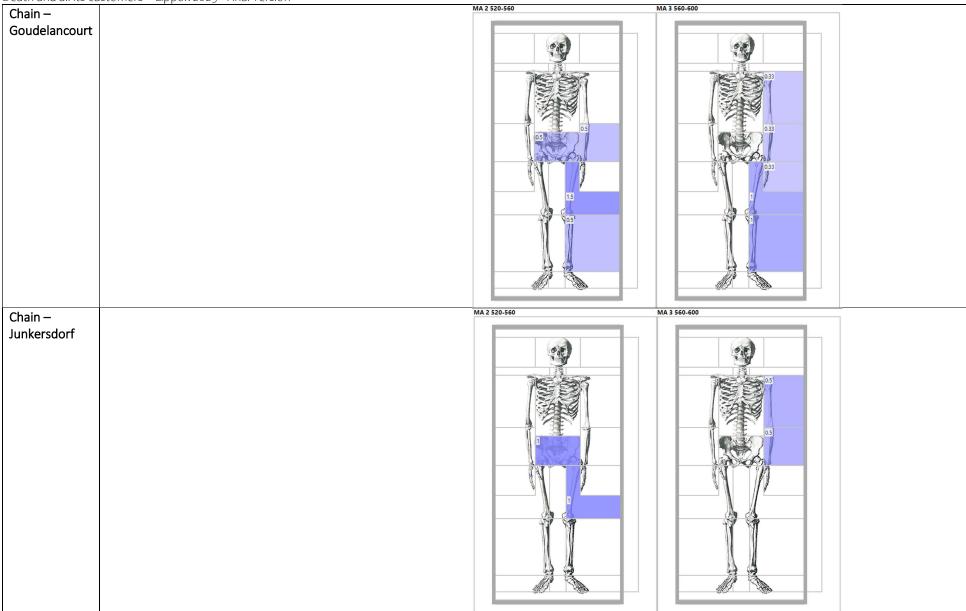
Utensils – Chain

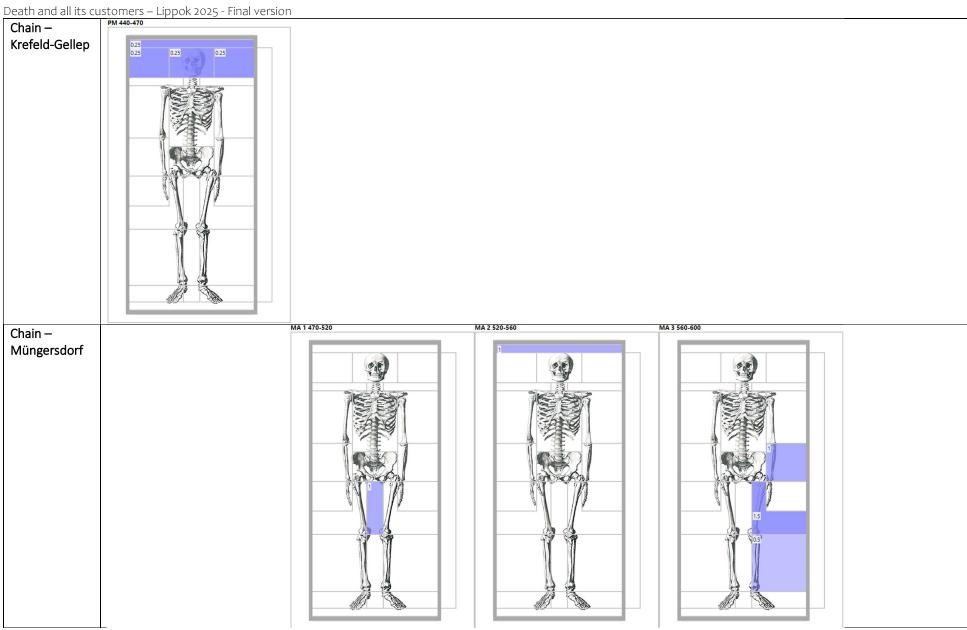


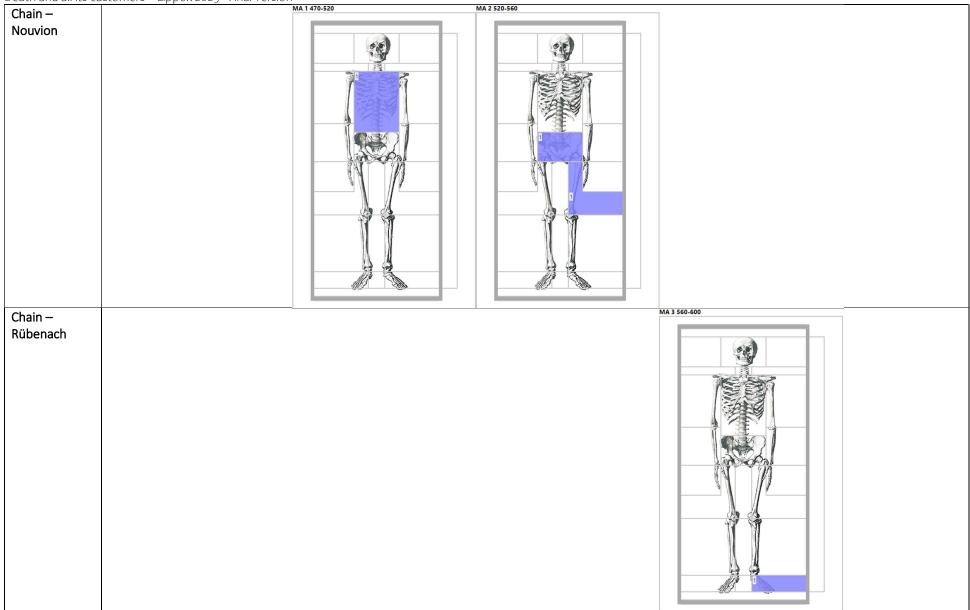


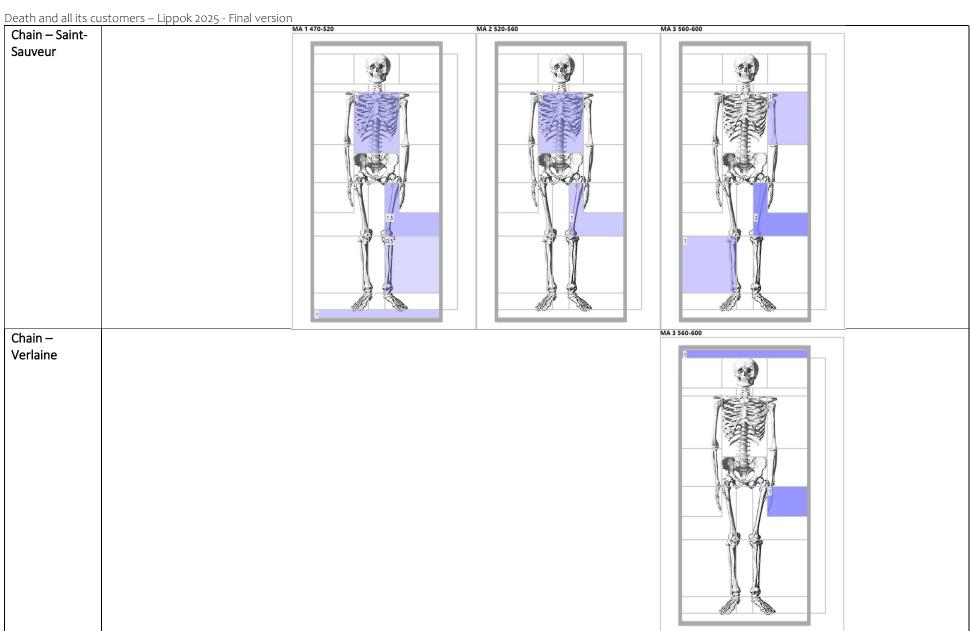






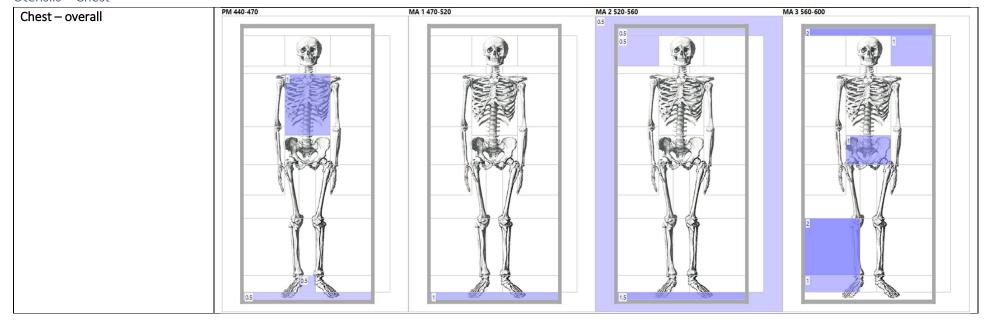


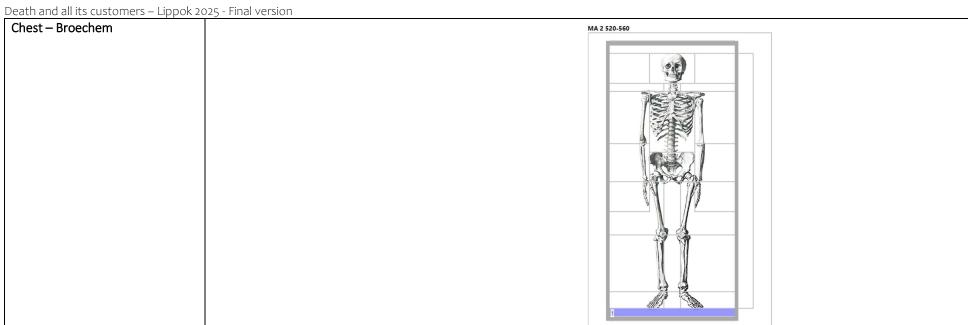




109

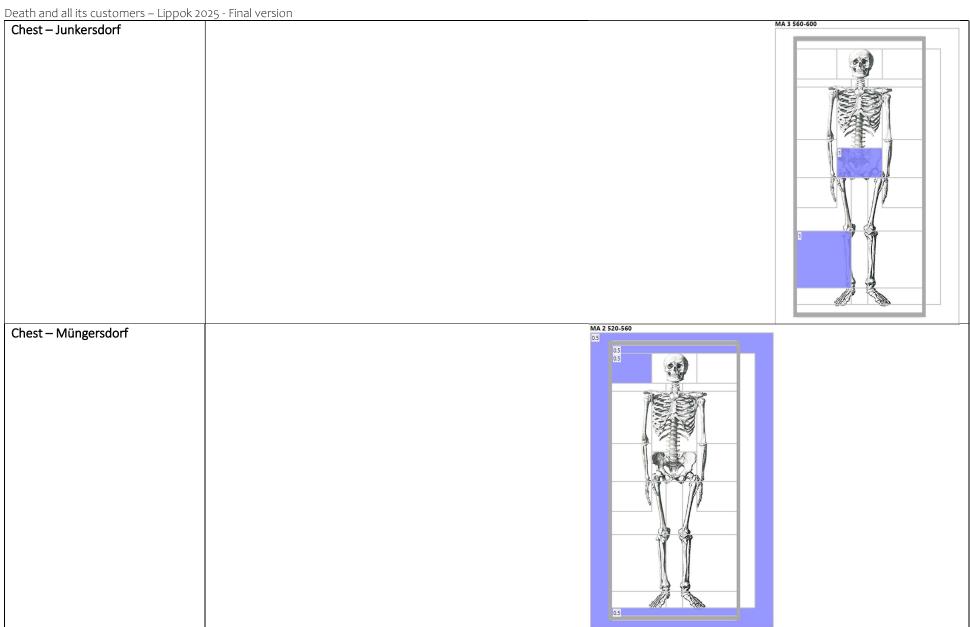
Utensils – Chest



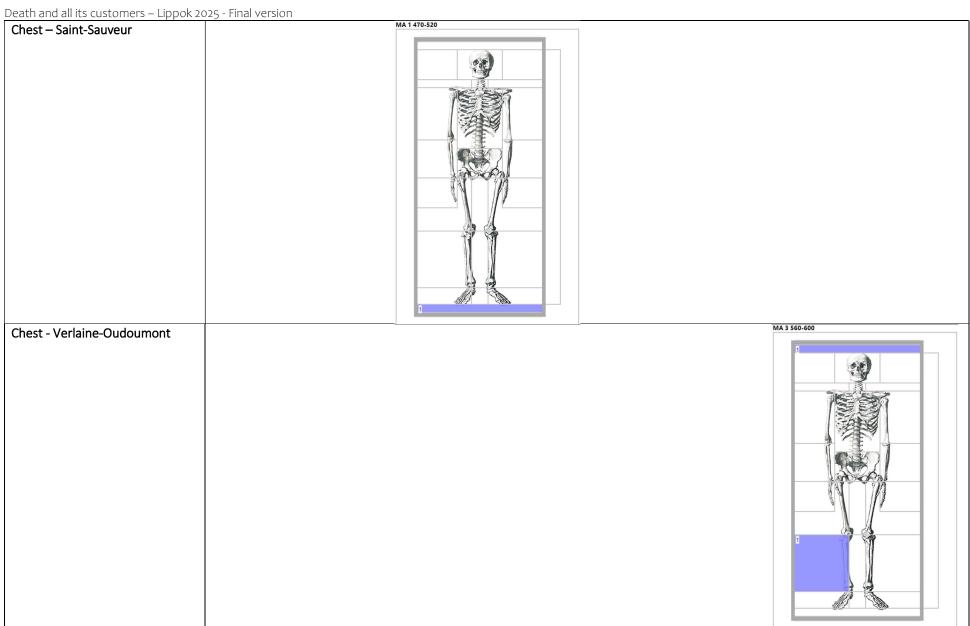




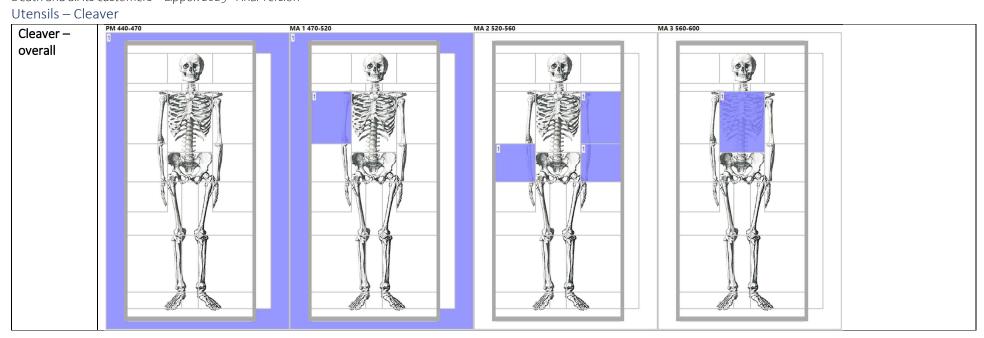
| hain – Cutry | MA 3 560-600 |
|--------------|--------------|
| | 0.5 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

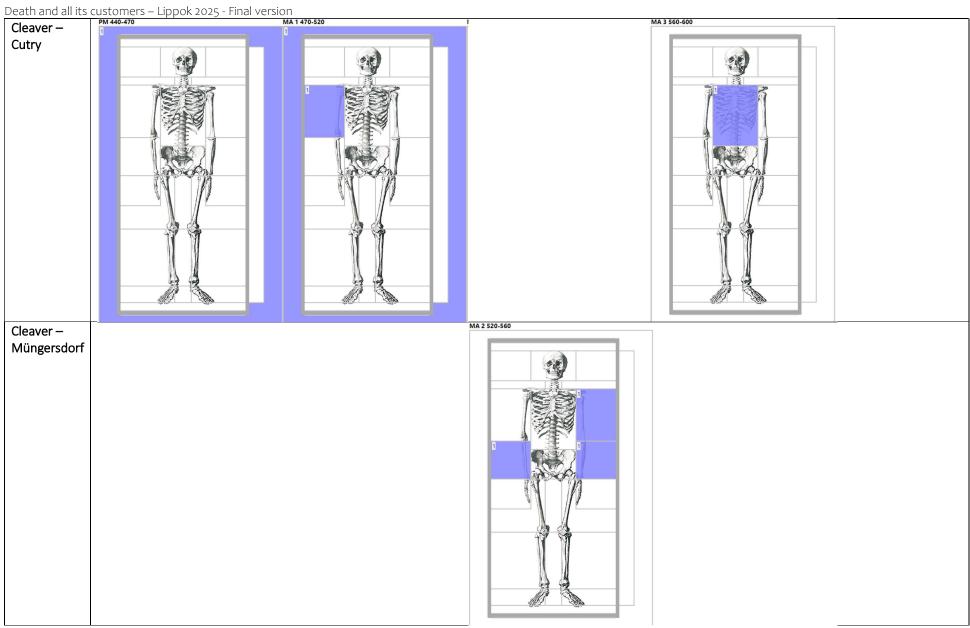


| Chest – Rödingen | MA 3 560-600 |
|------------------|--------------|
| Chest – Rodingen | |
| Chest – Rübenach | MA 3 560-600 |



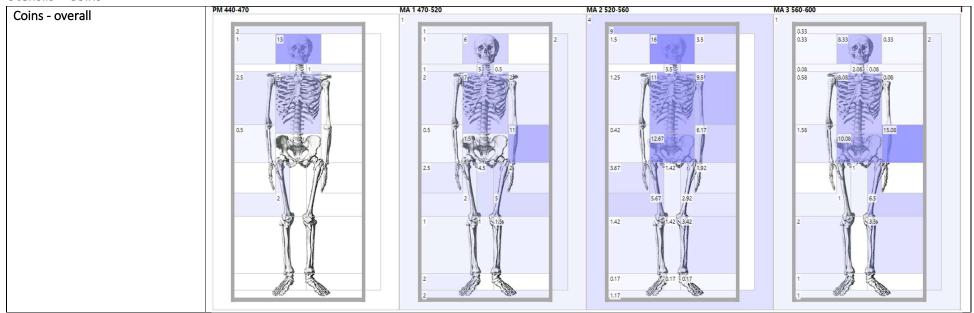
117

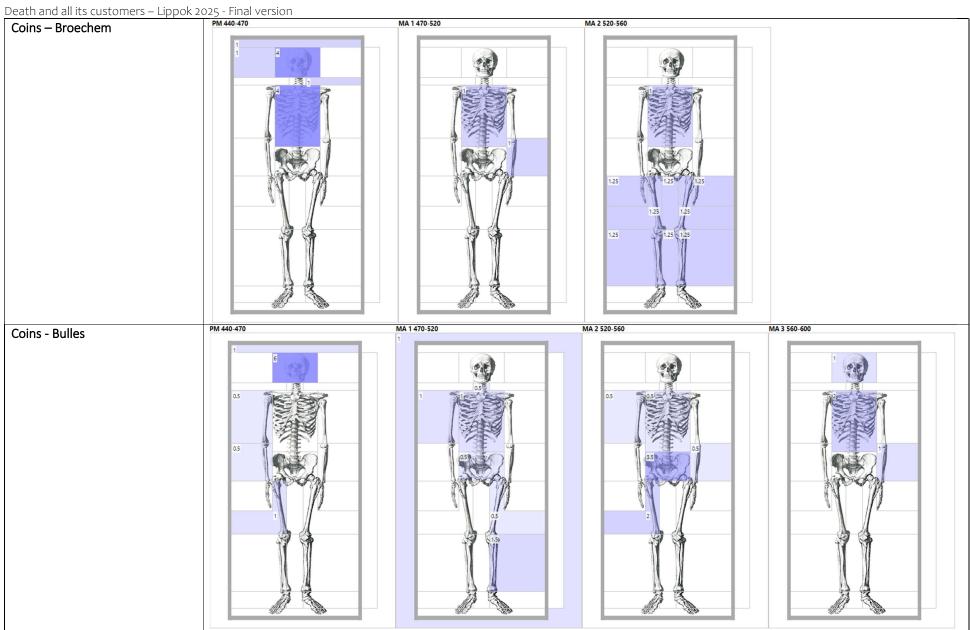


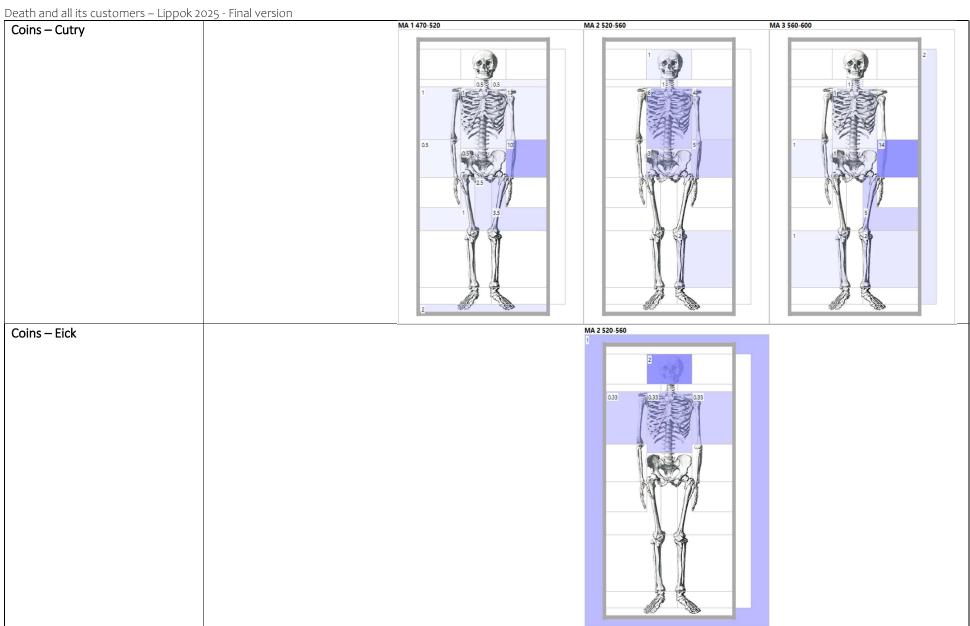


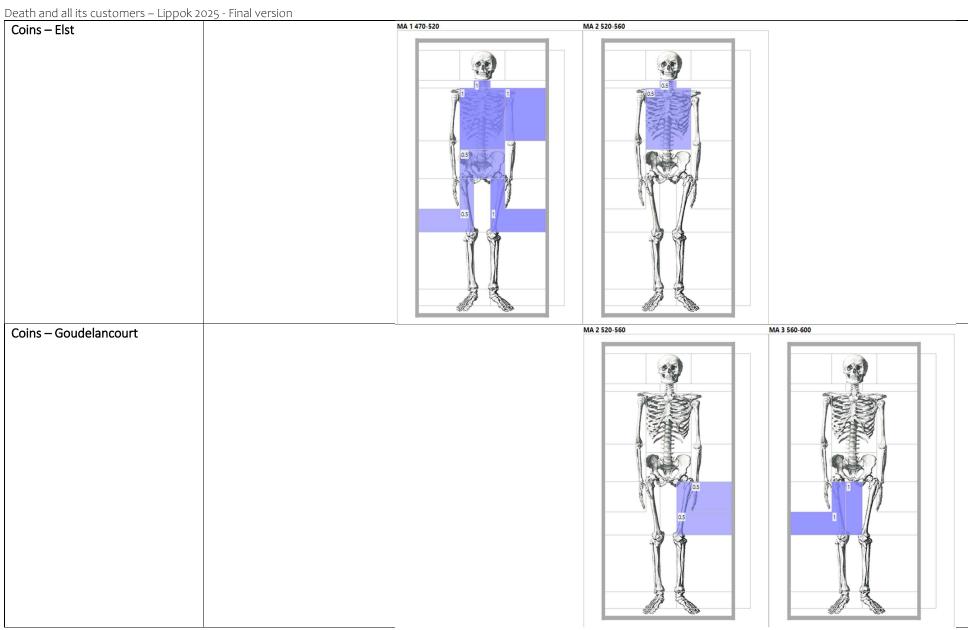
120

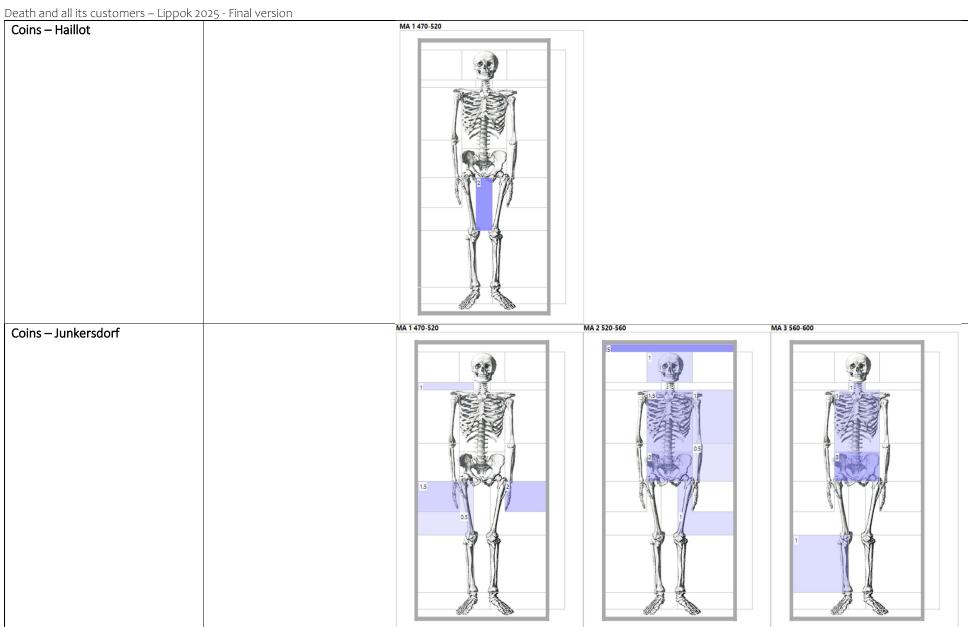
Utensils – Coins

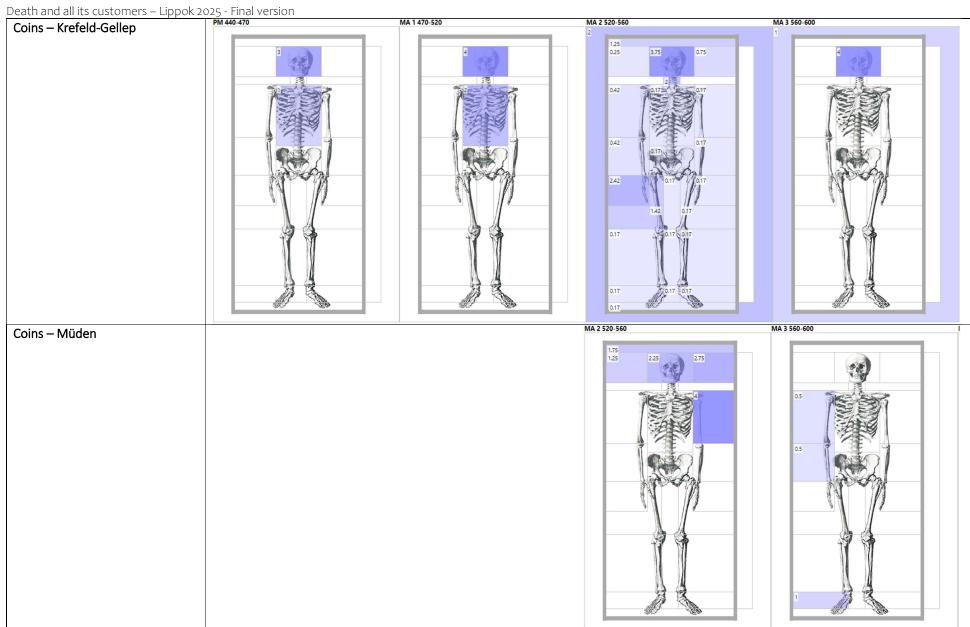


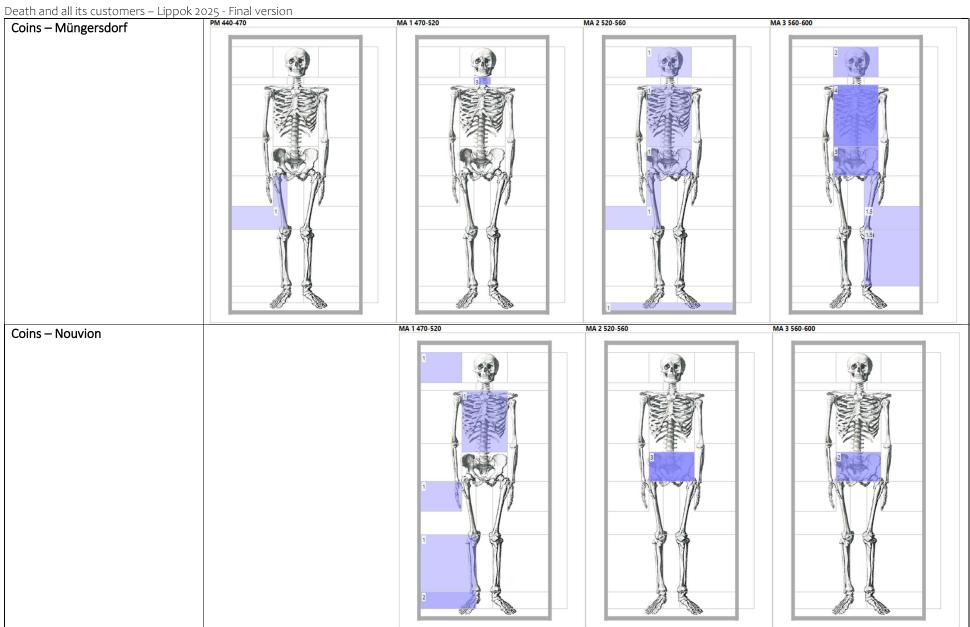


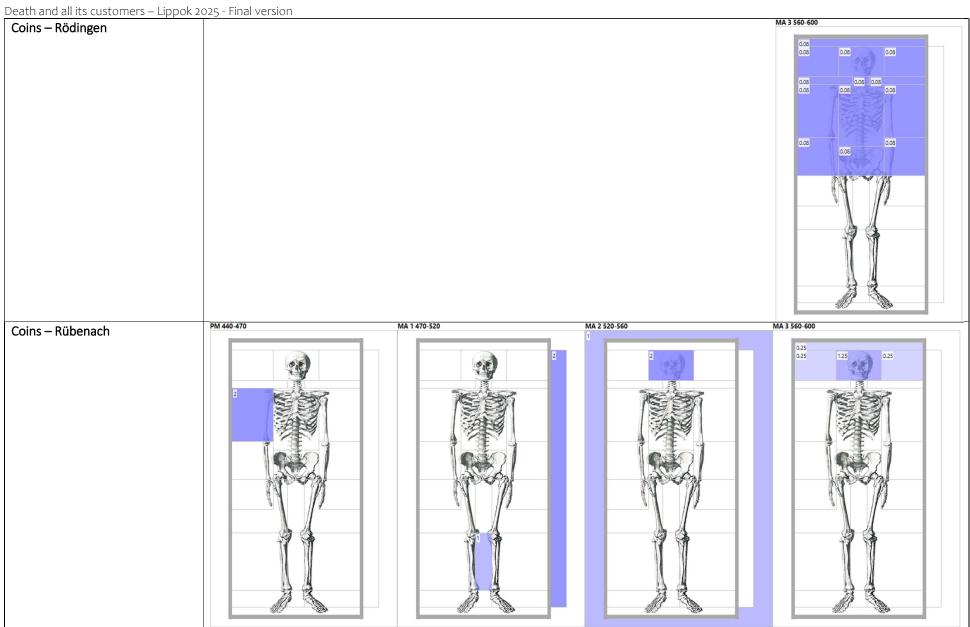


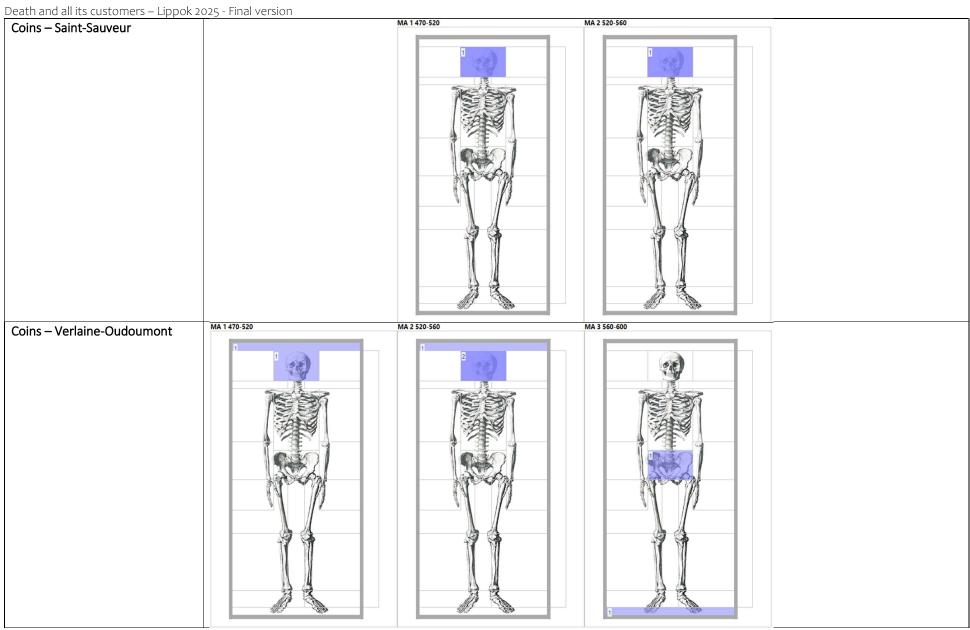






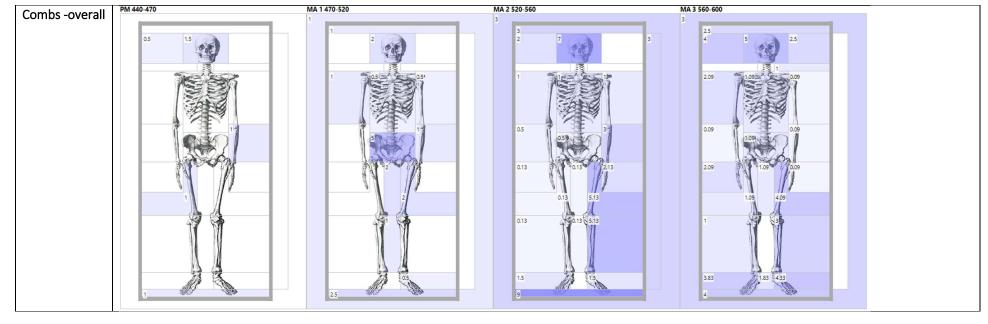


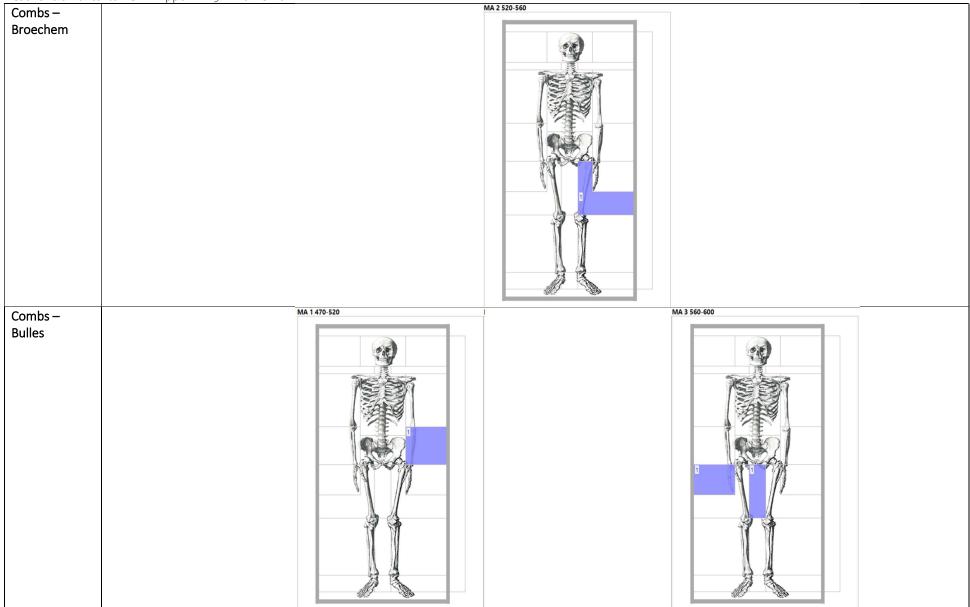


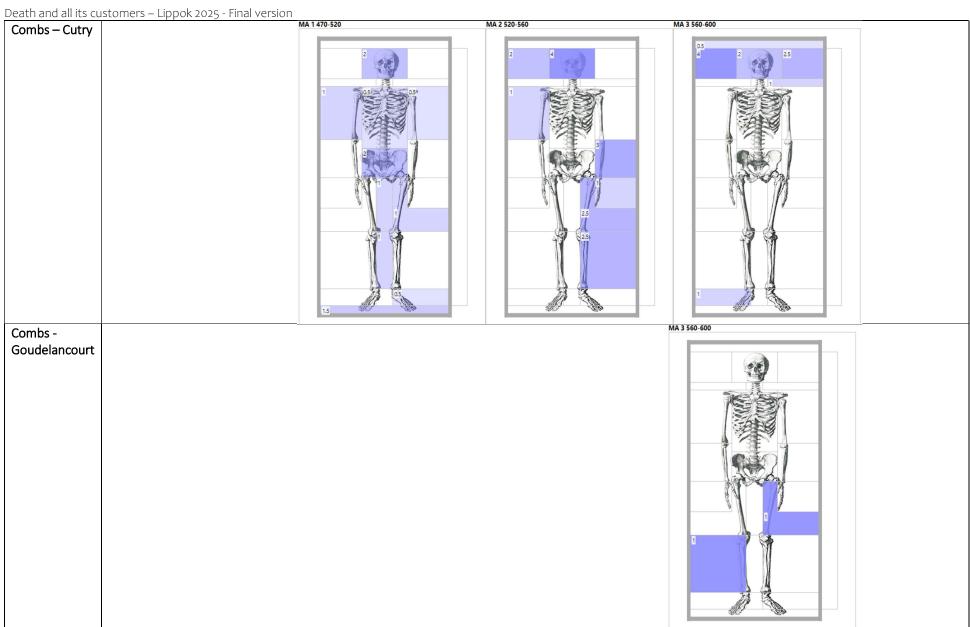


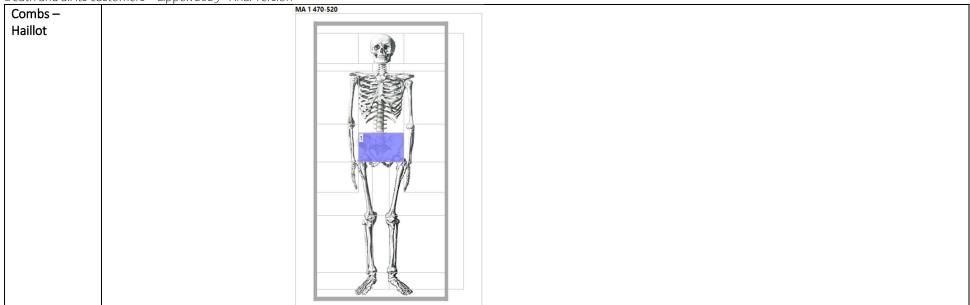
Appendix 14

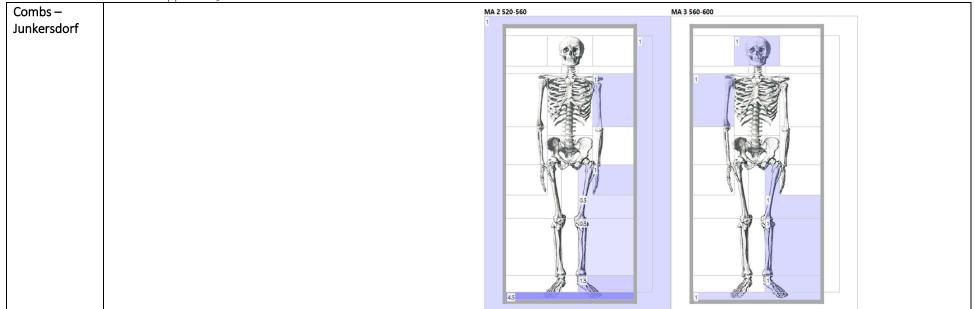
Utensils – Combs

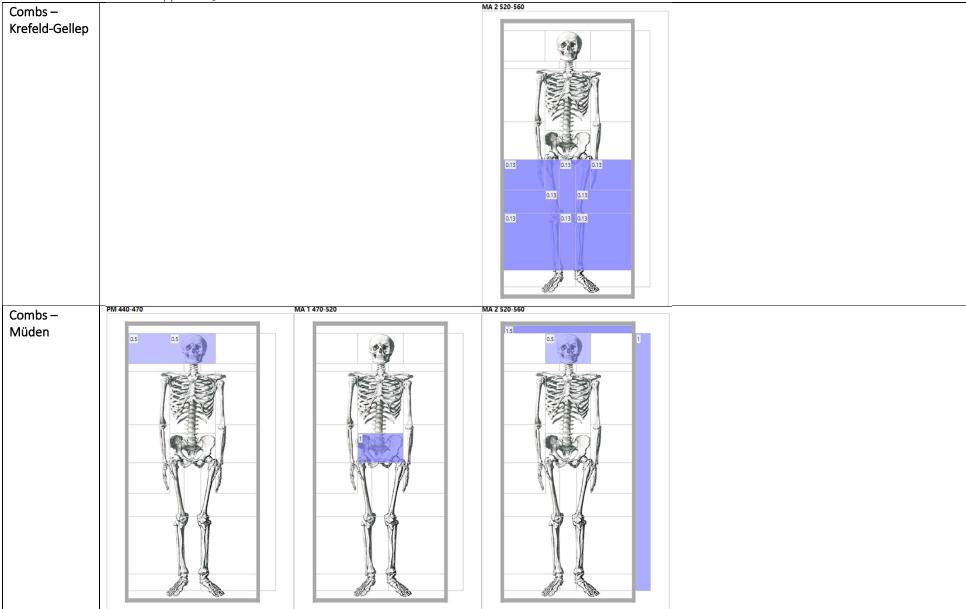


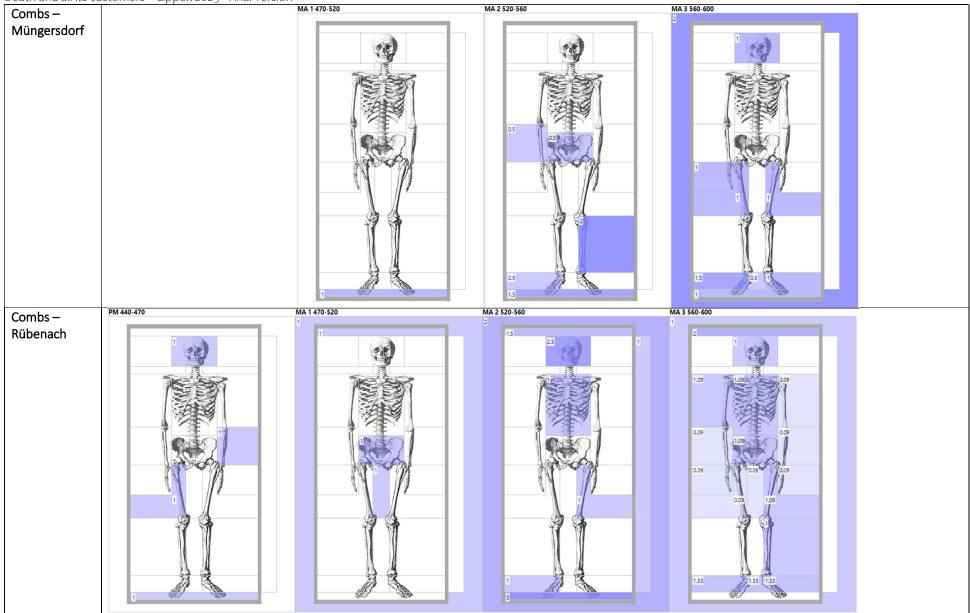


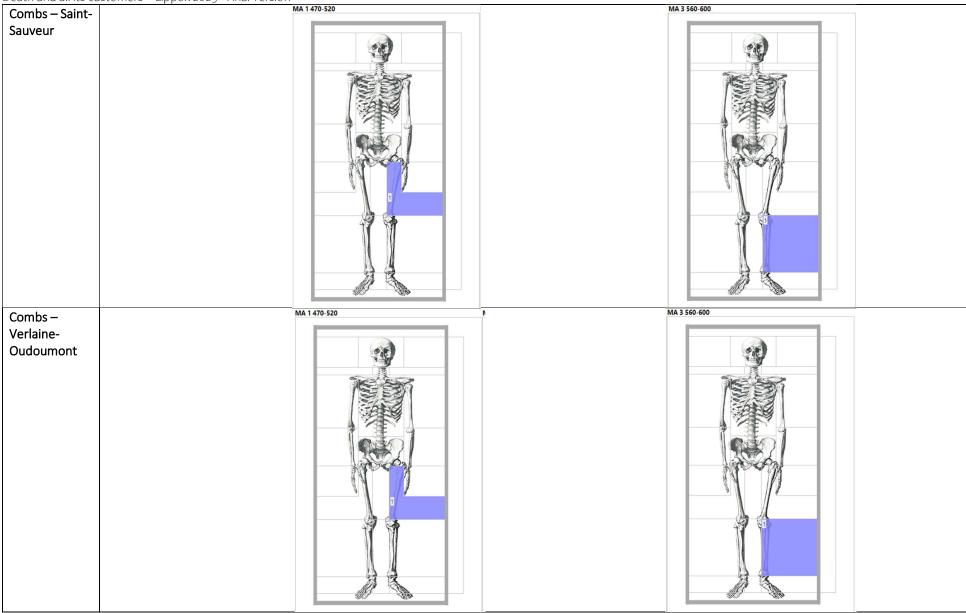






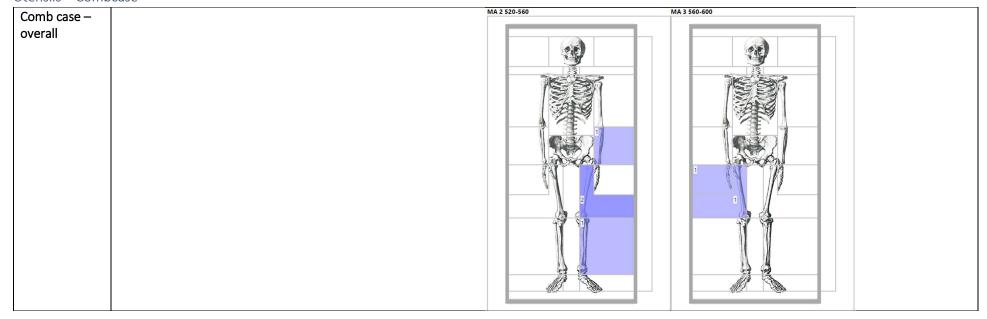


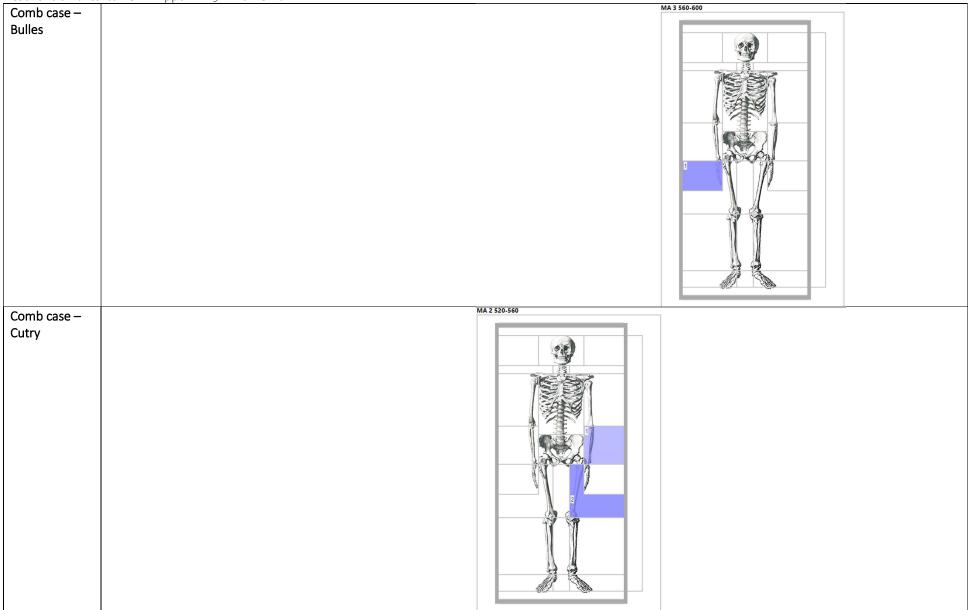


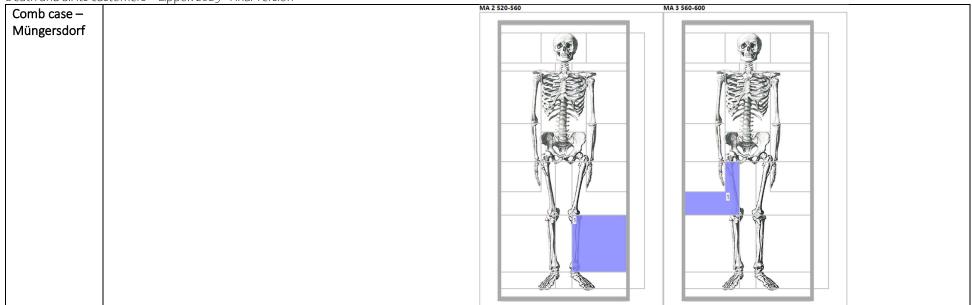


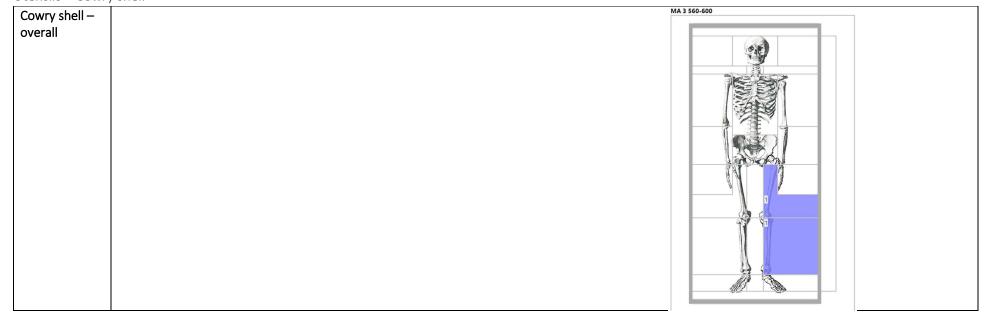
Appendix 14

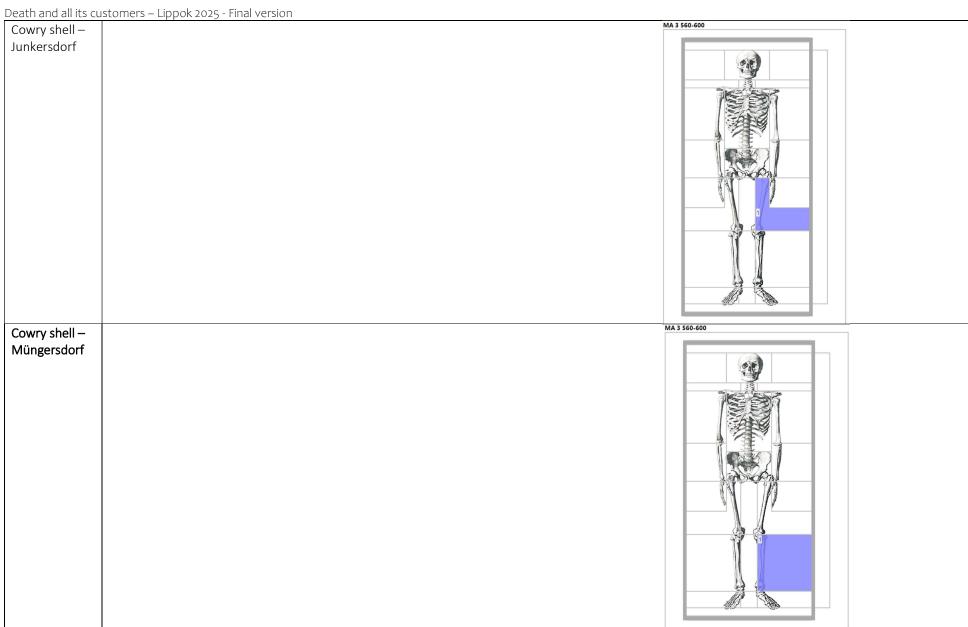
Utensils – Combcase

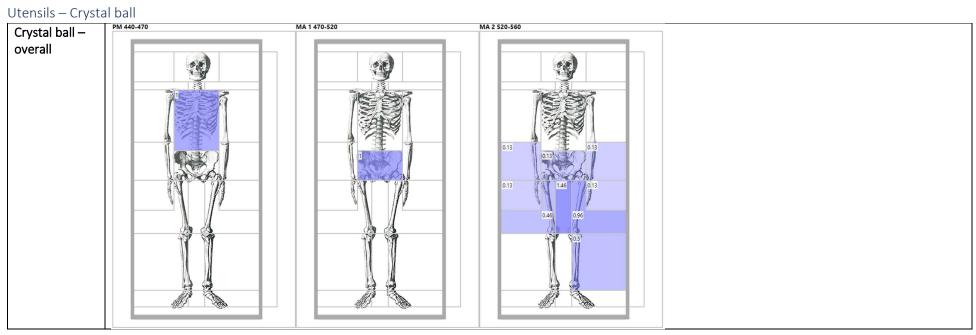


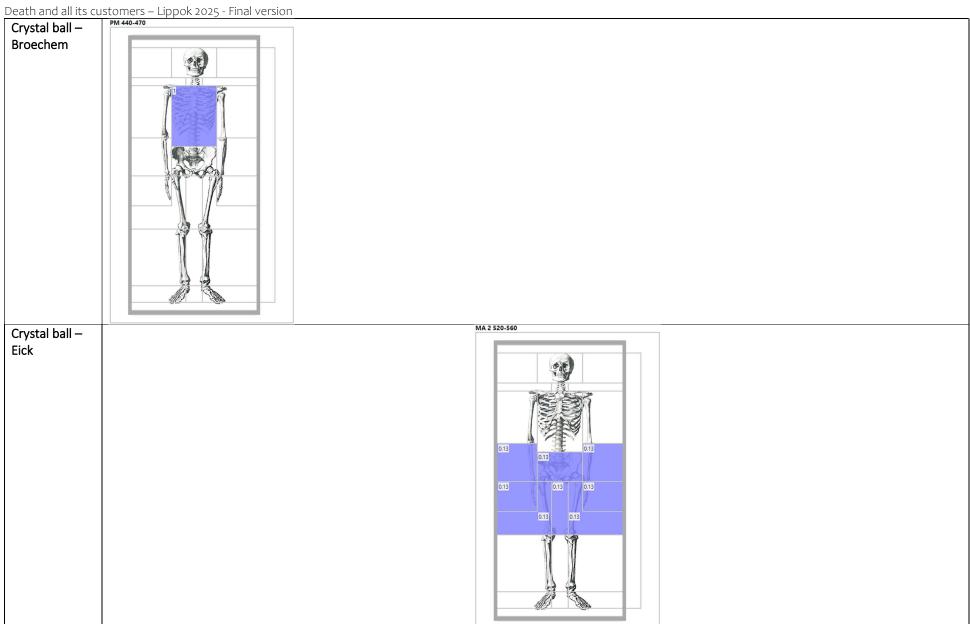


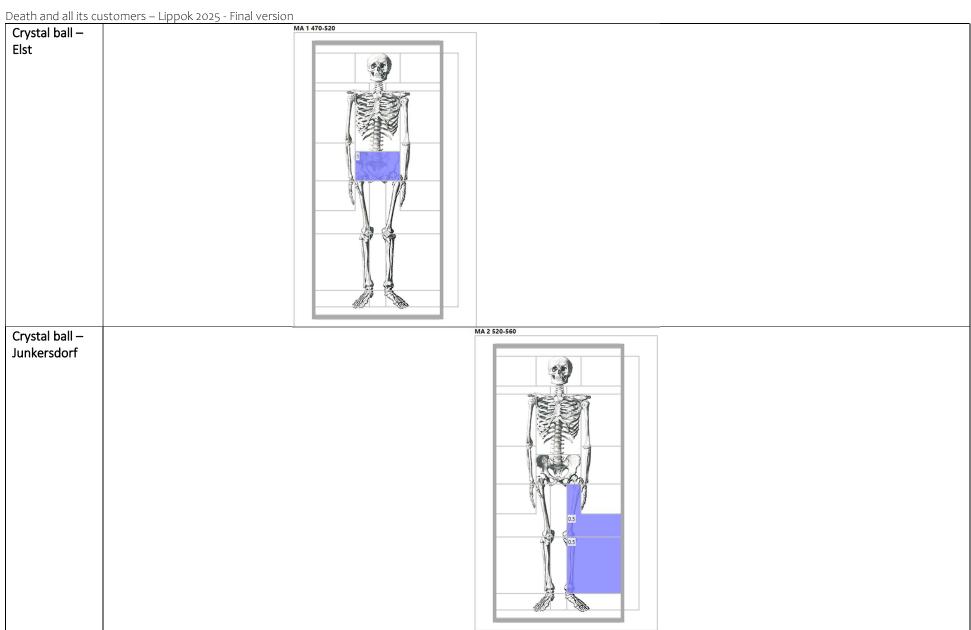


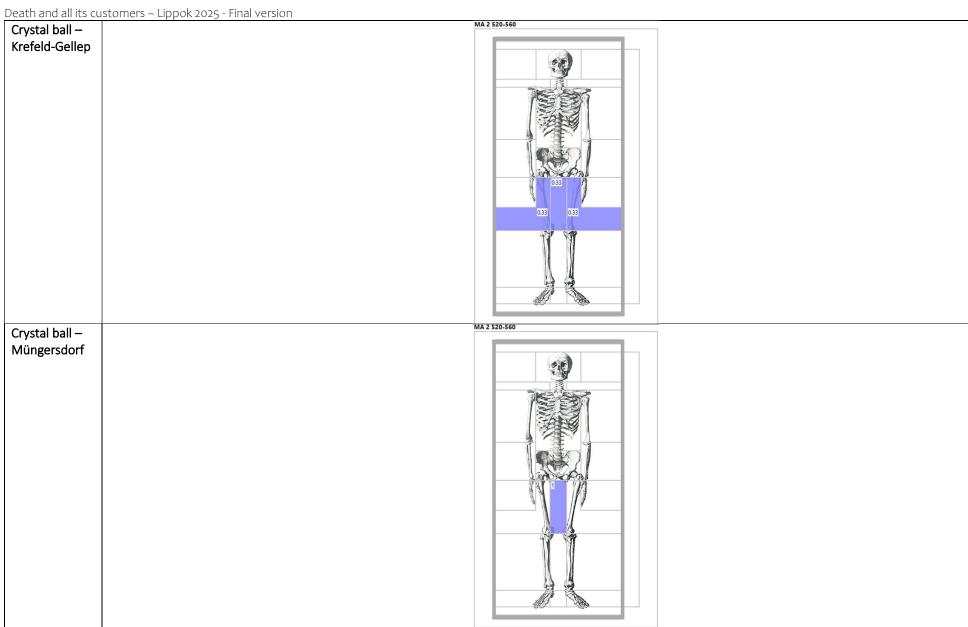




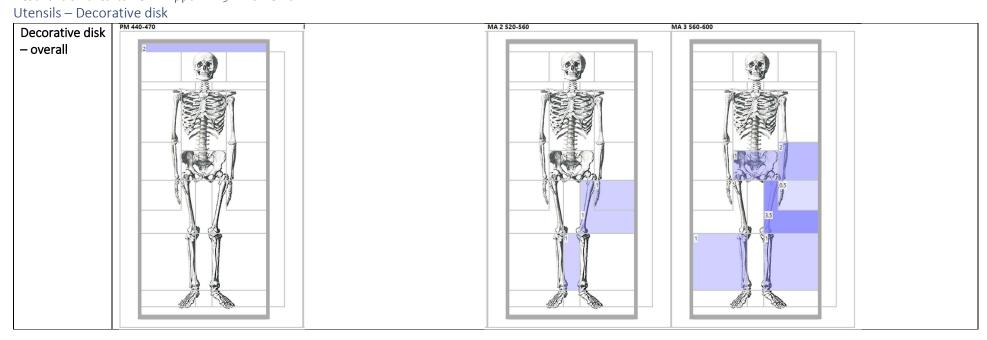


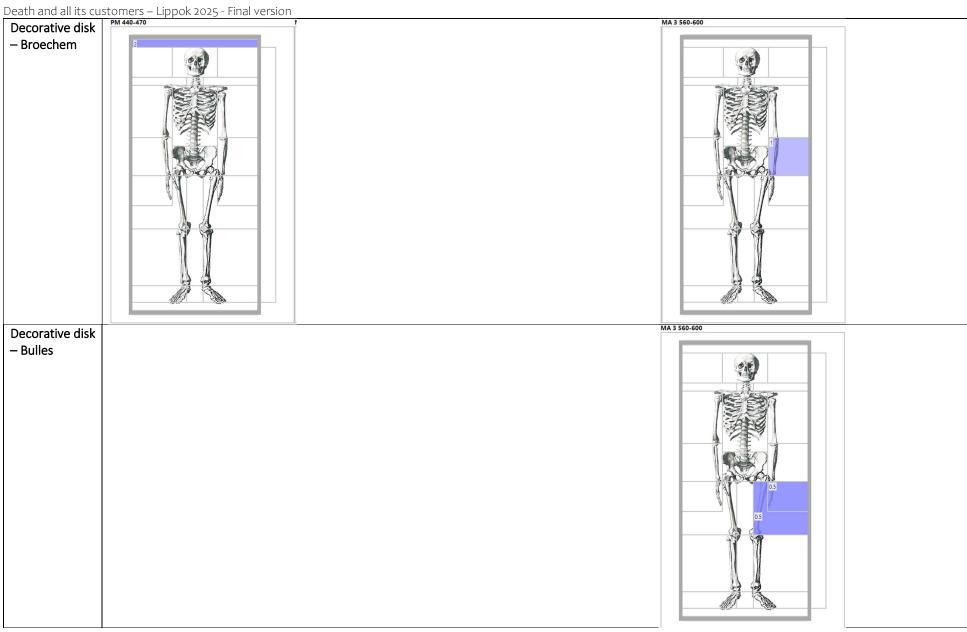


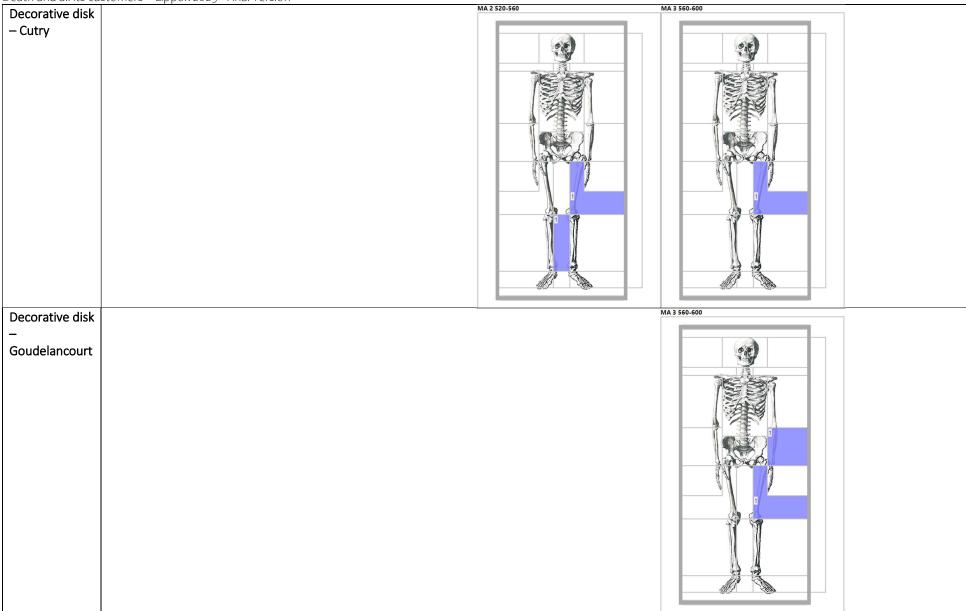


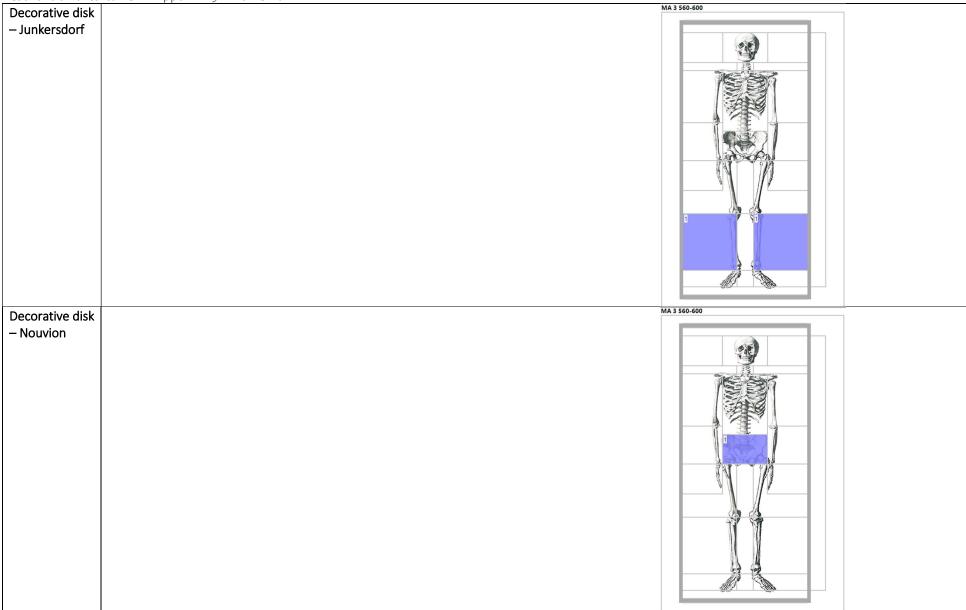


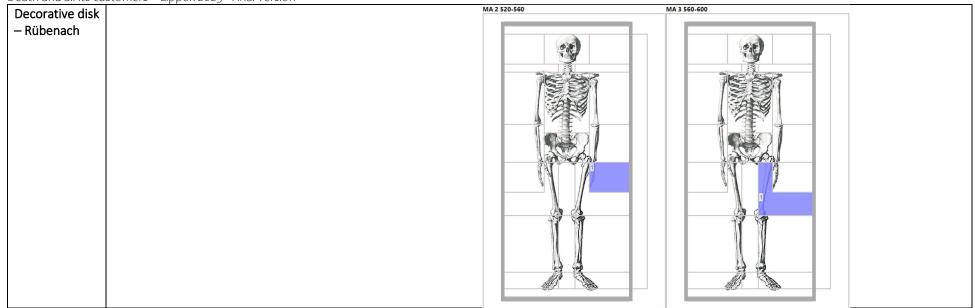
Appendix 14

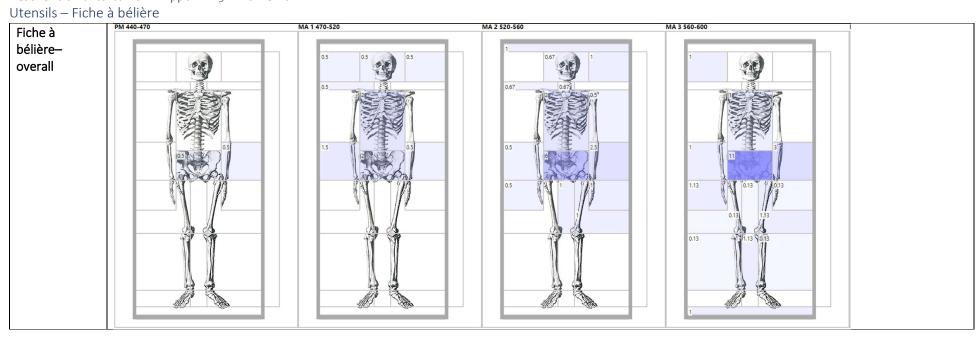


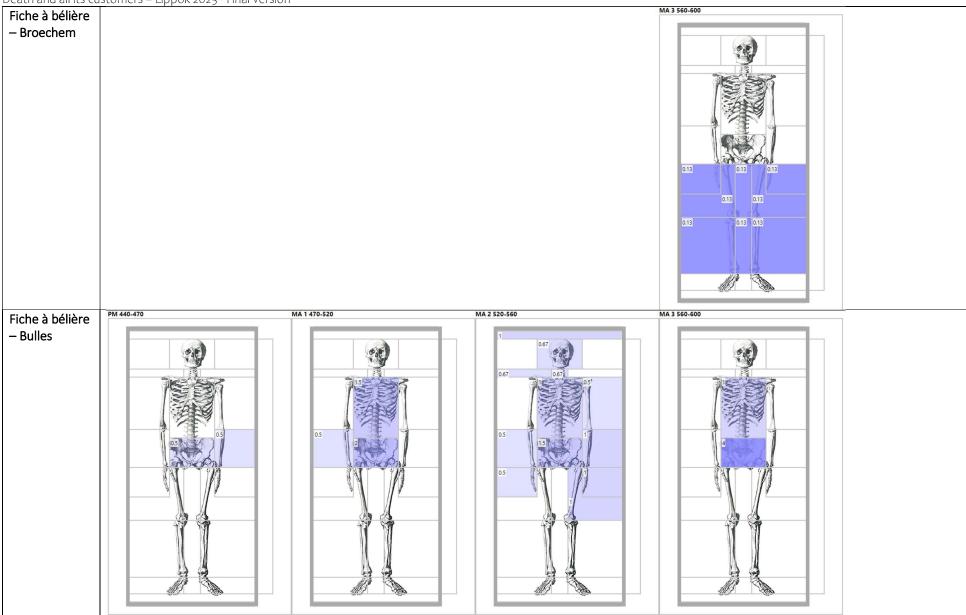


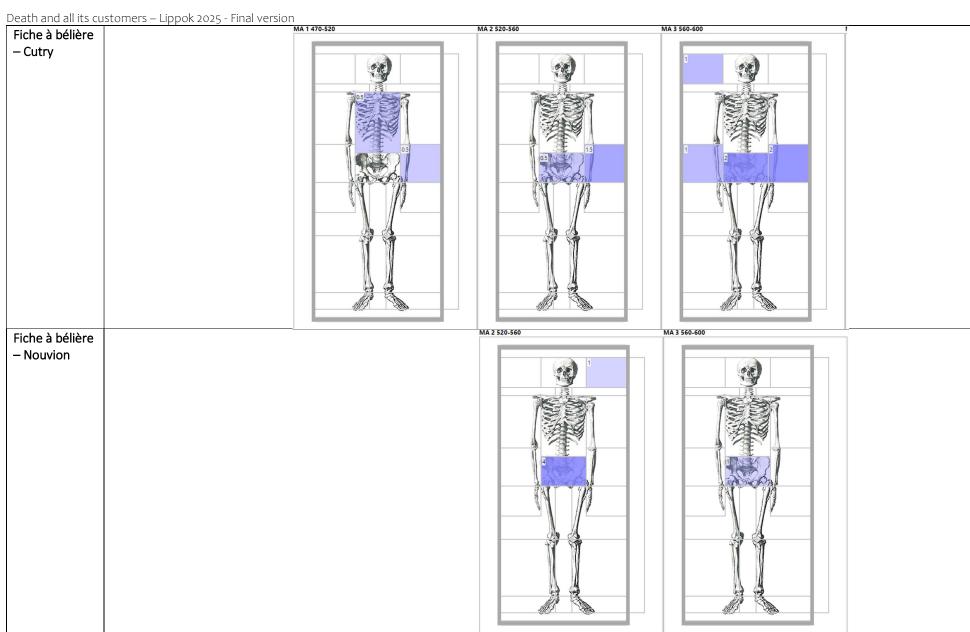


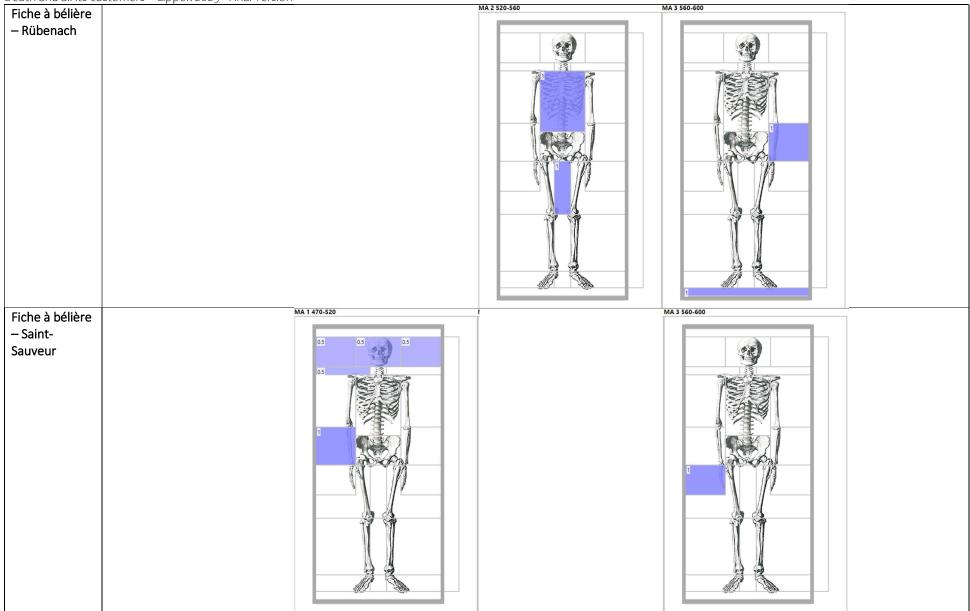






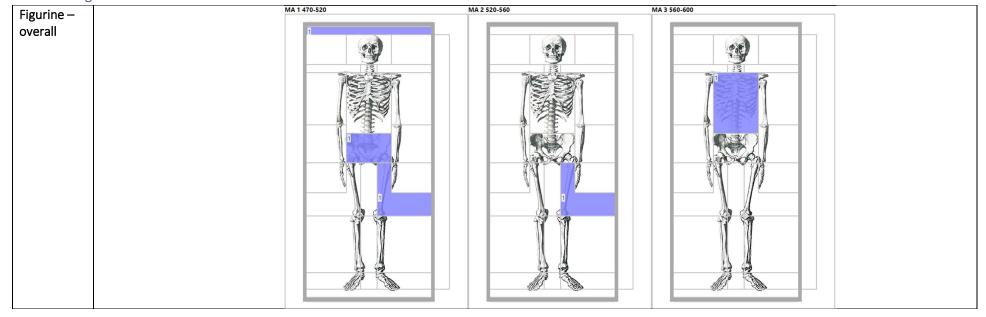


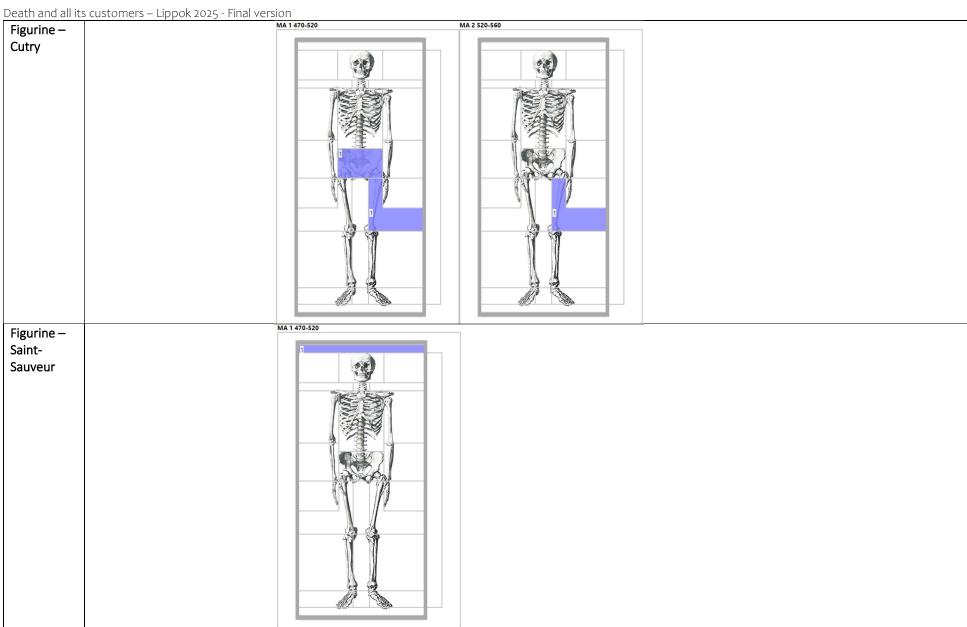




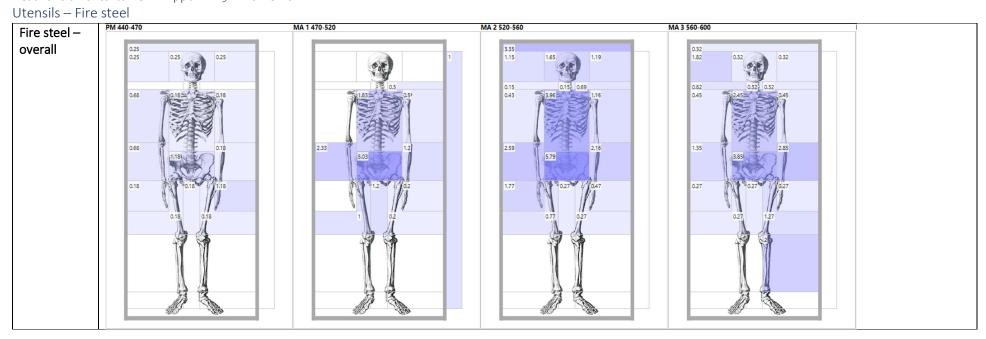


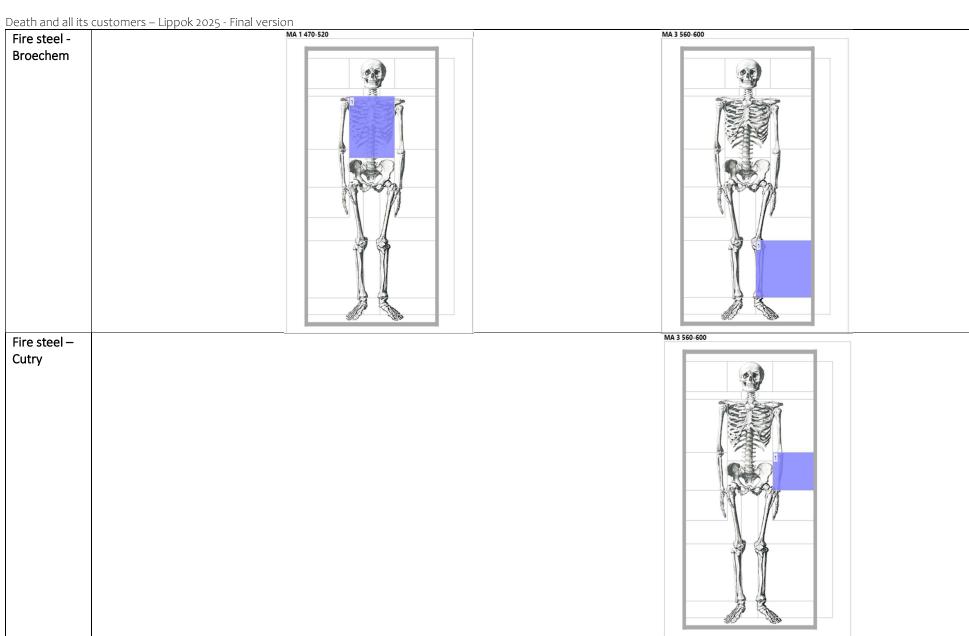
Utensils – Figurine

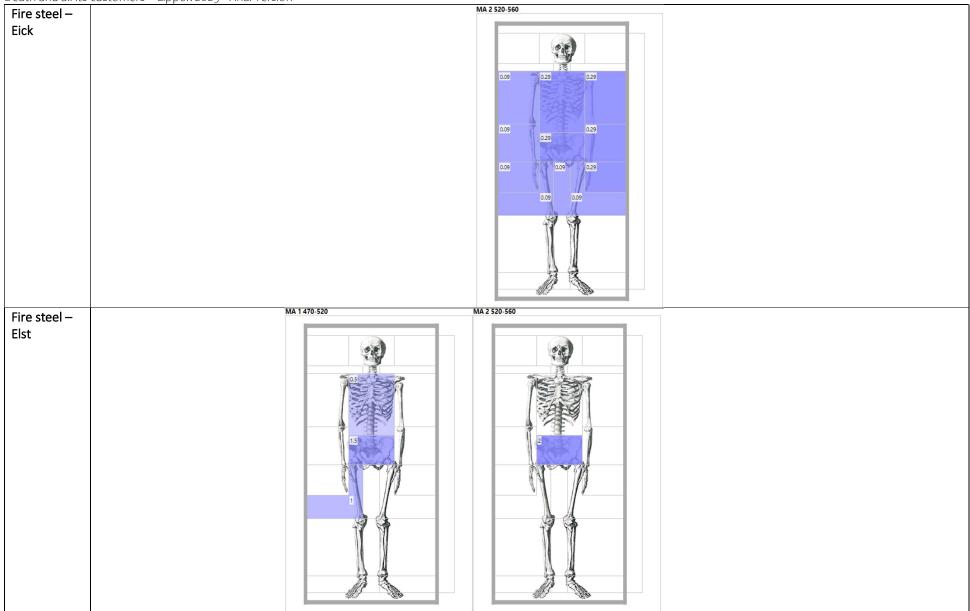


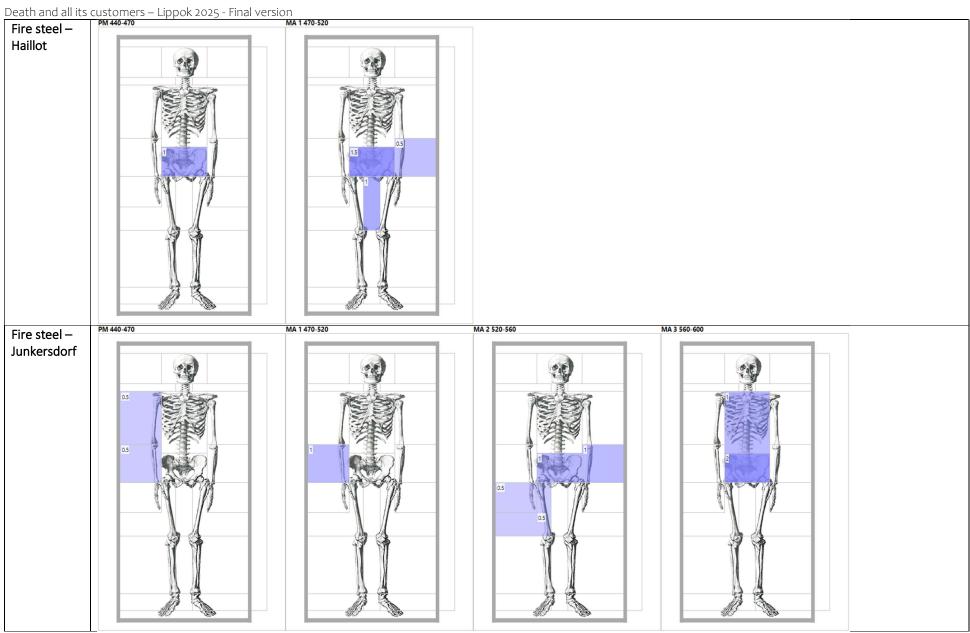


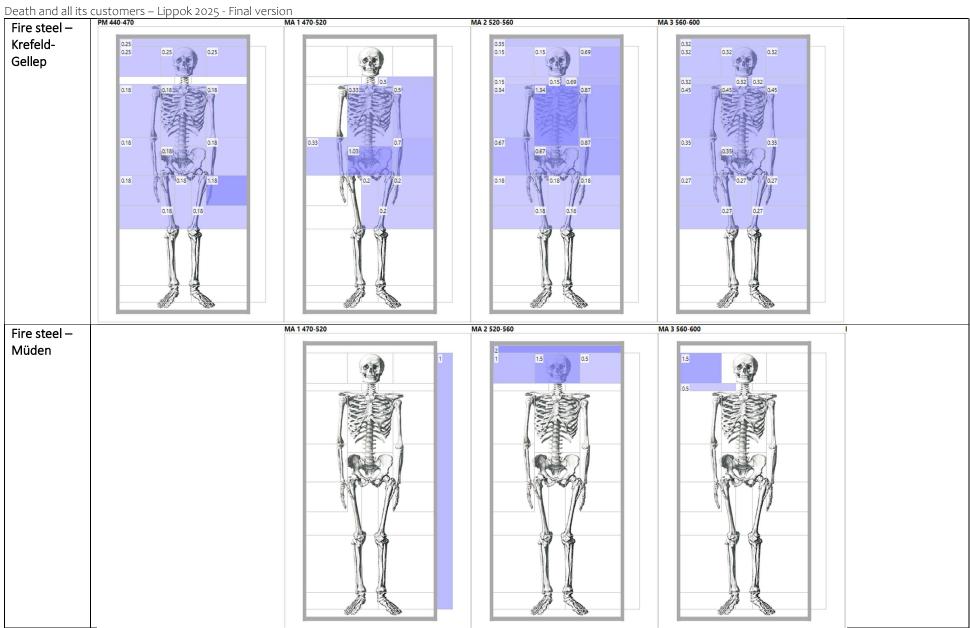
| Figurine – | MA 3 560-600 |
|------------|--------------|
| Manue — | |
| Verlaine- | |
| Oudoumont | |
| | |
| | |

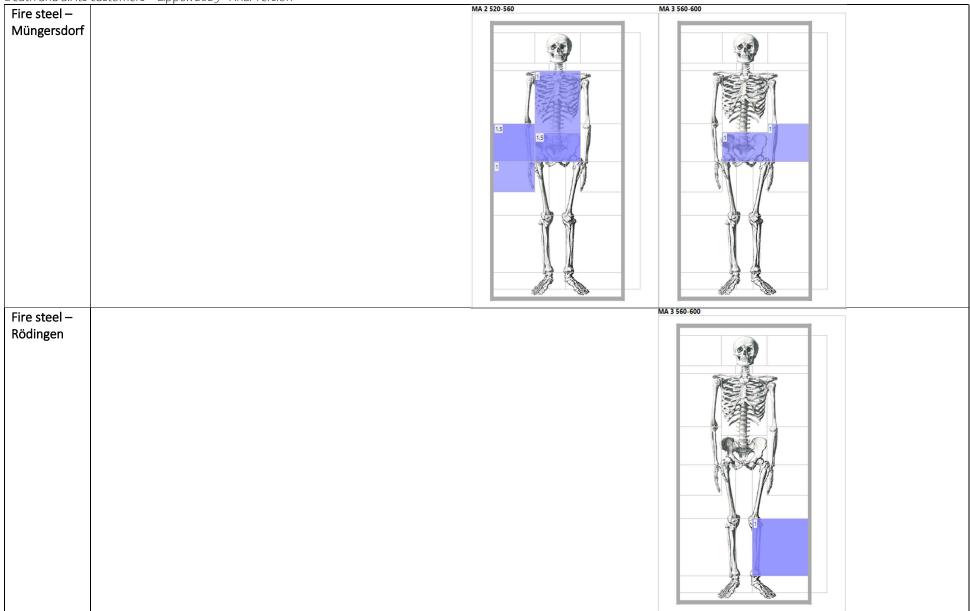


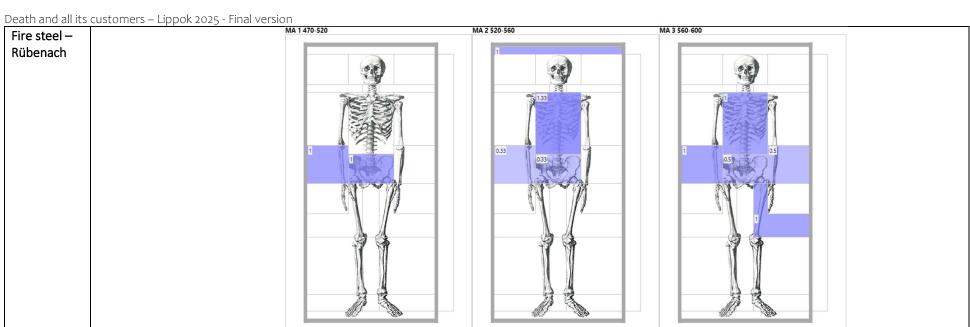


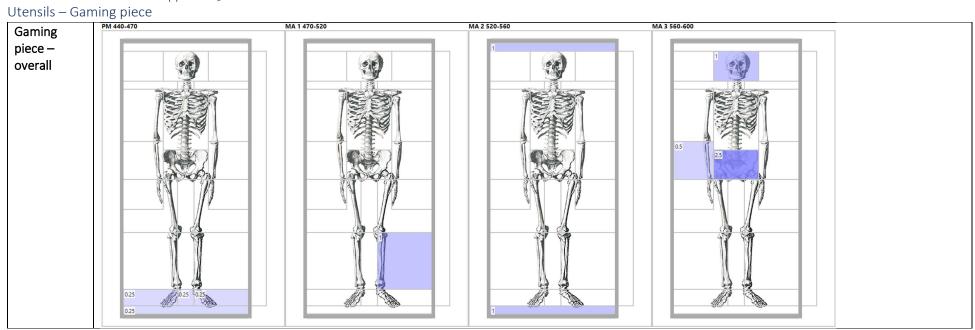


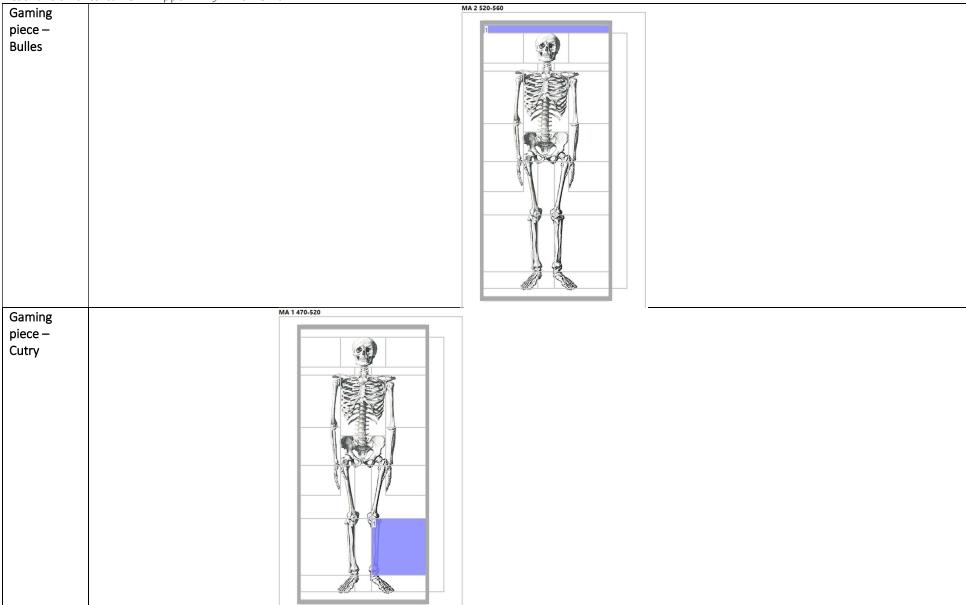


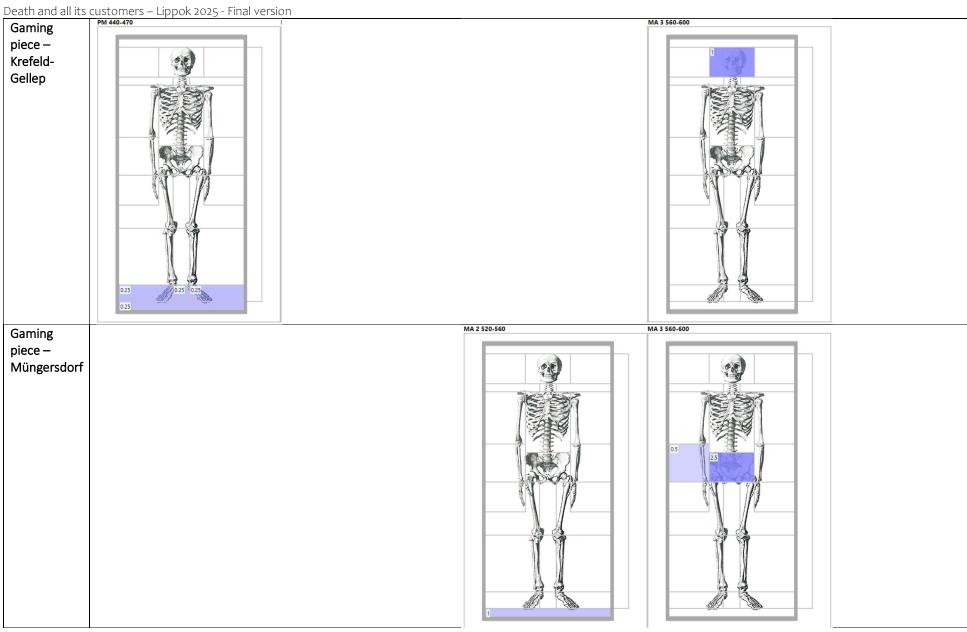




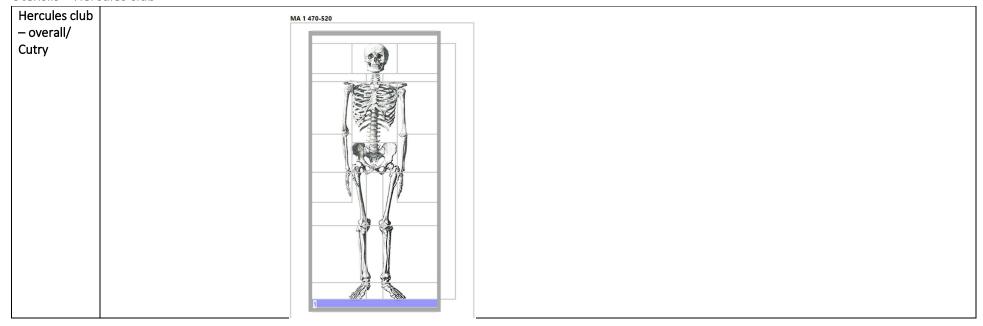




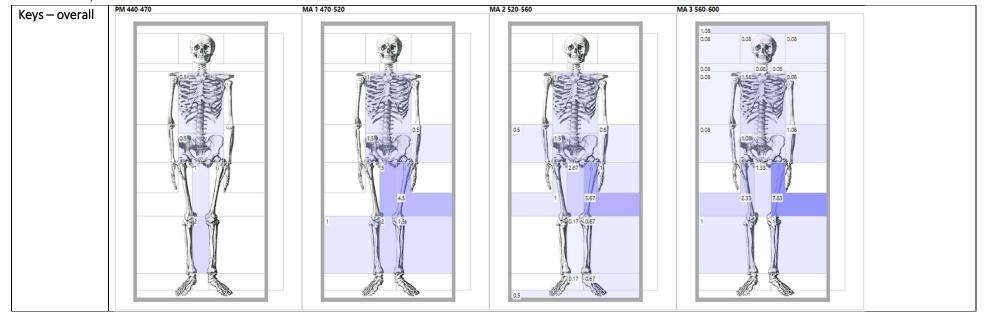




Utensils – Hercules club

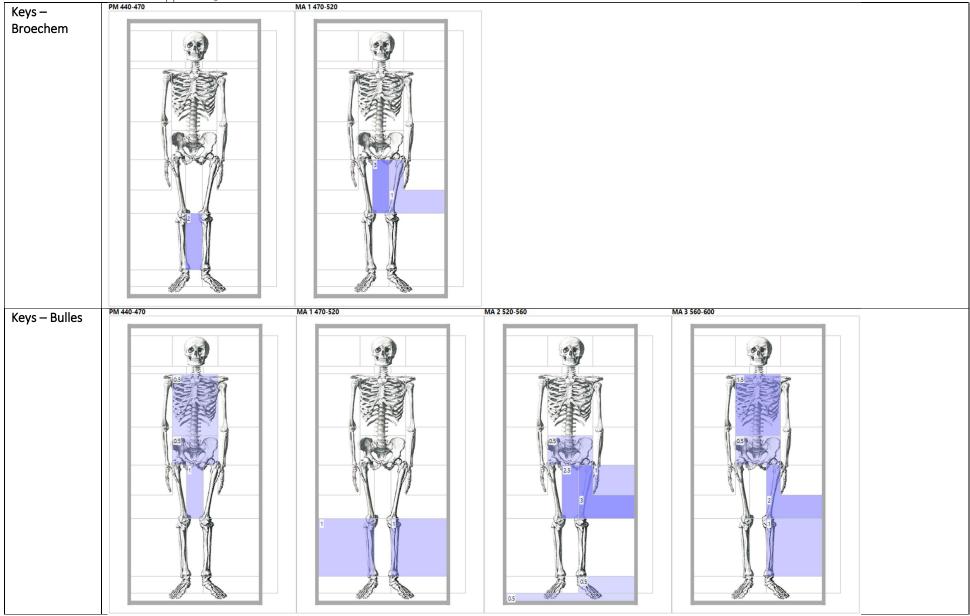


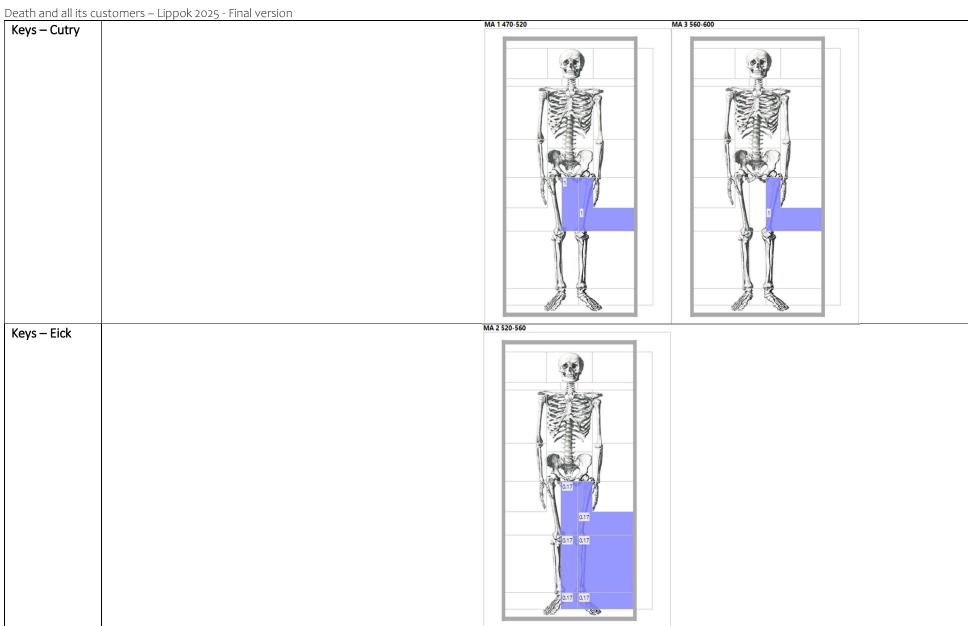
Utensils – Keys

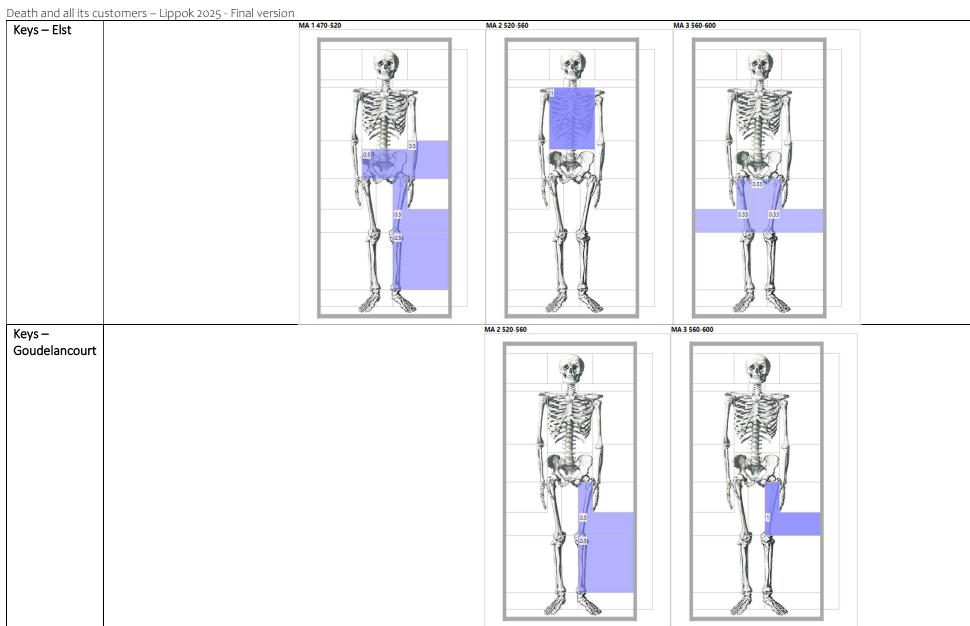


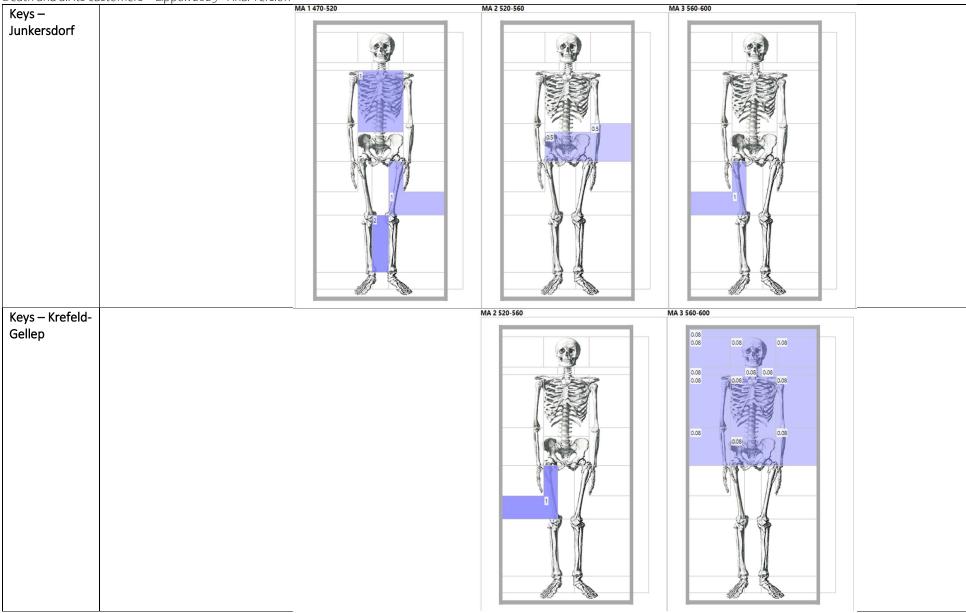
Death and all its customers – Lippok 2025 - Final version

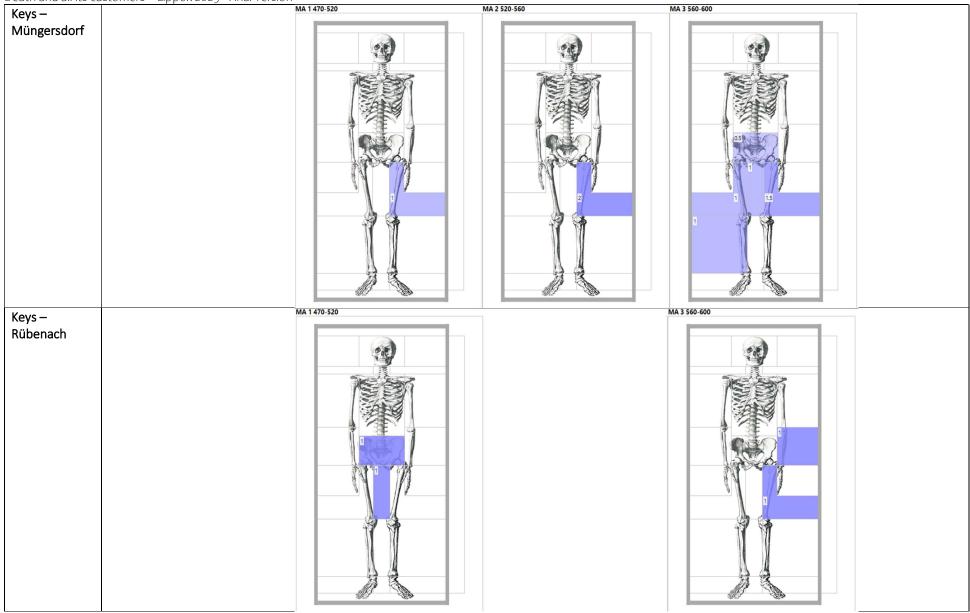
| PM 440-470 | PM 440-47

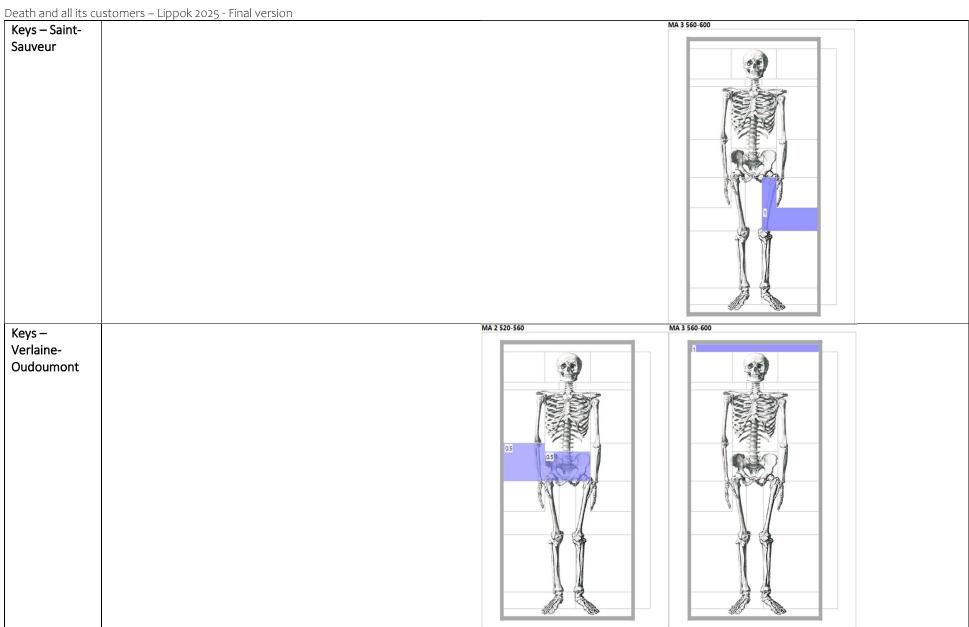




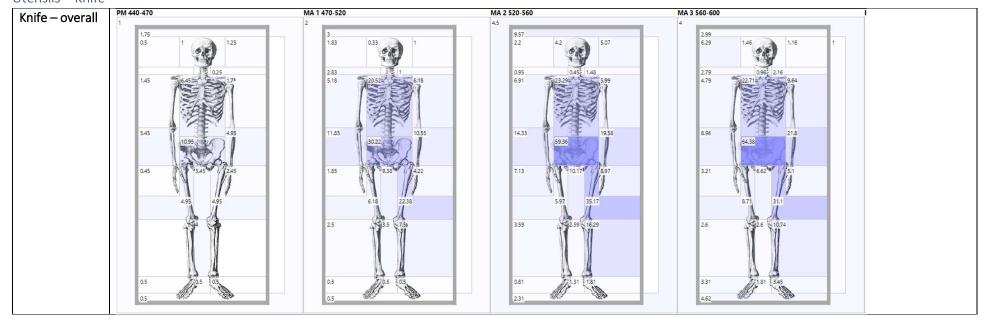


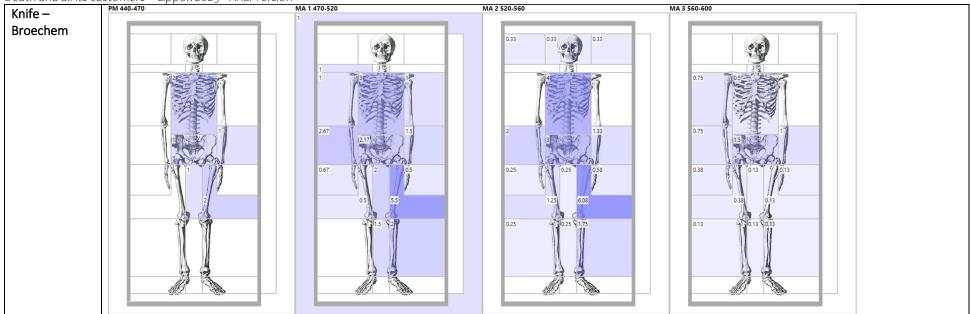


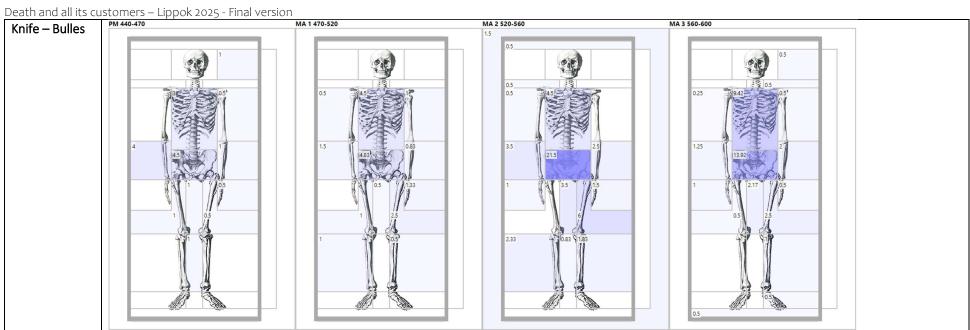


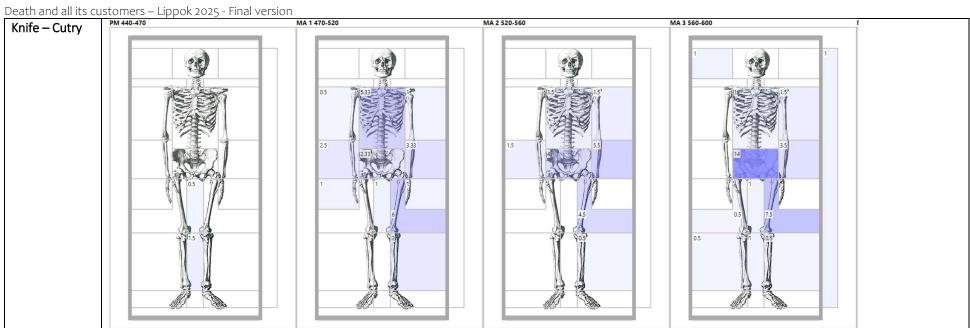


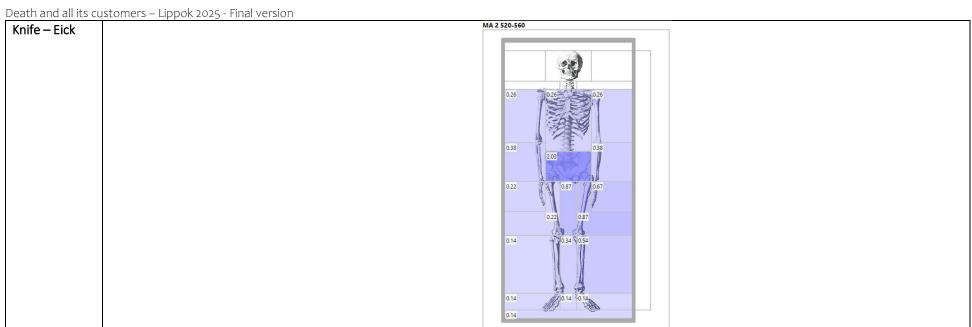
Utensils – Knife

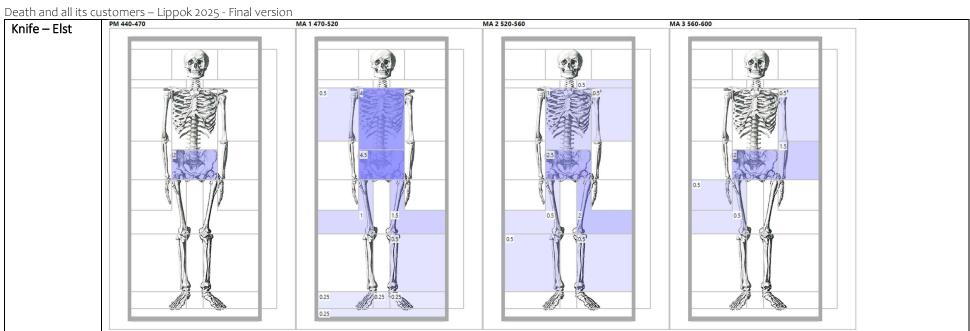


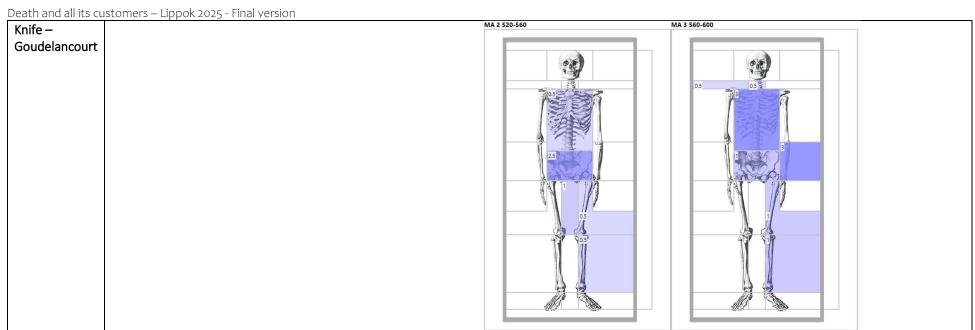


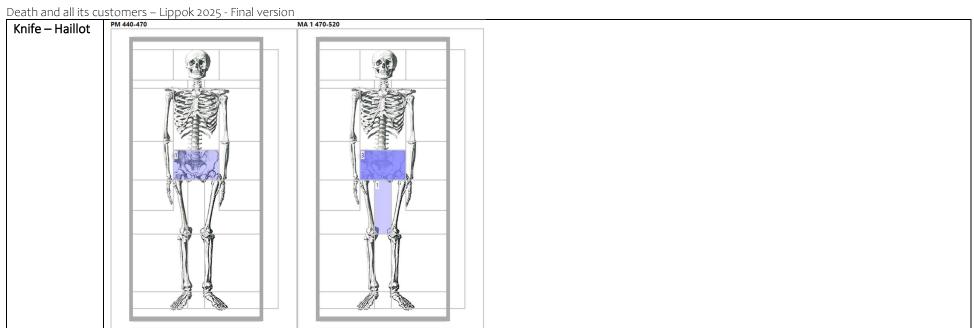


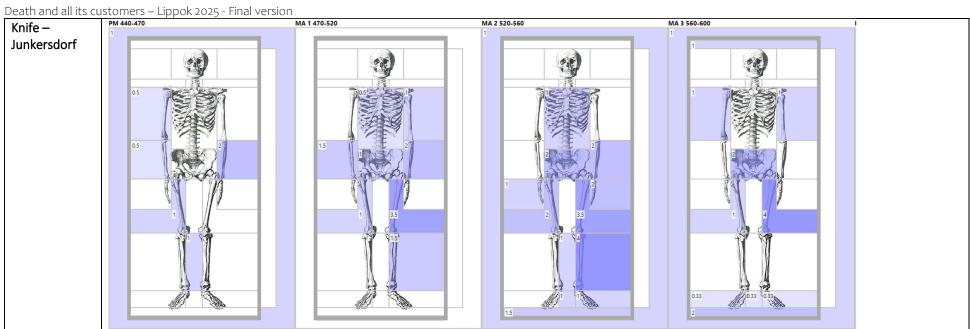


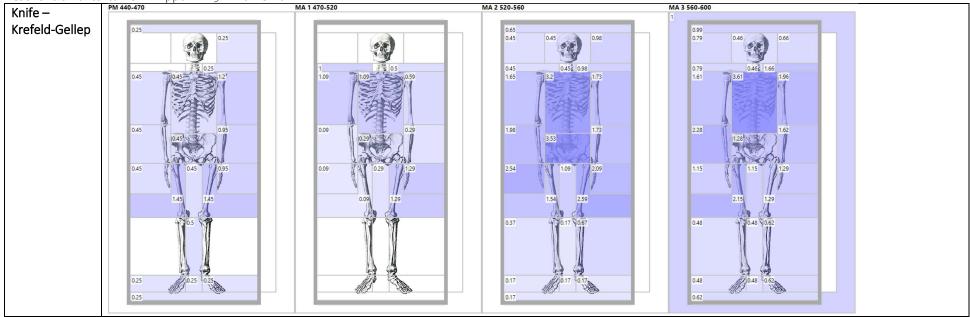


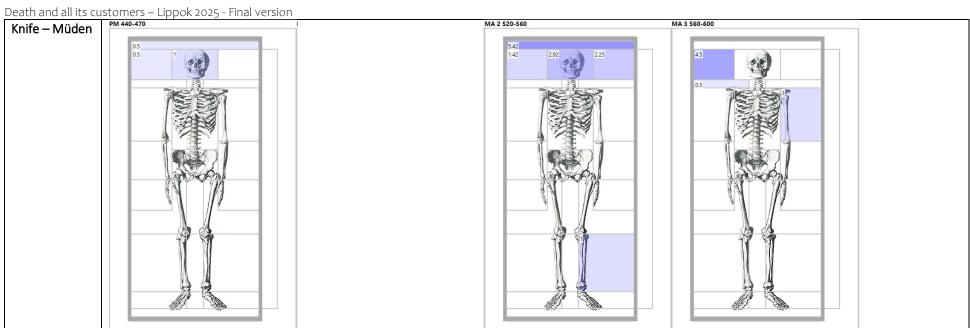


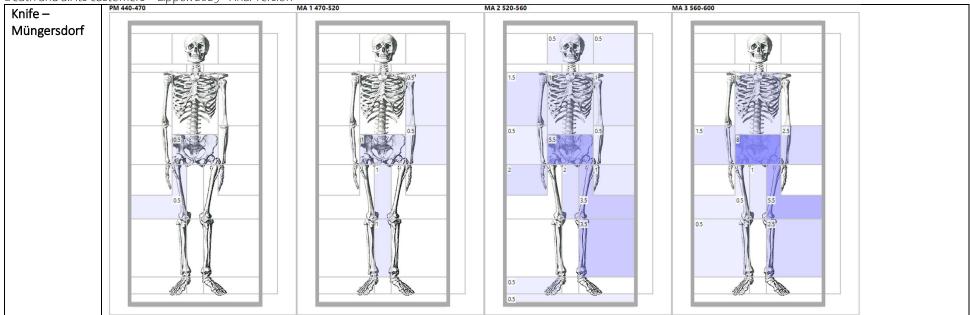


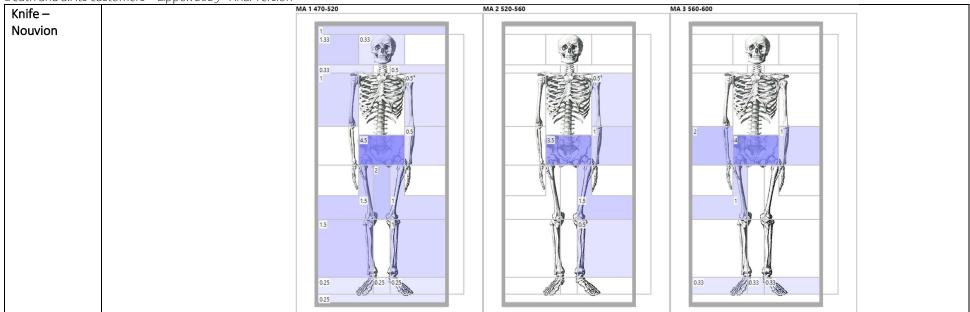


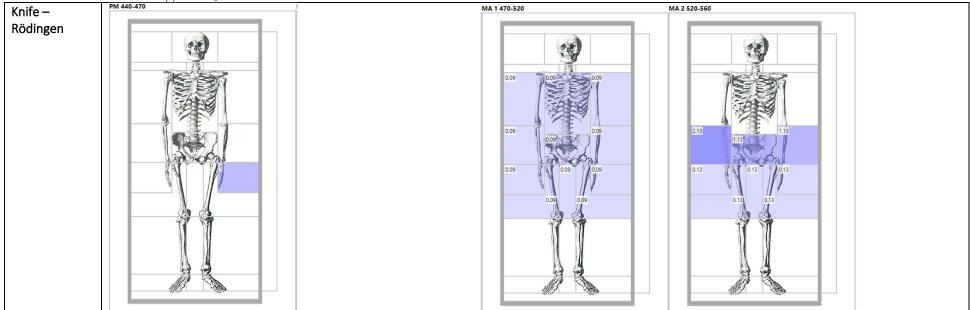


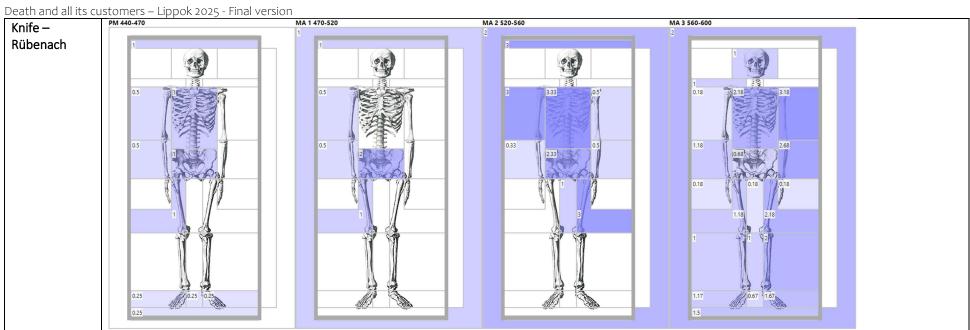






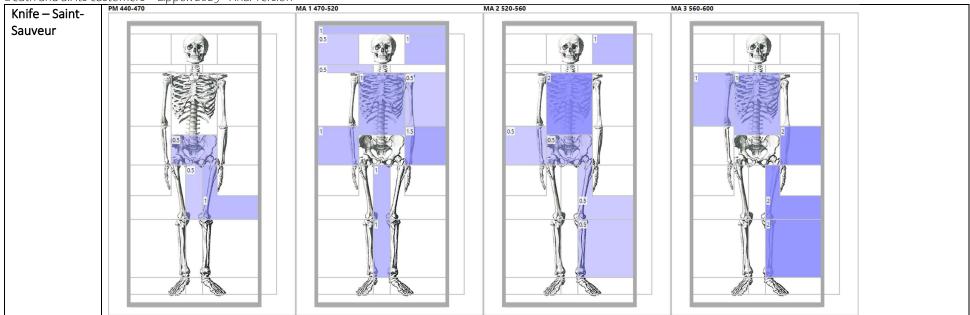


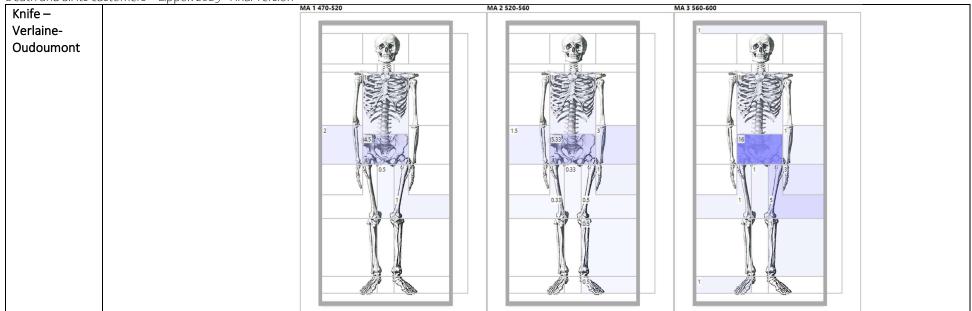


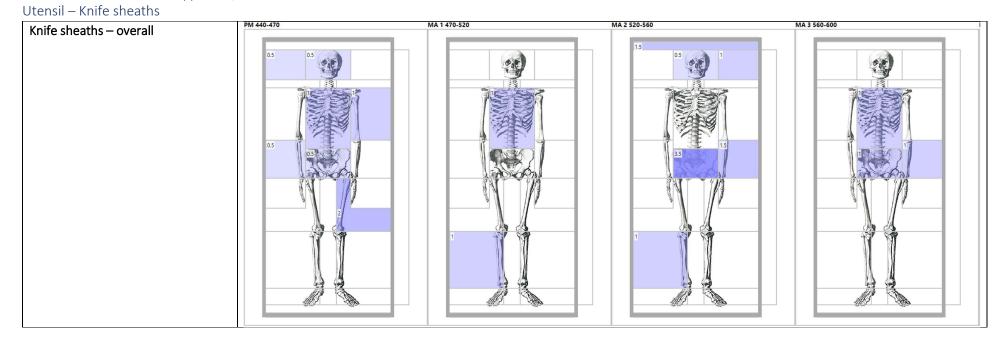


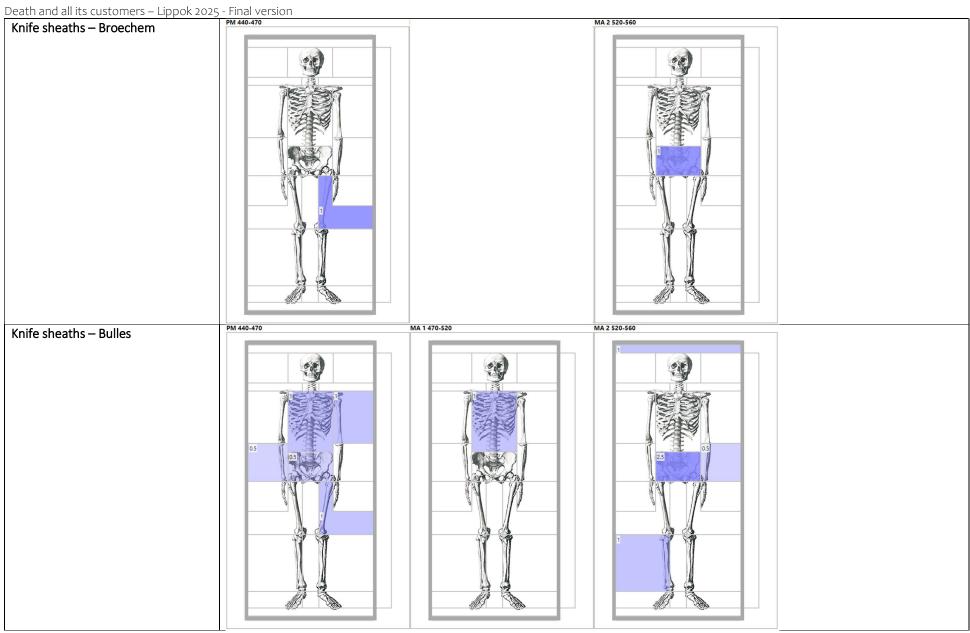
Death and all its customers – Lippok 2025 - Final version

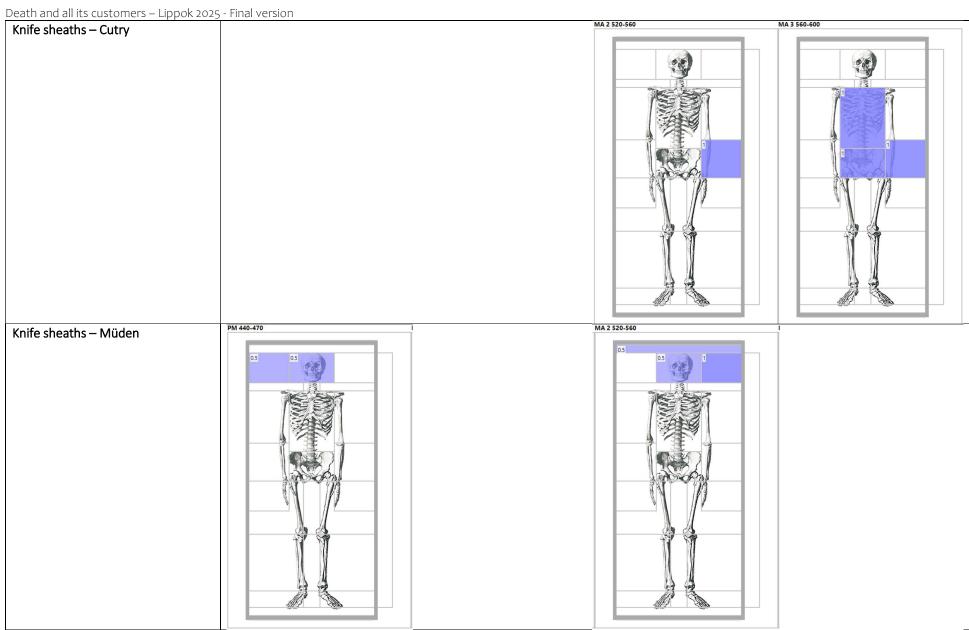
[Knifo – Saint | PM 440-470 | PM 440-

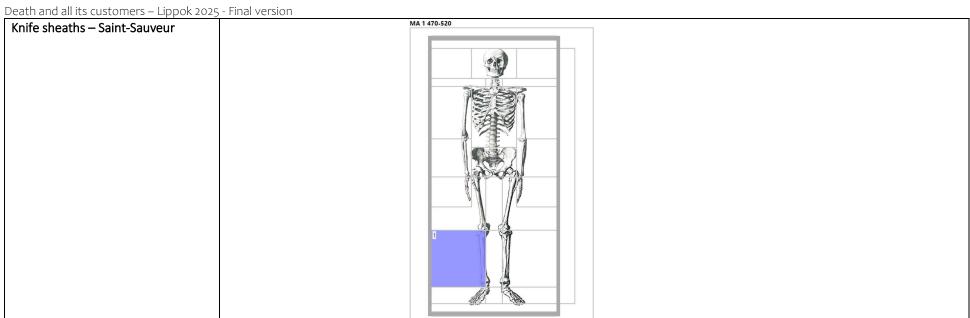


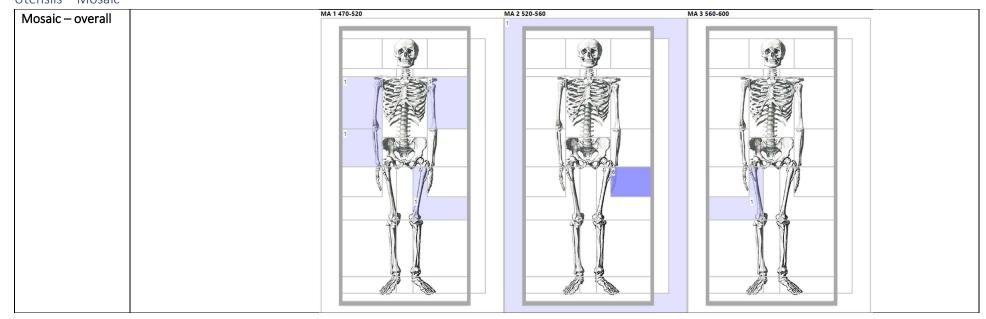


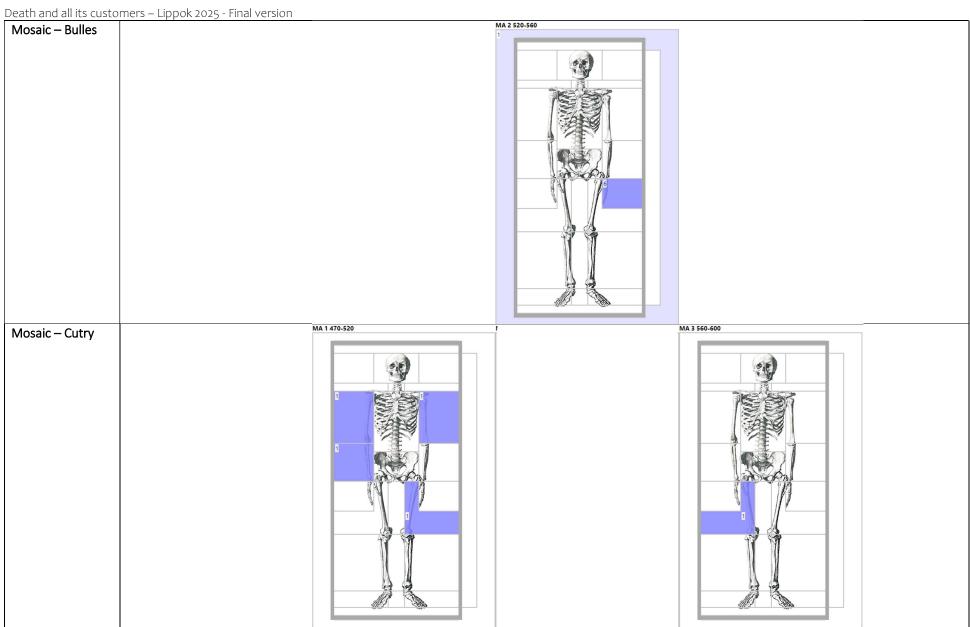






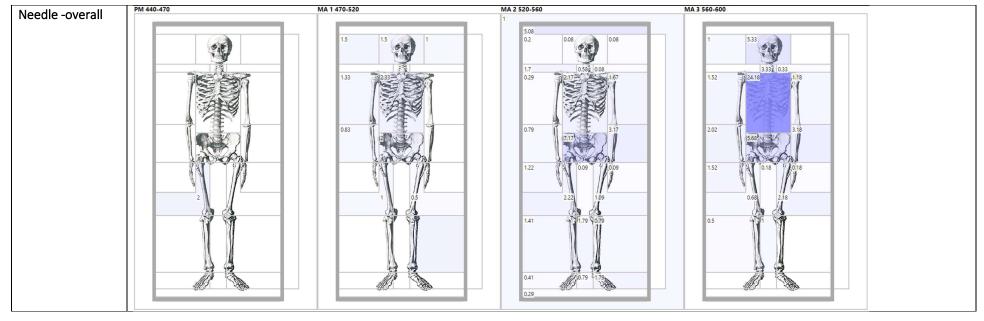


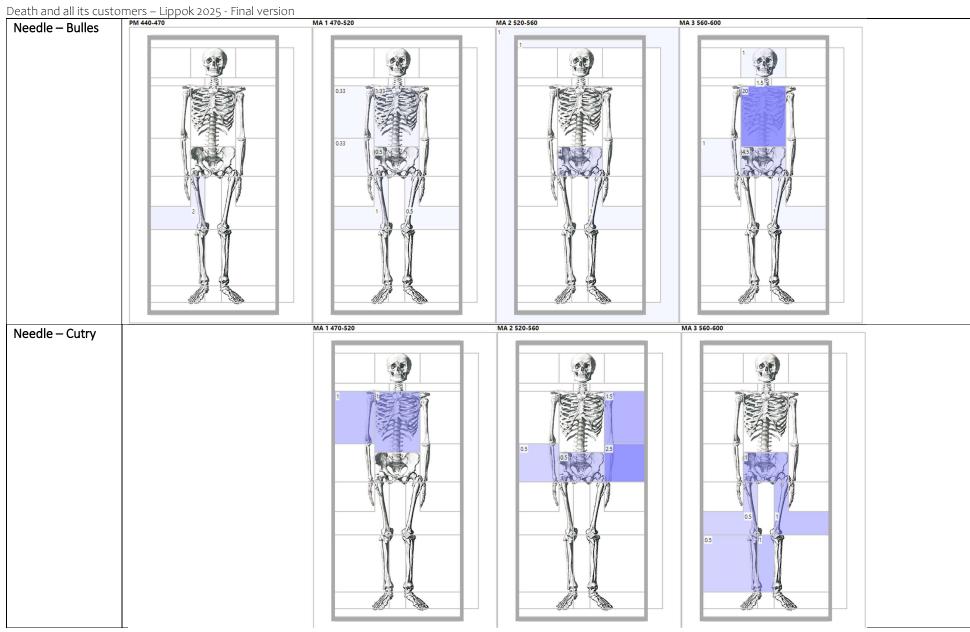


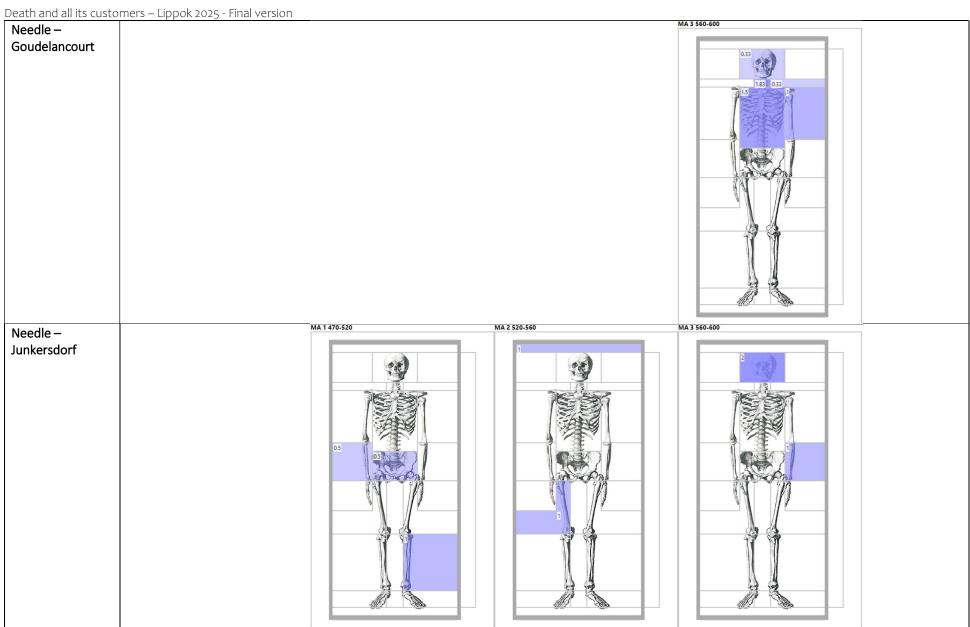


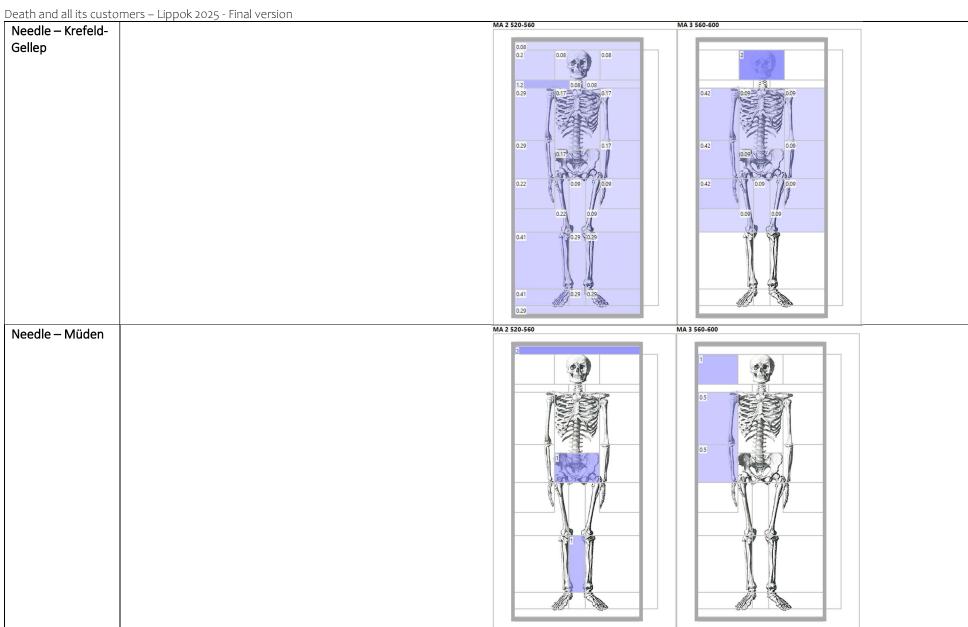
Appendix 14

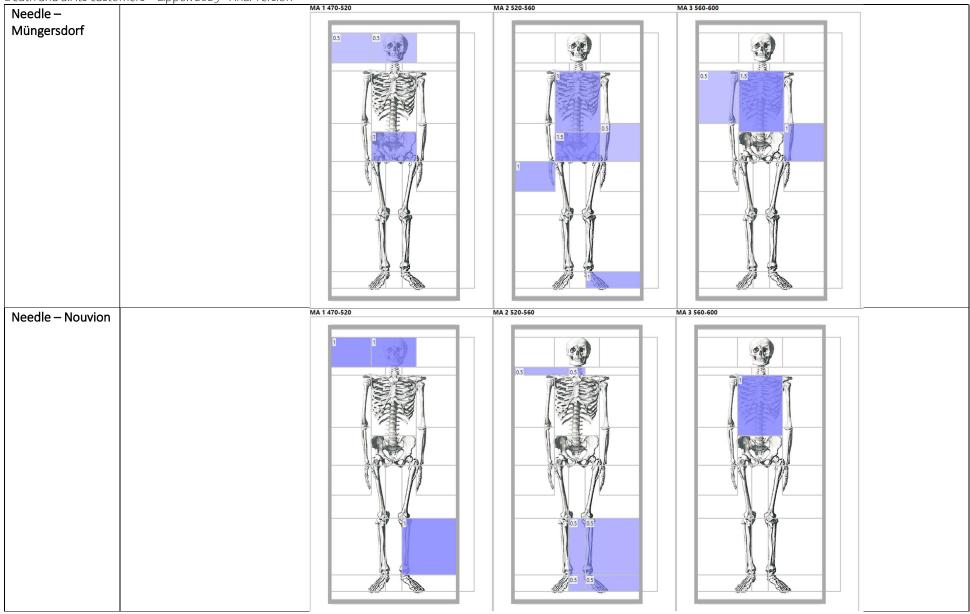
Utensils – Needles

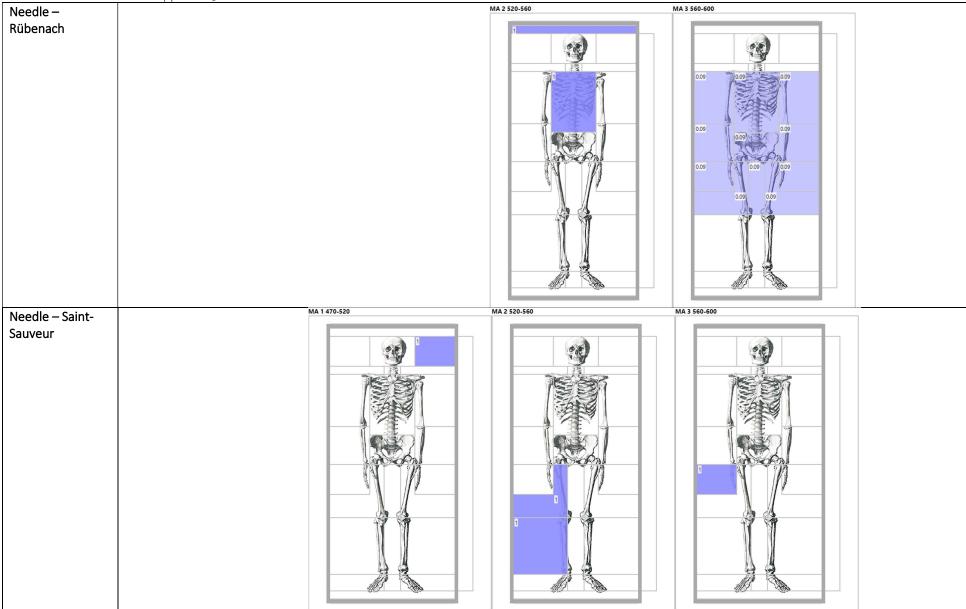






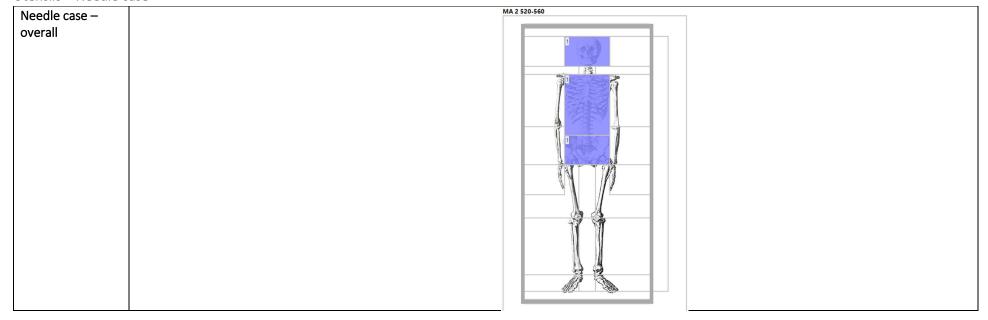


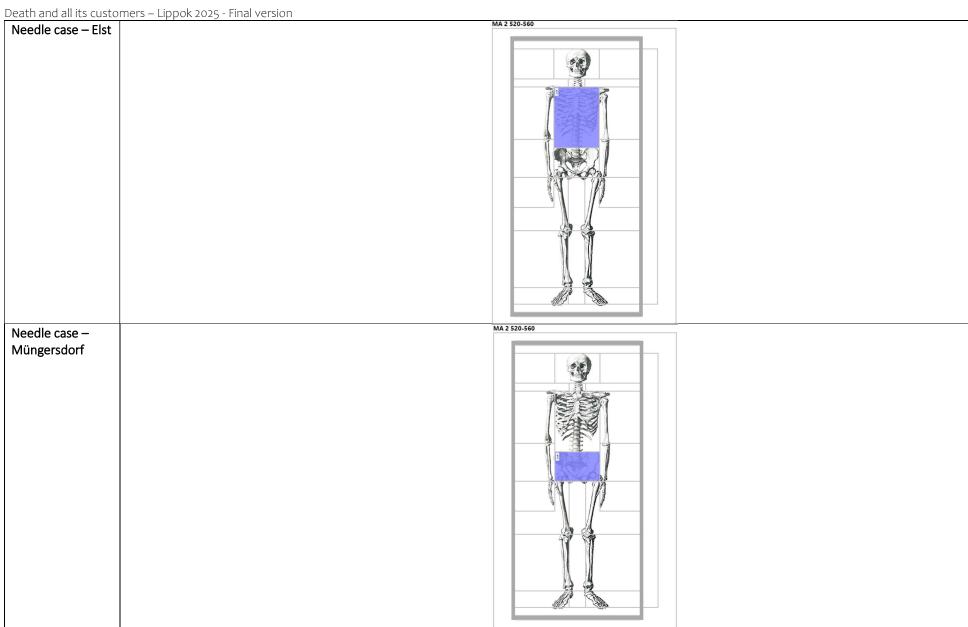


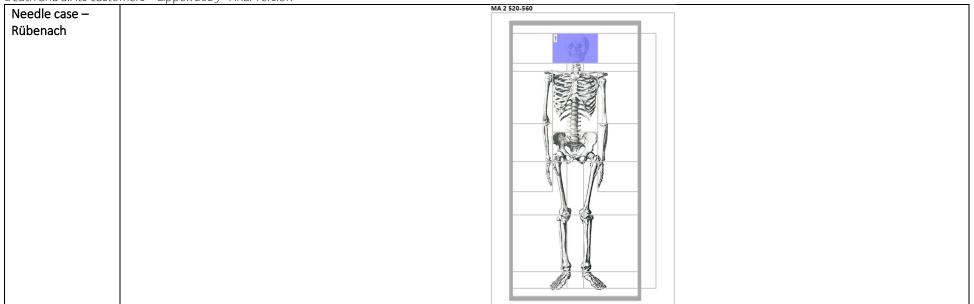




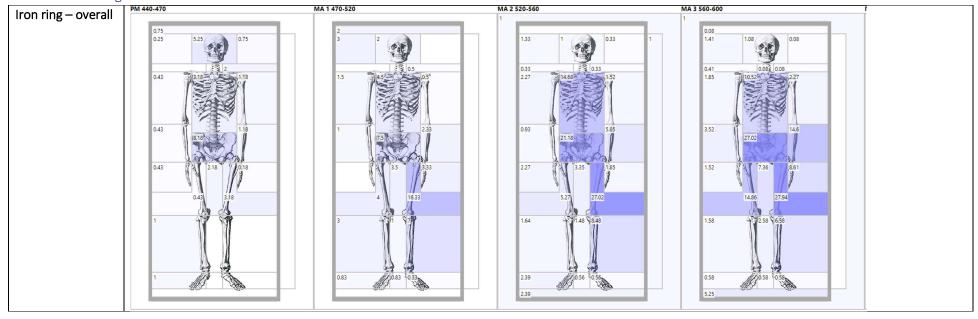
Utensils – Needle case

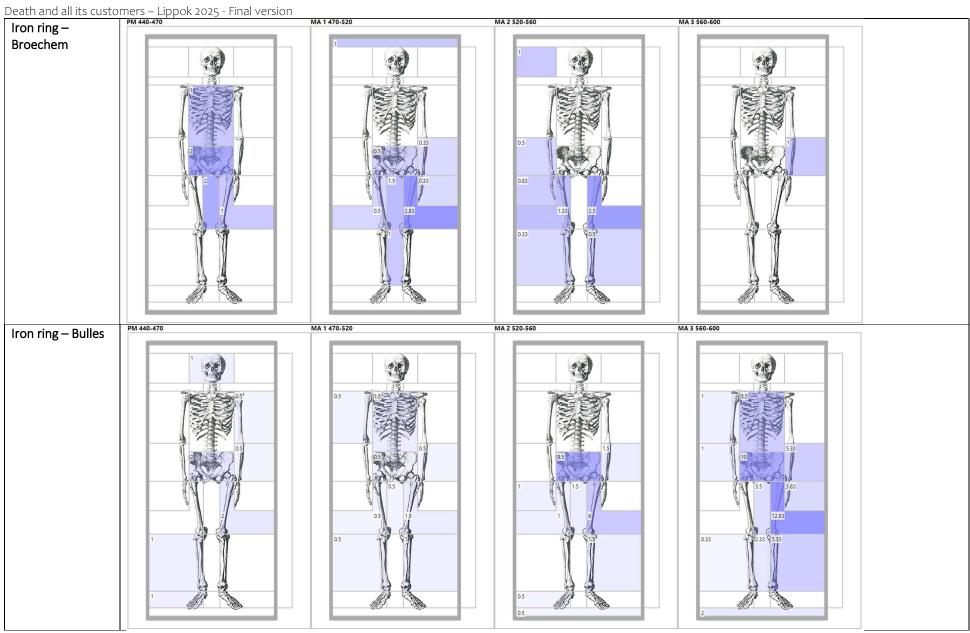


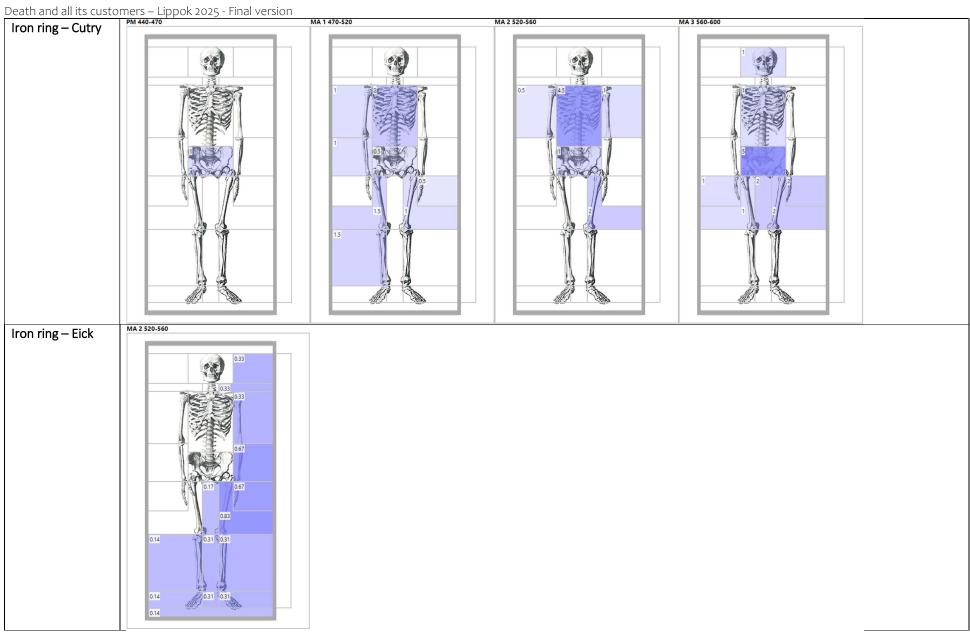


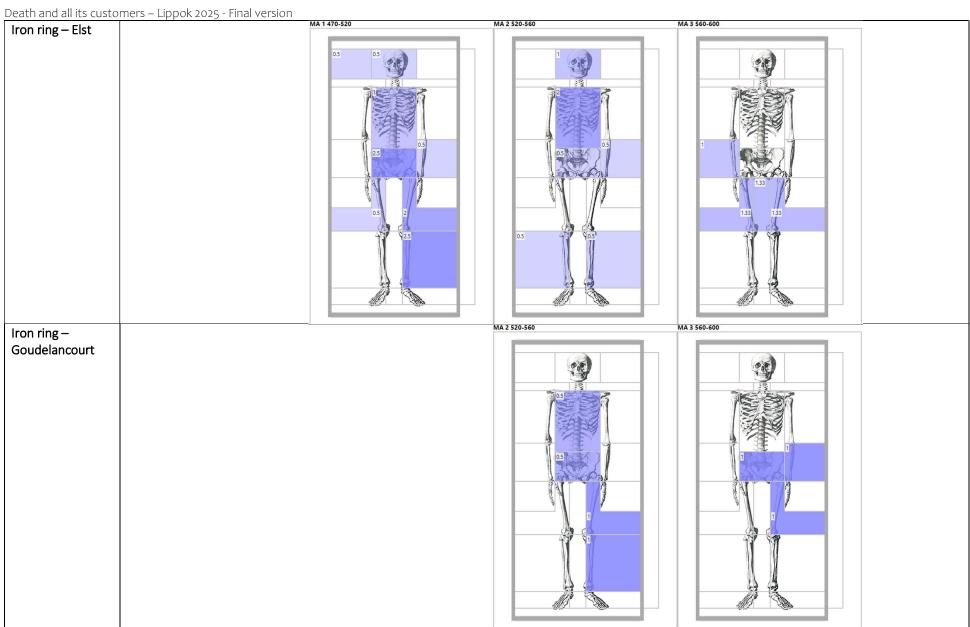


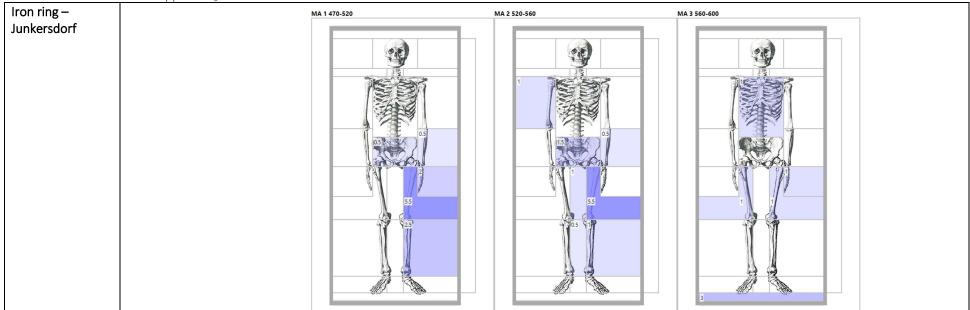
Utensils – Iron ring

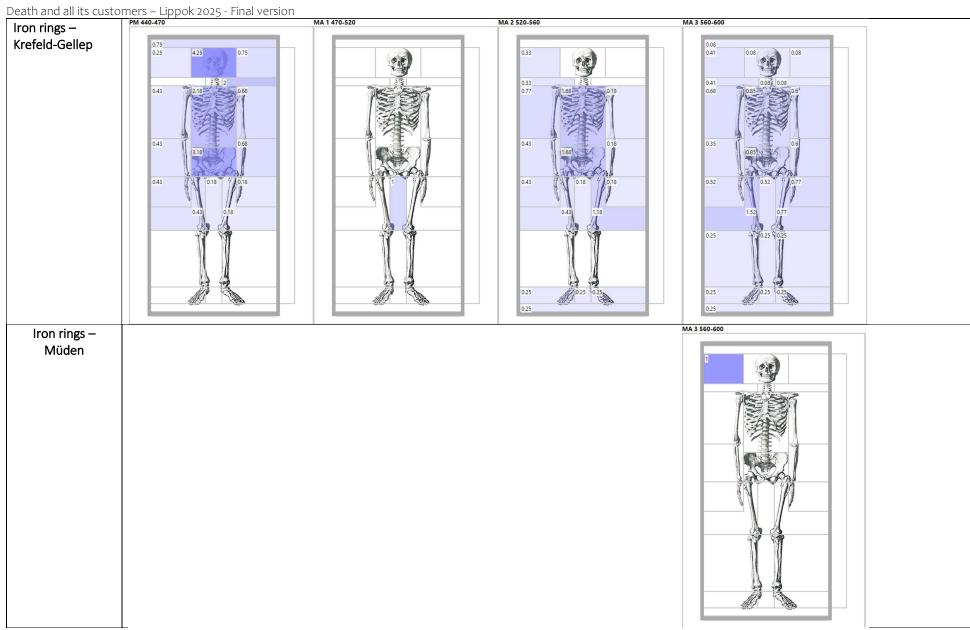


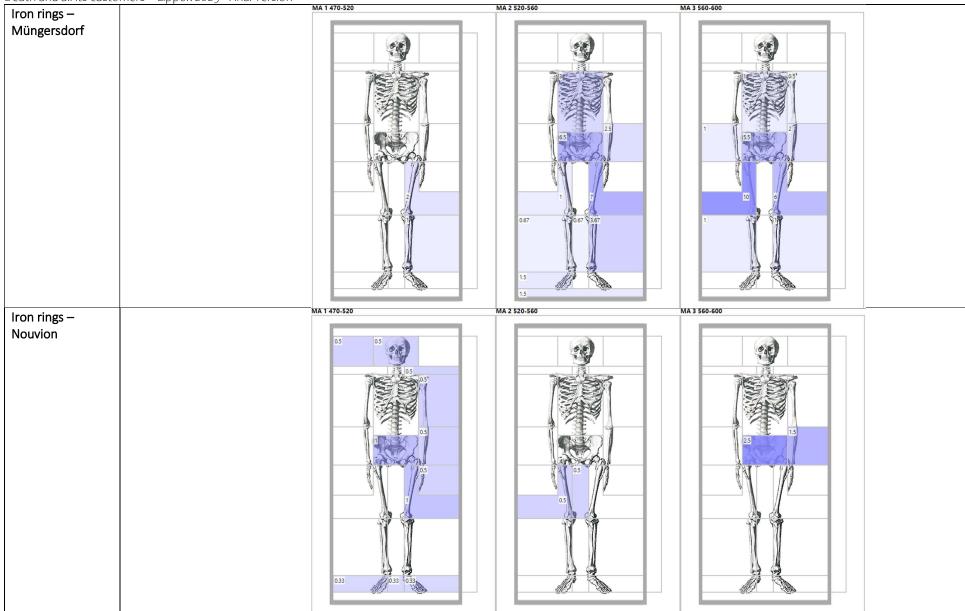


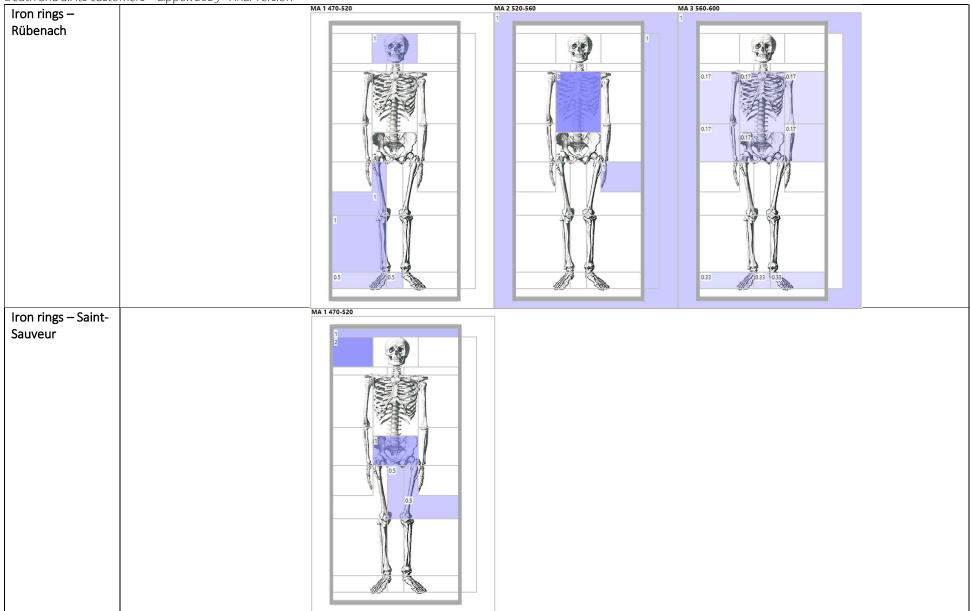


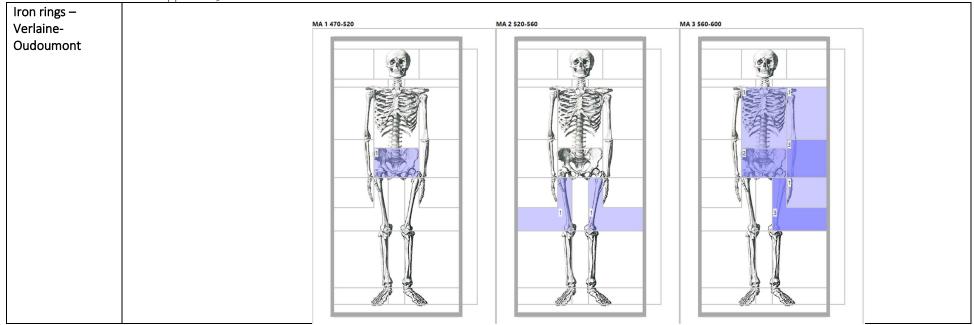




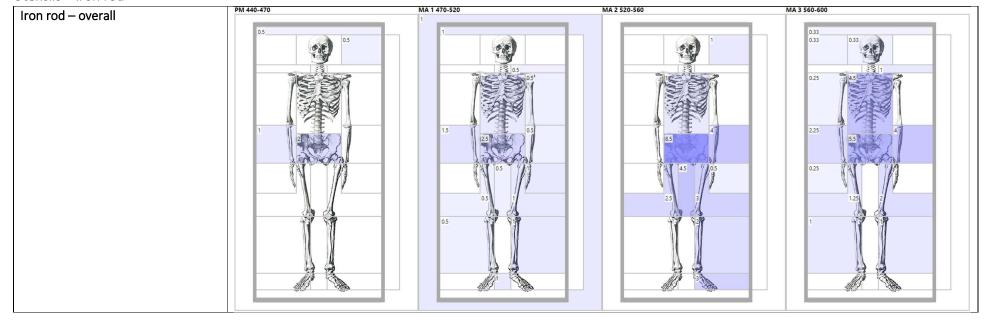


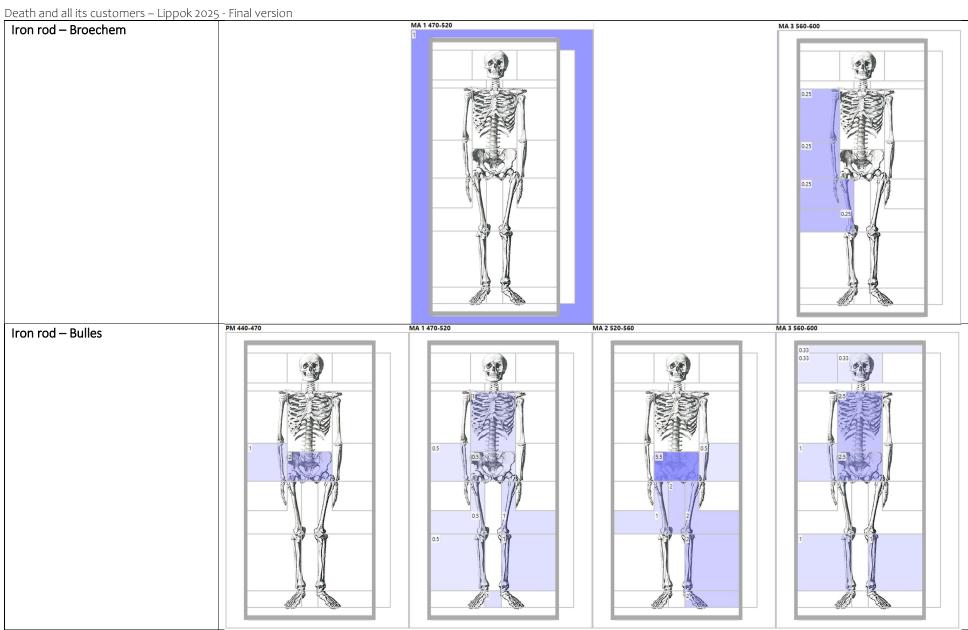


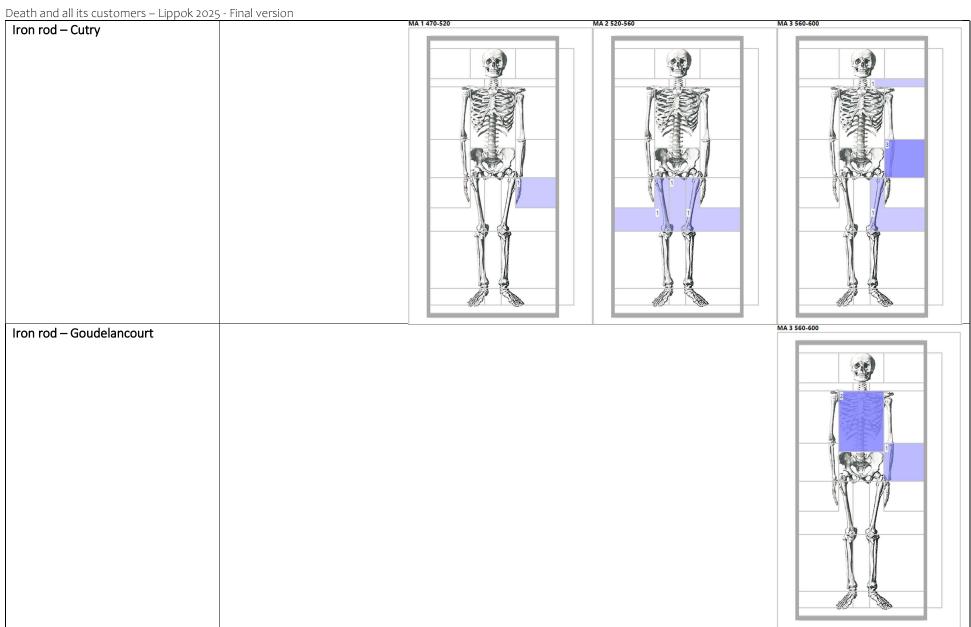


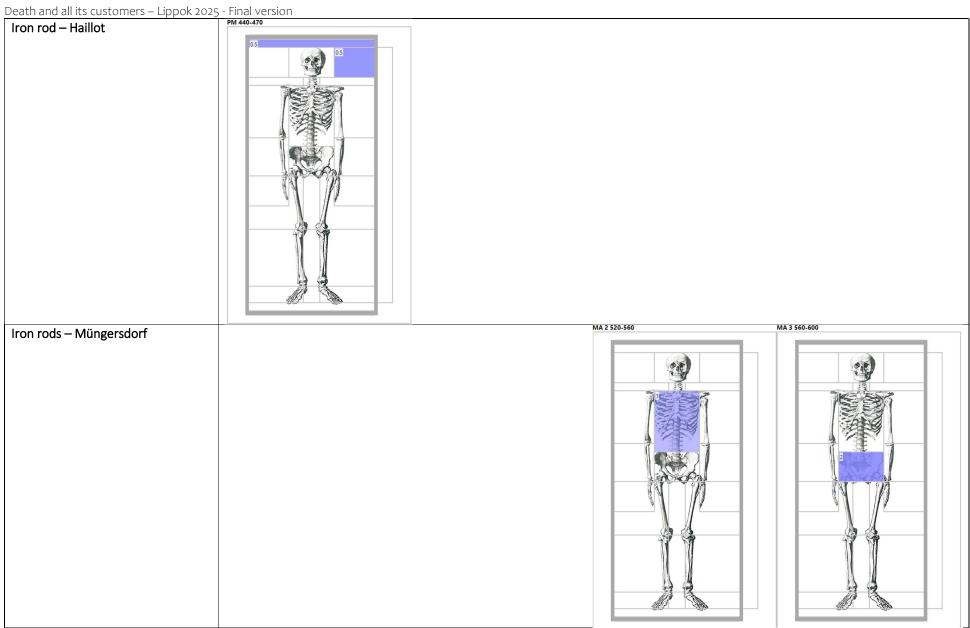


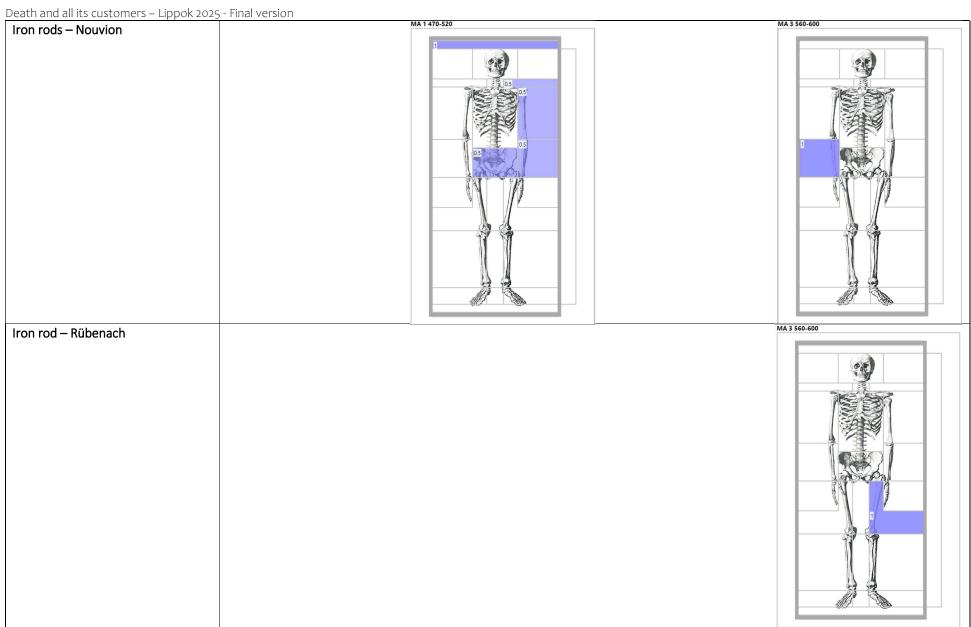
Utensils – Iron rod

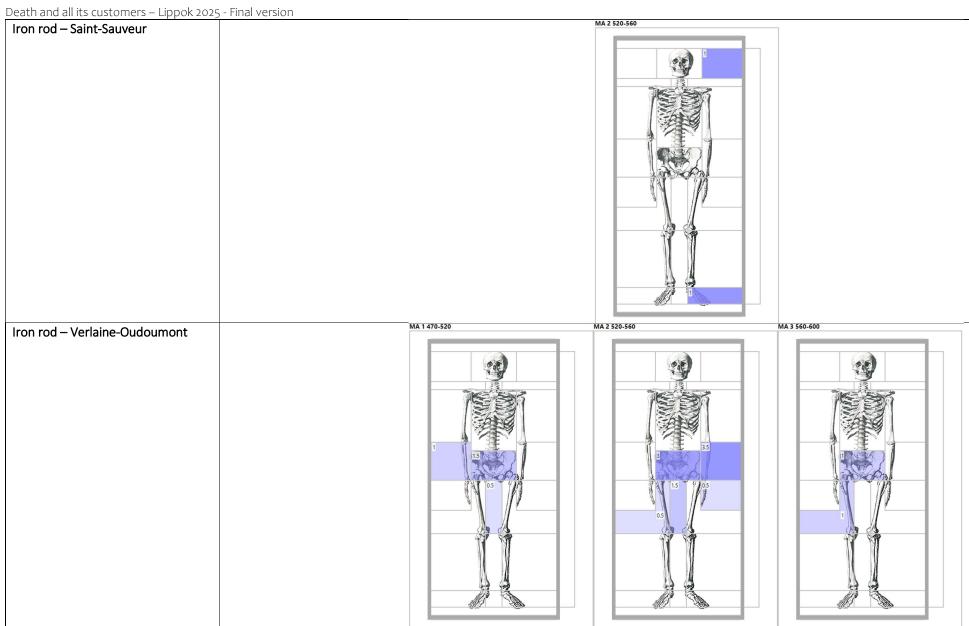






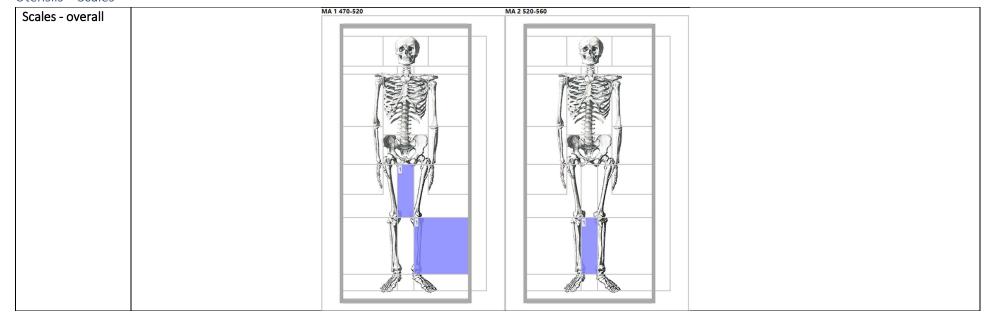


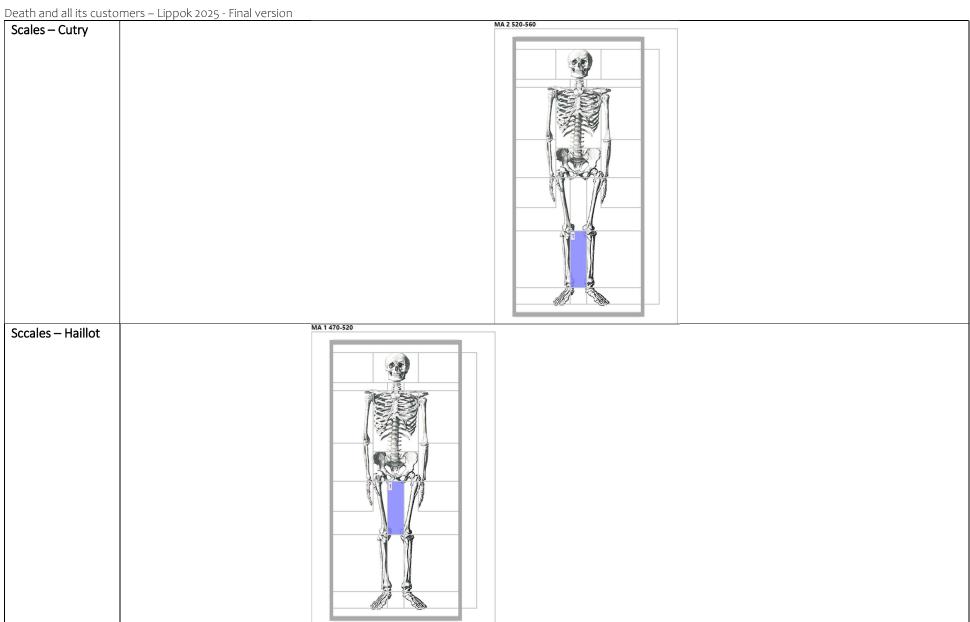


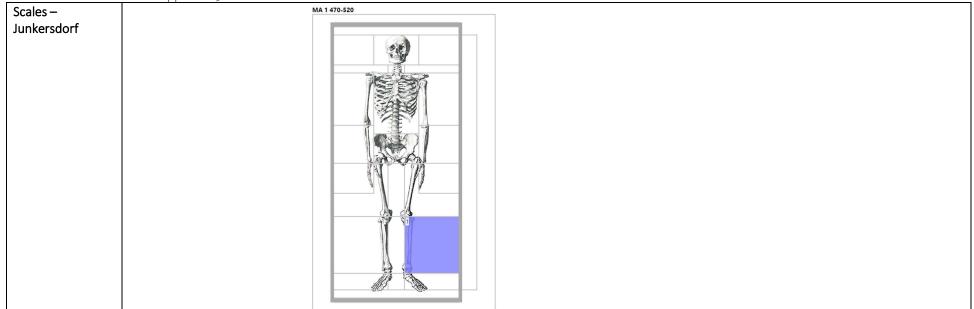


232

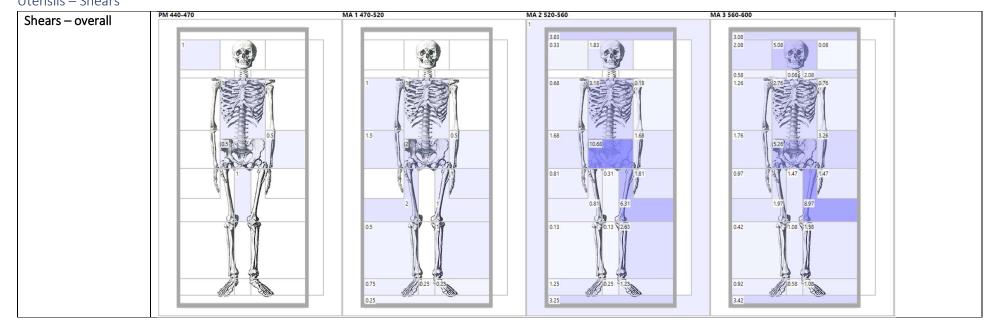
Utensils – Scales

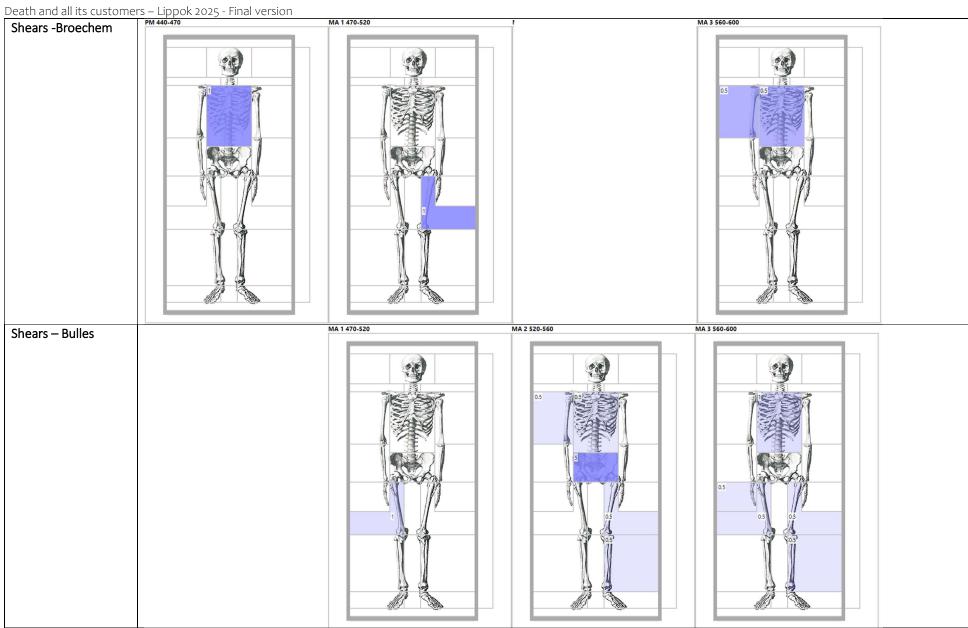


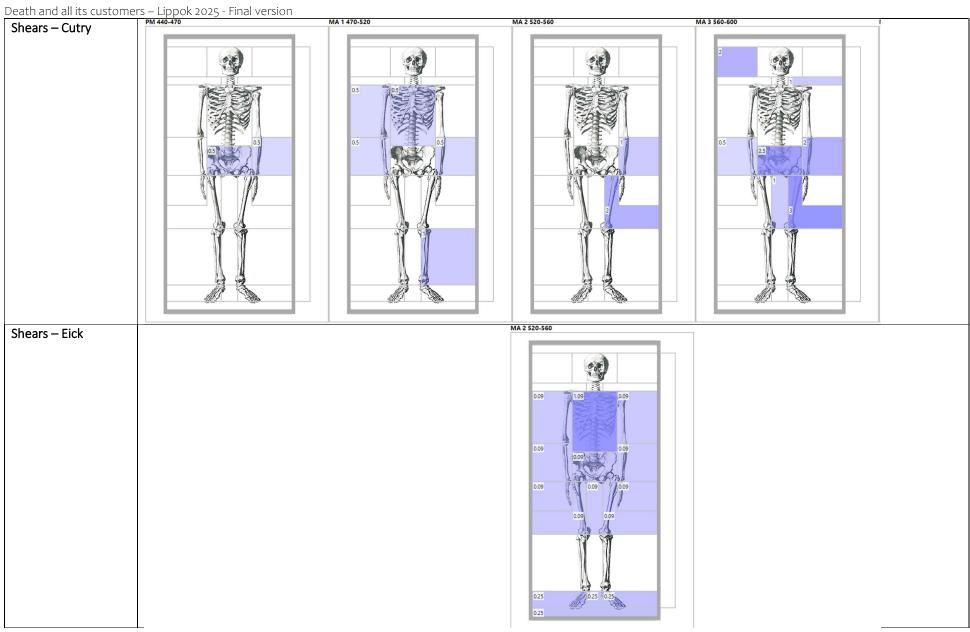


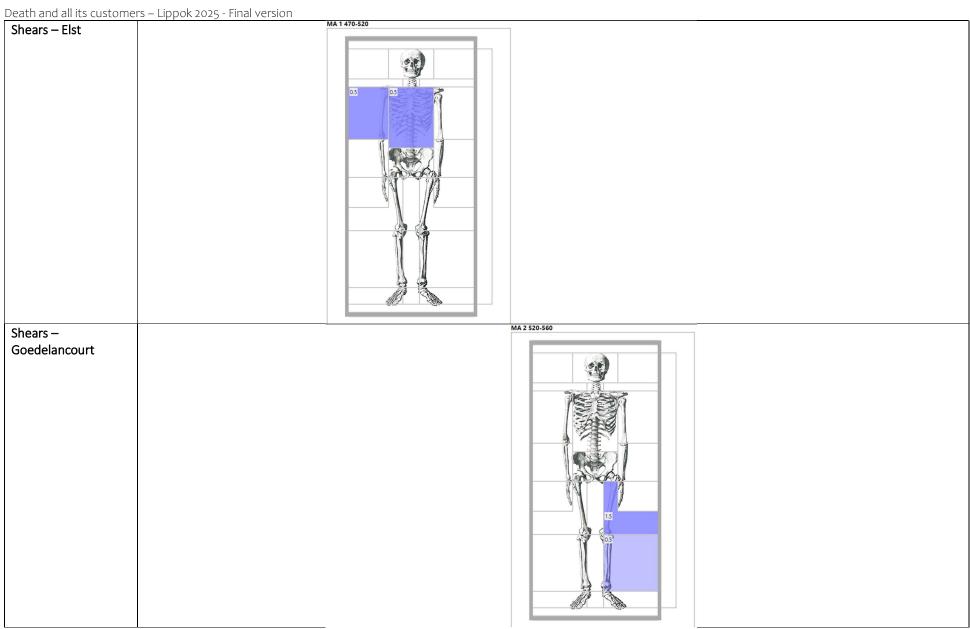


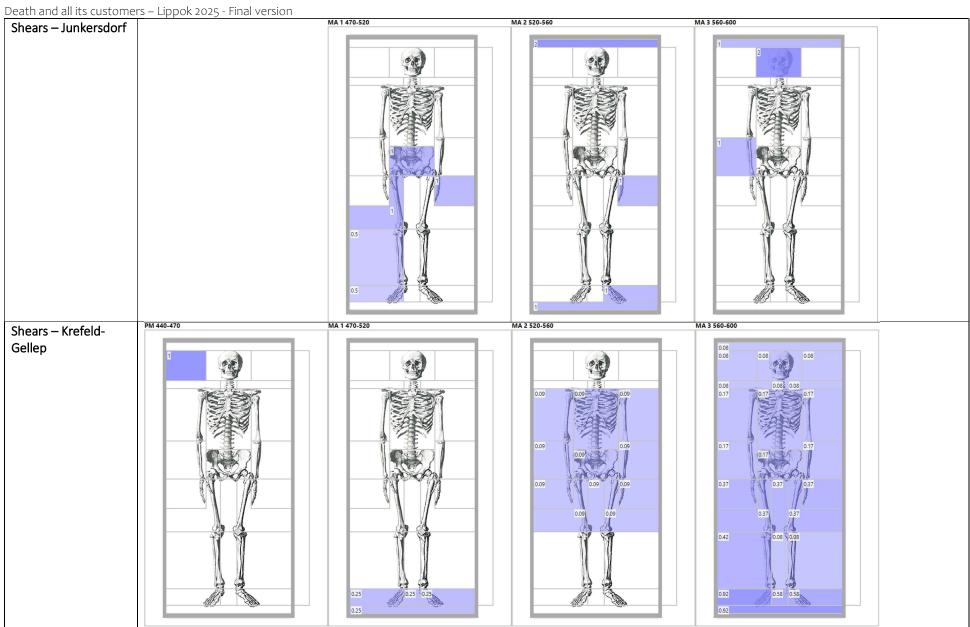
Death and all its customers – Lippok 2025 - Final version Utensils – Shears

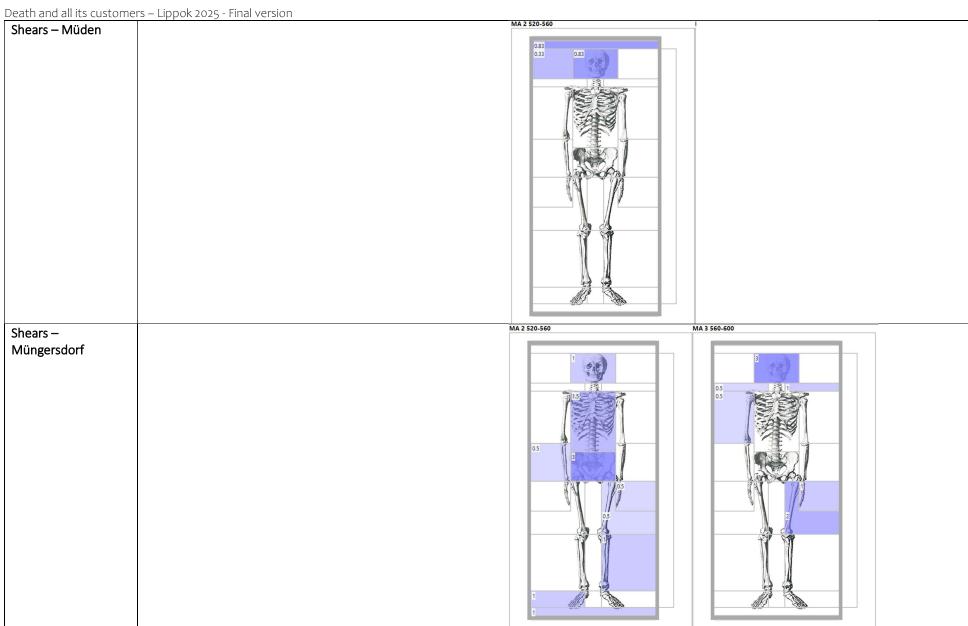


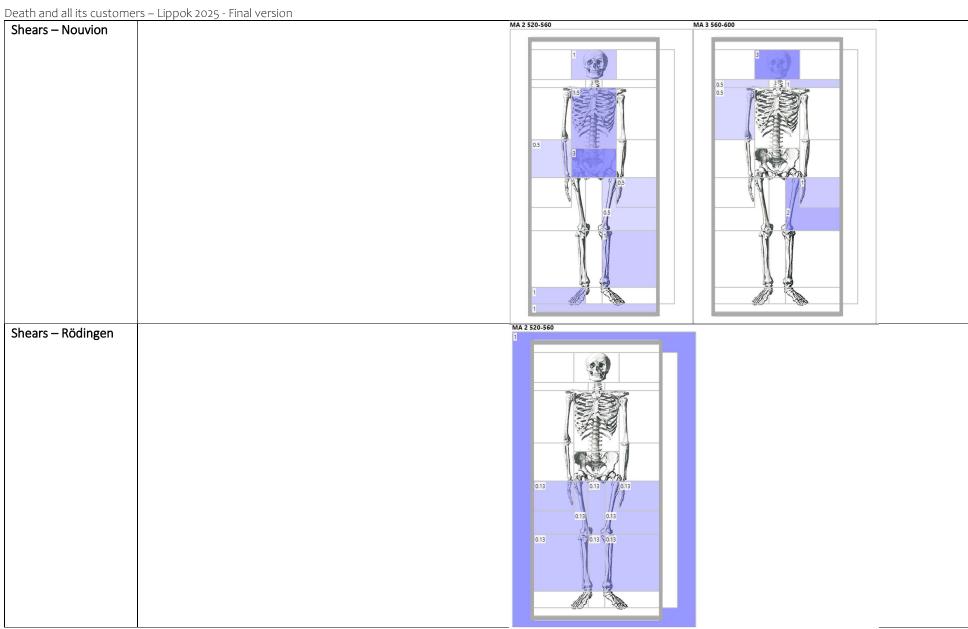


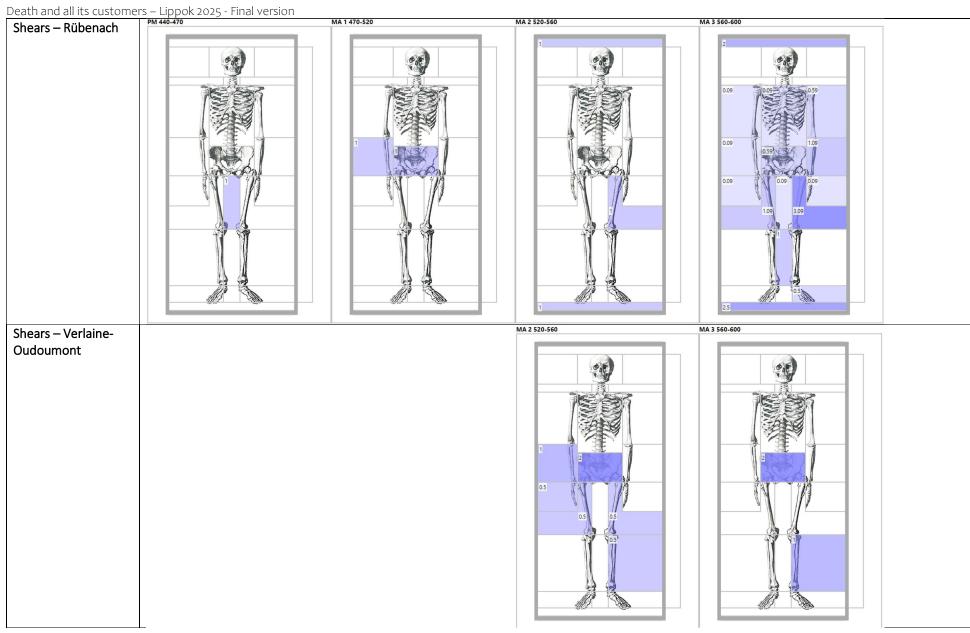






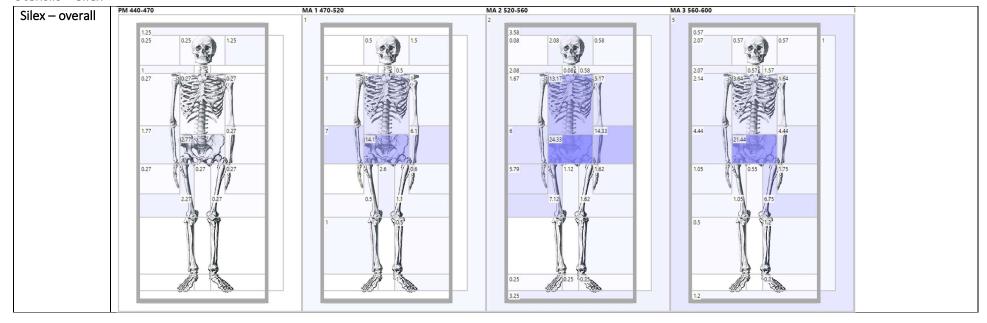


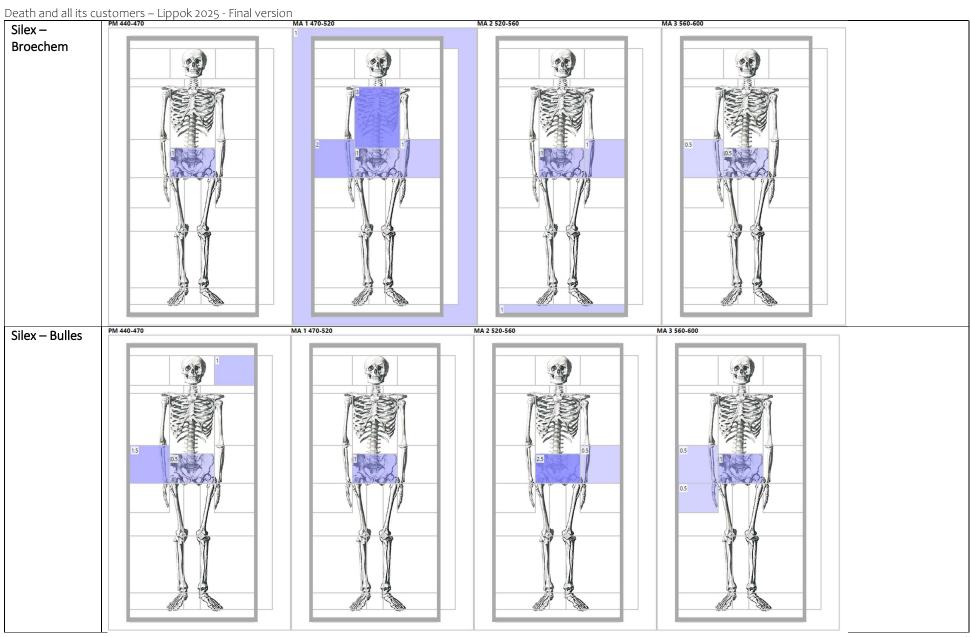


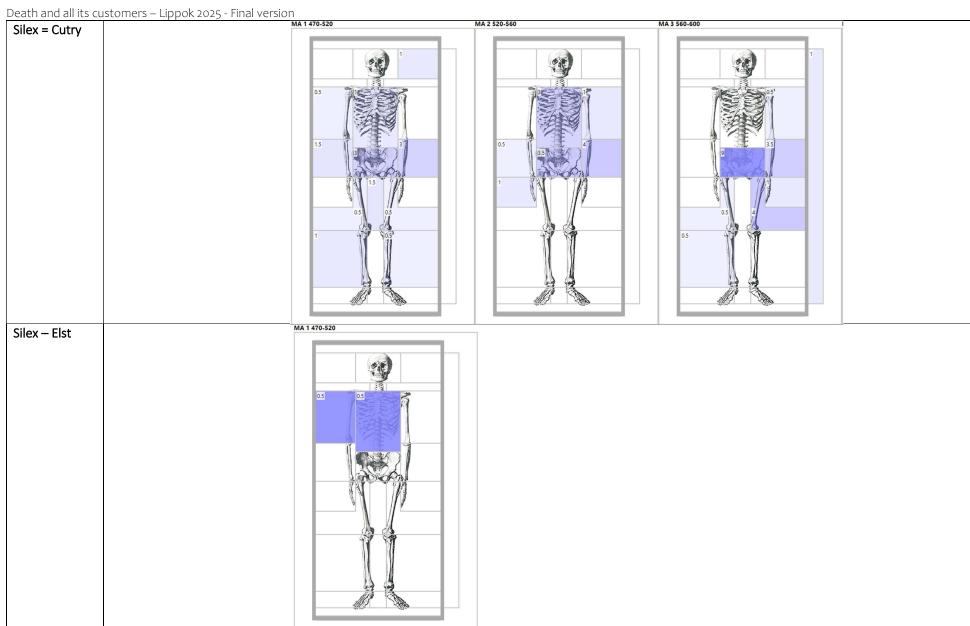


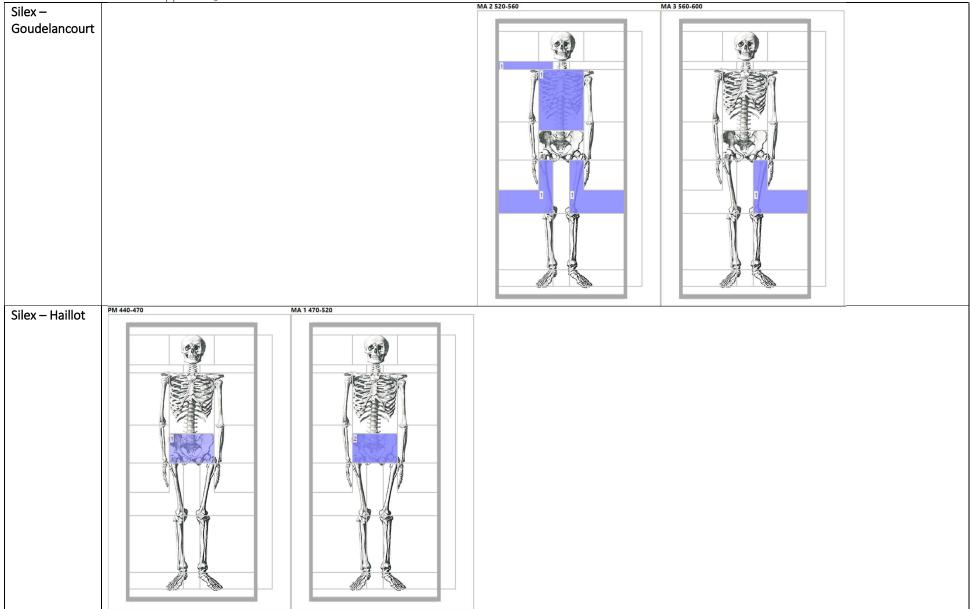
244

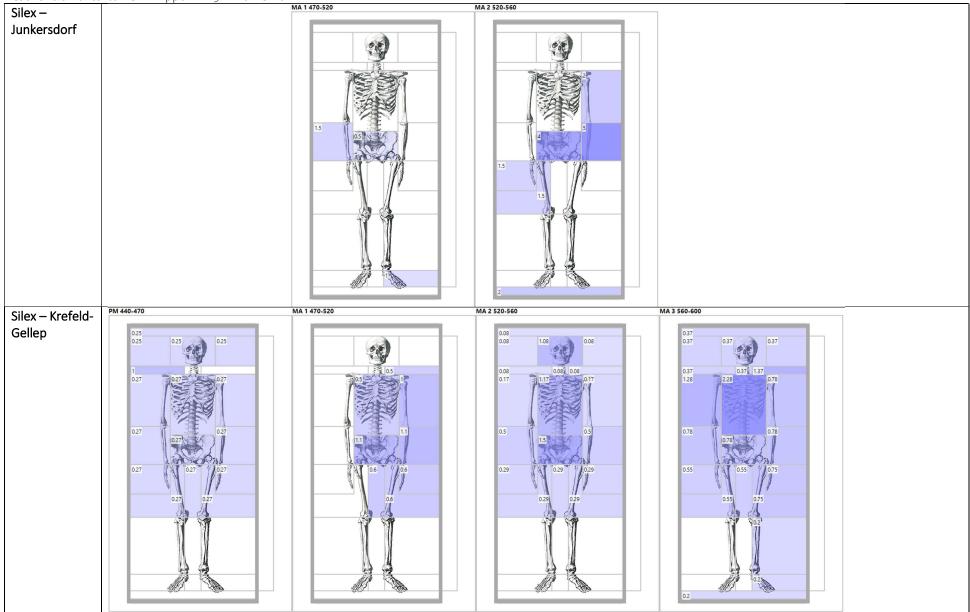
Utensils – Silex

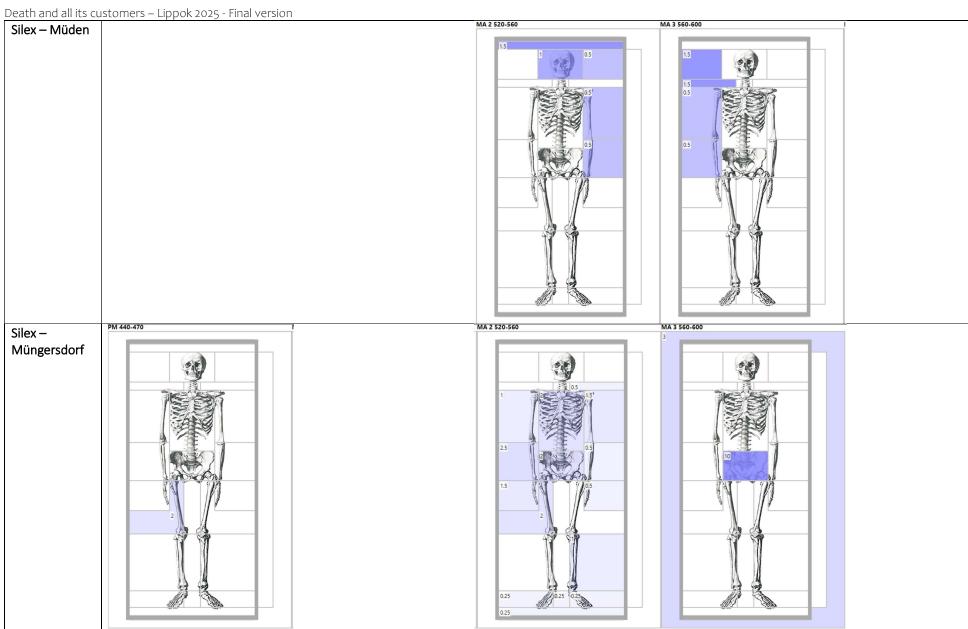


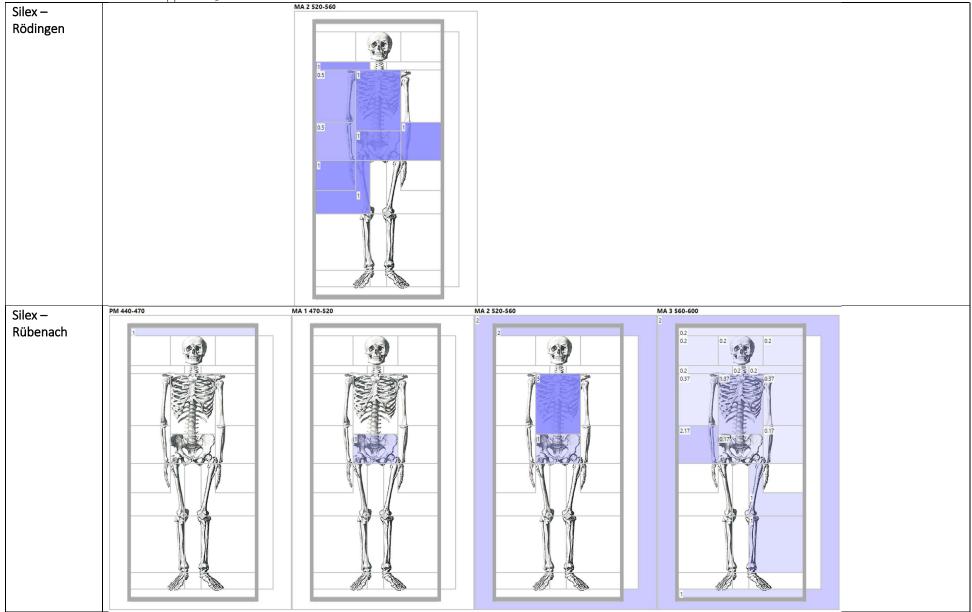


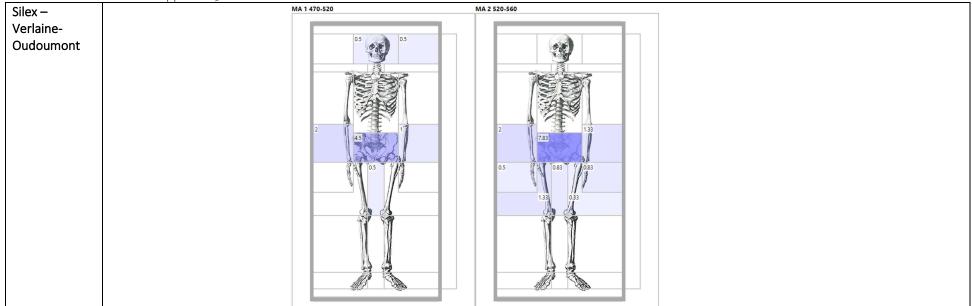


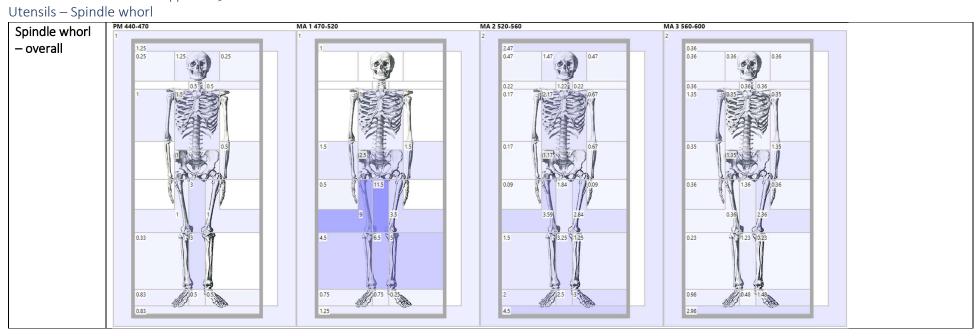


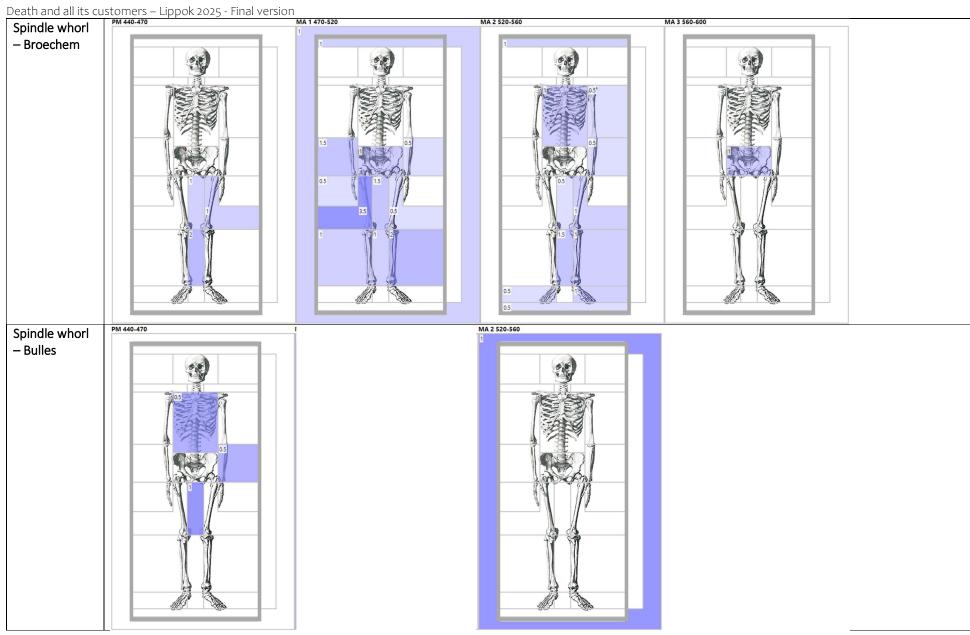


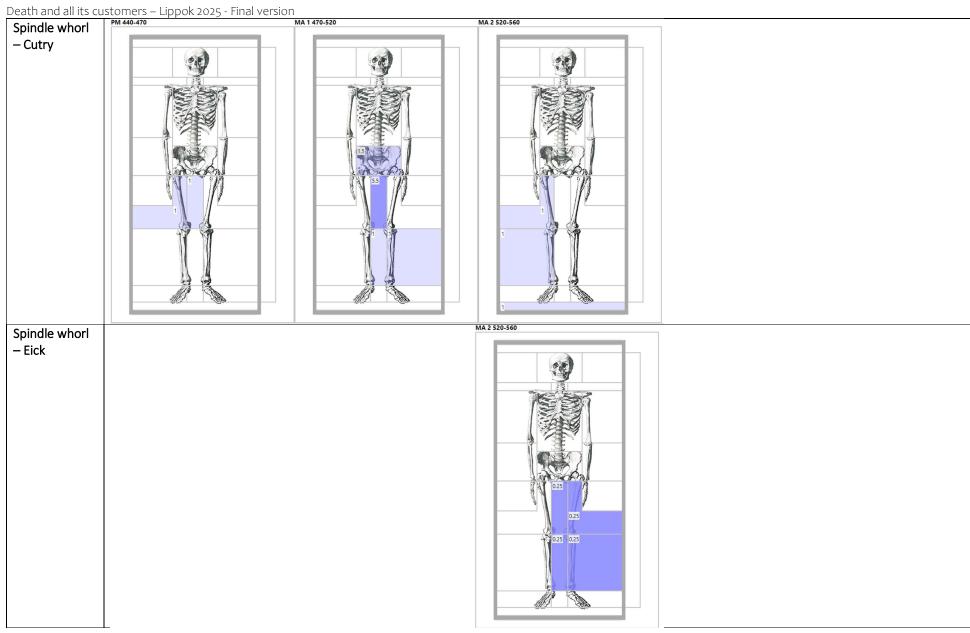


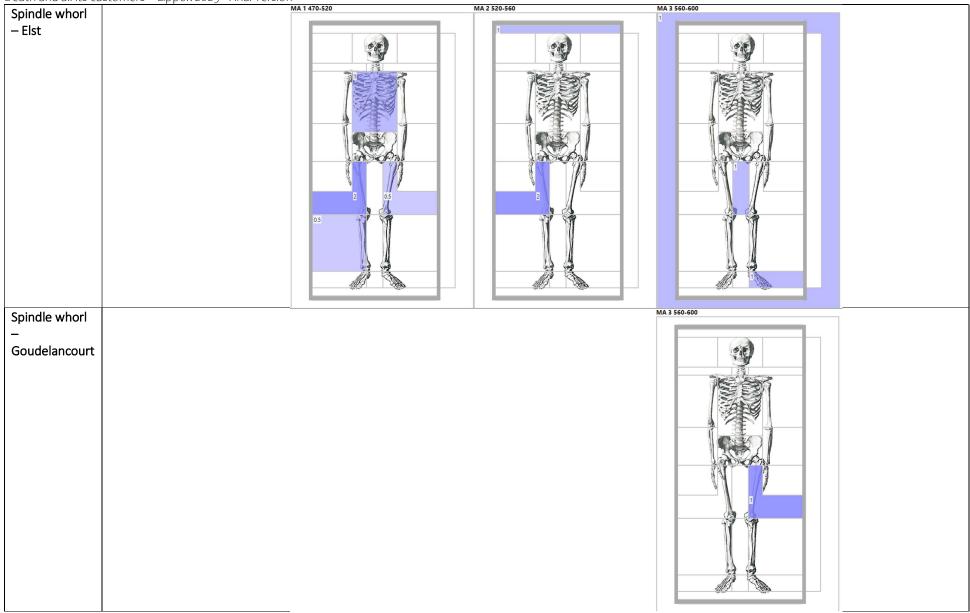






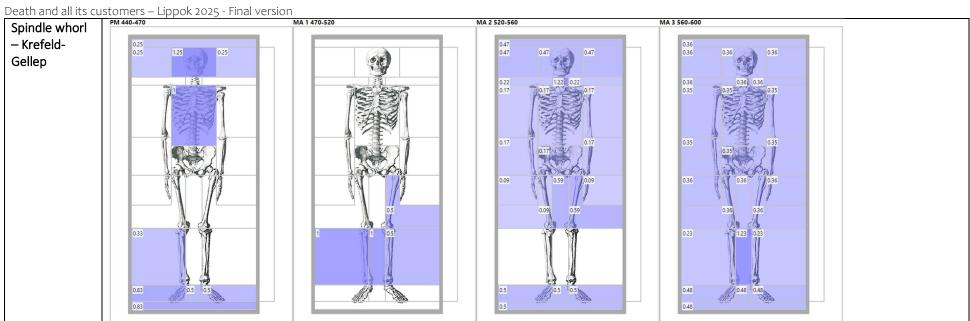




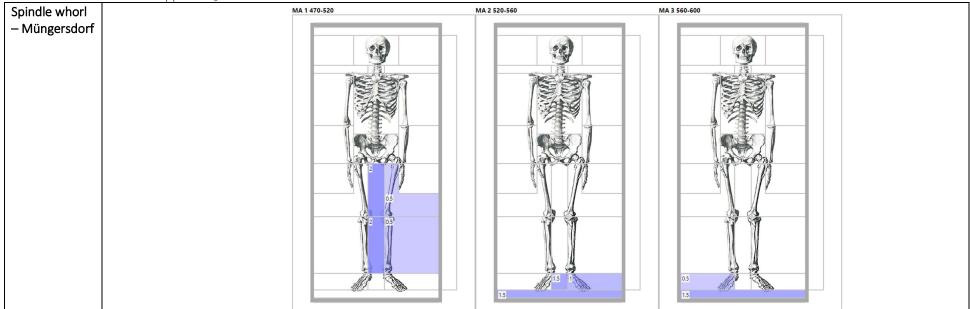


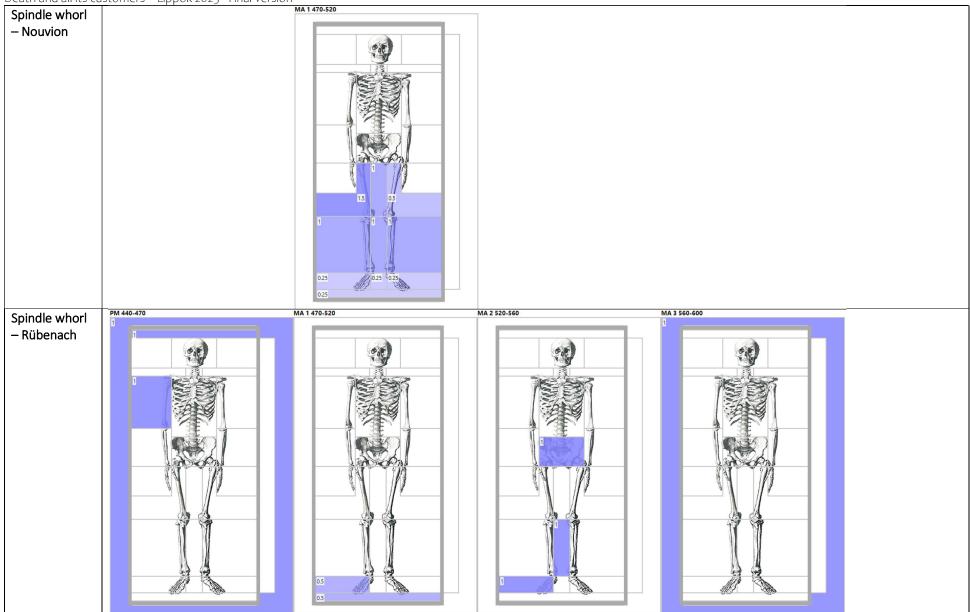
Death and all its customers – Lippok 2025 - Final version

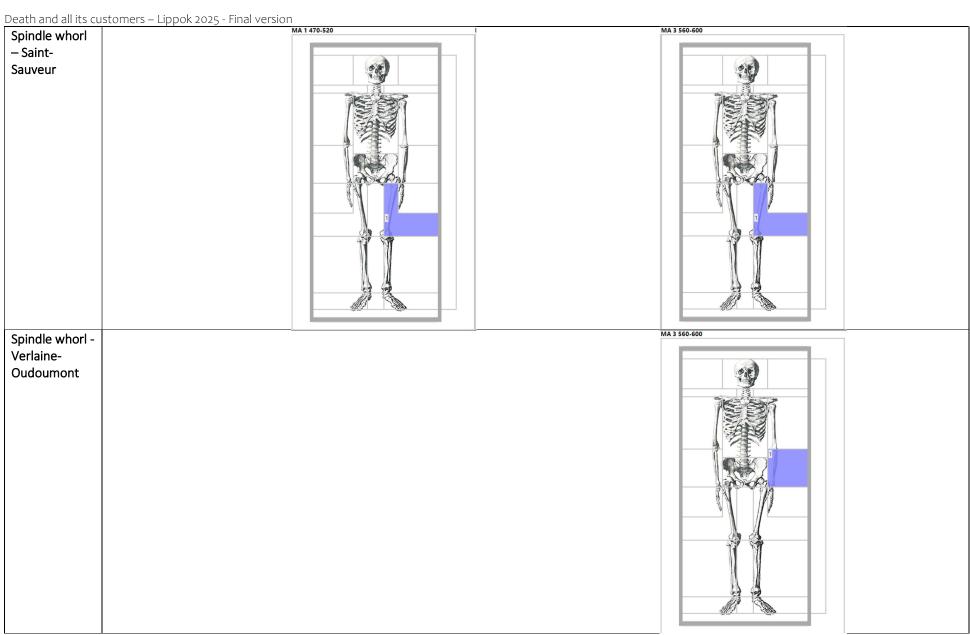
Spindlo wheel PM 440-470 Spindle whorl Haillot PM 440-470 MA 1 470-520 MA 2 520-560 MA 3 560-600 Spindle whorl Junkersdorf



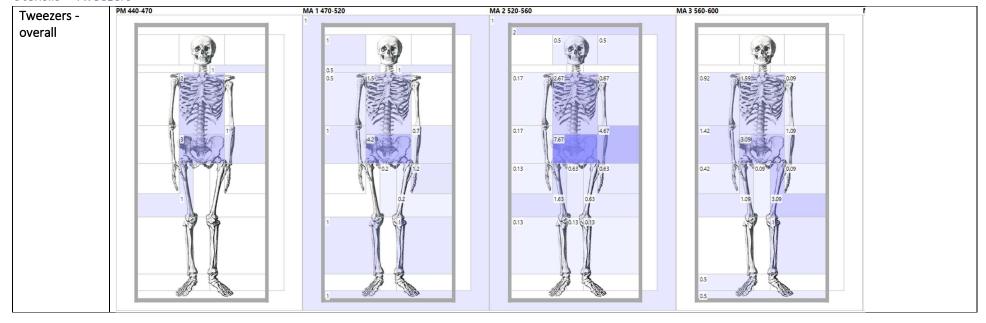


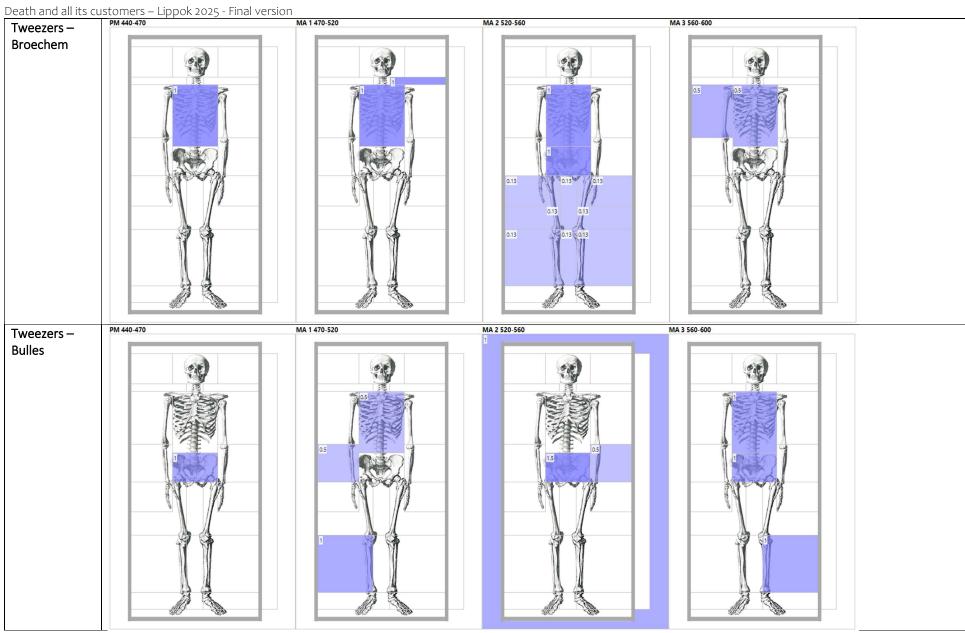


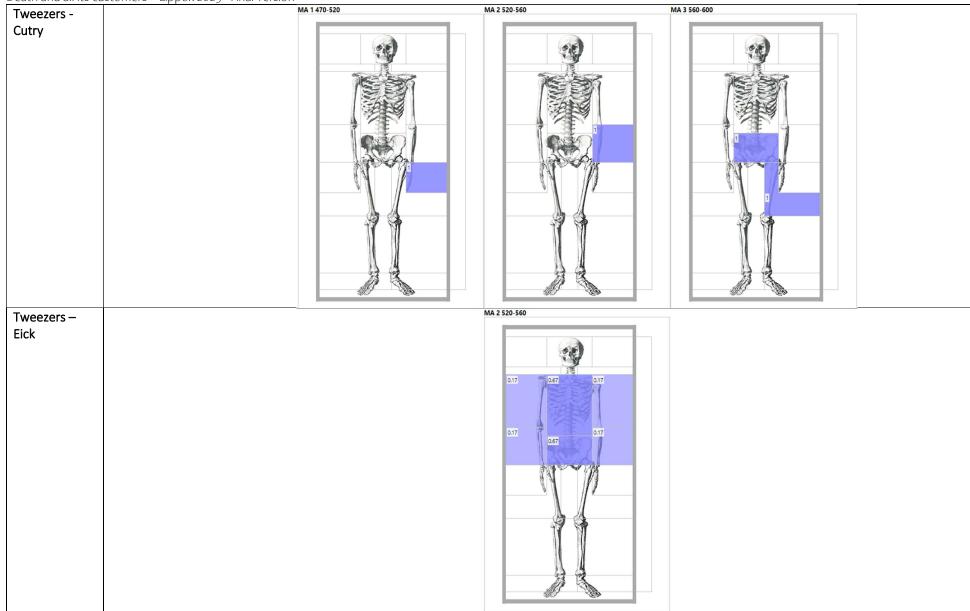


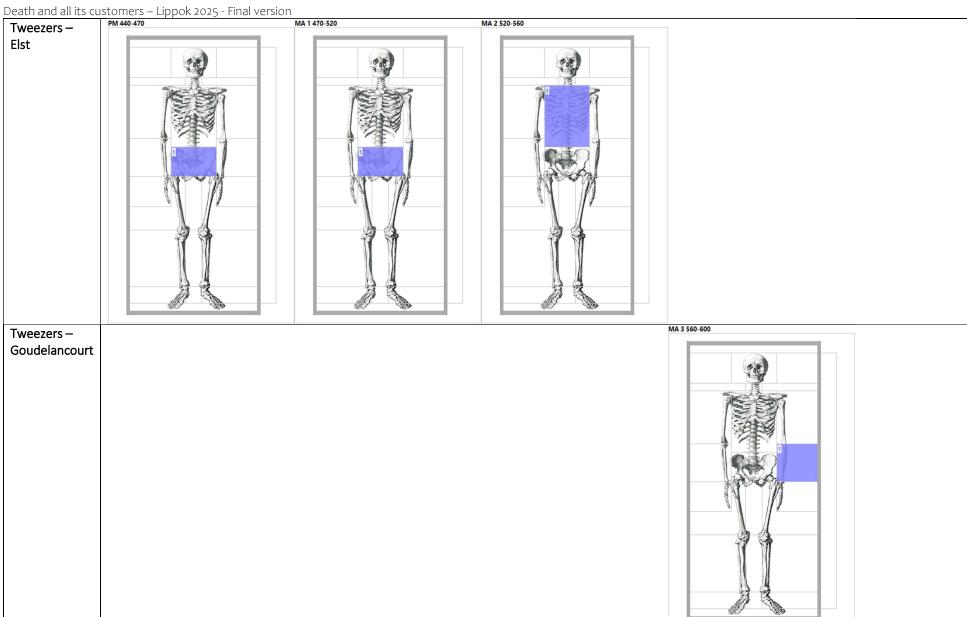


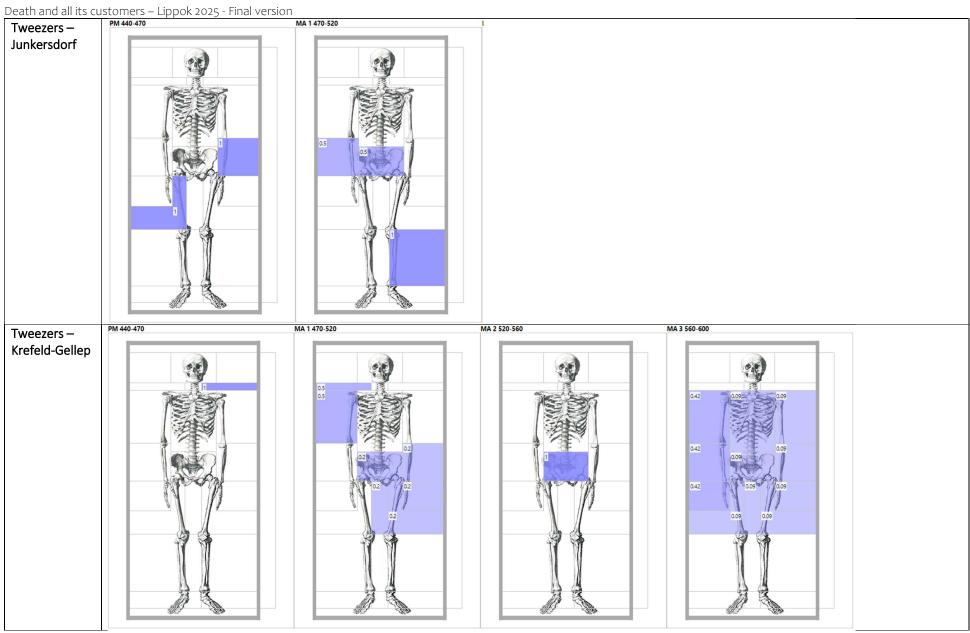
Utensils – Tweezers

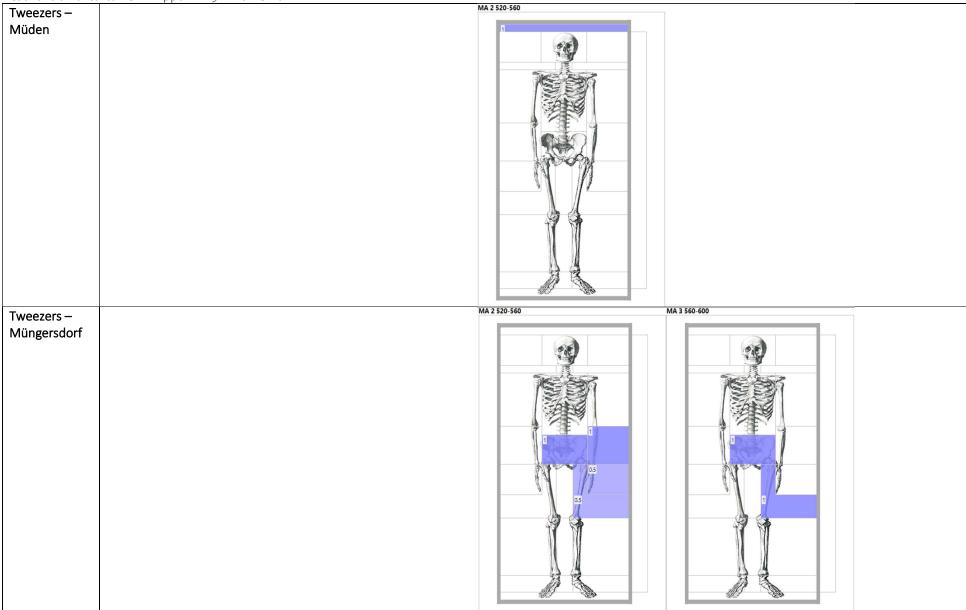


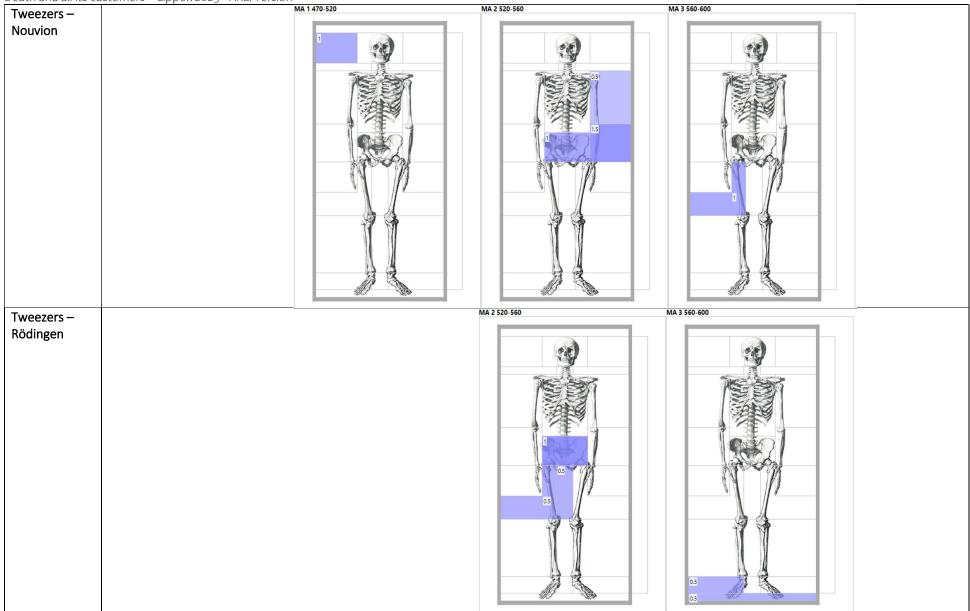


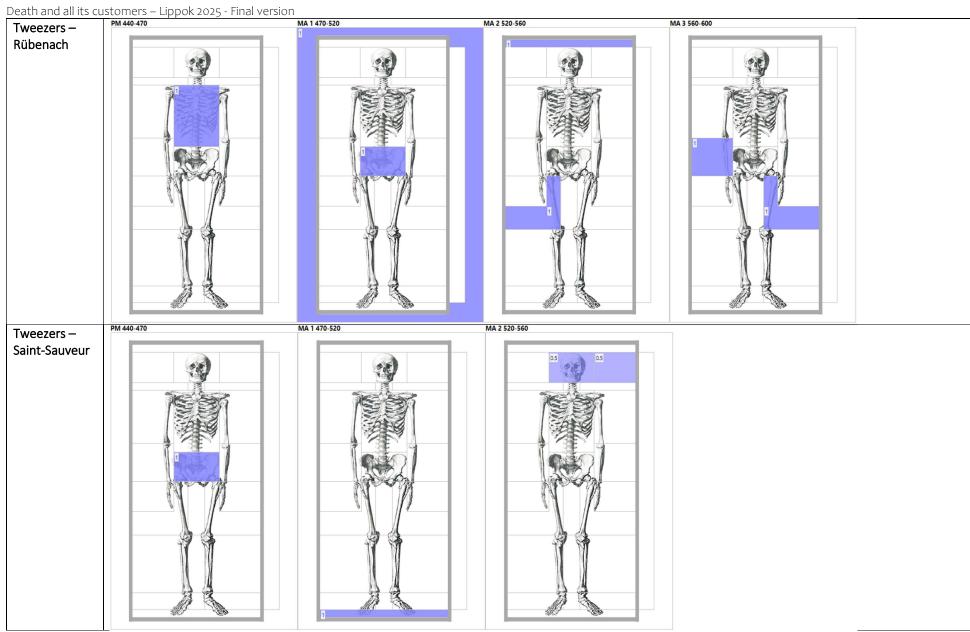


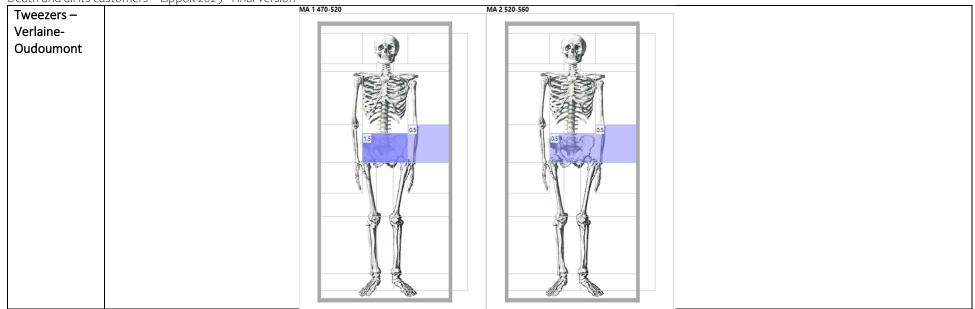




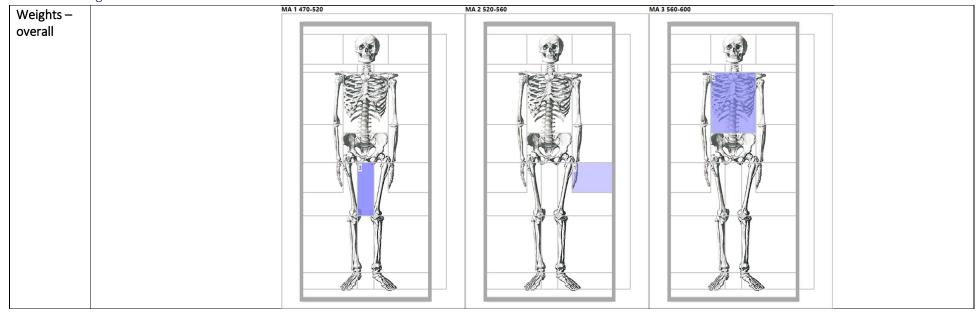


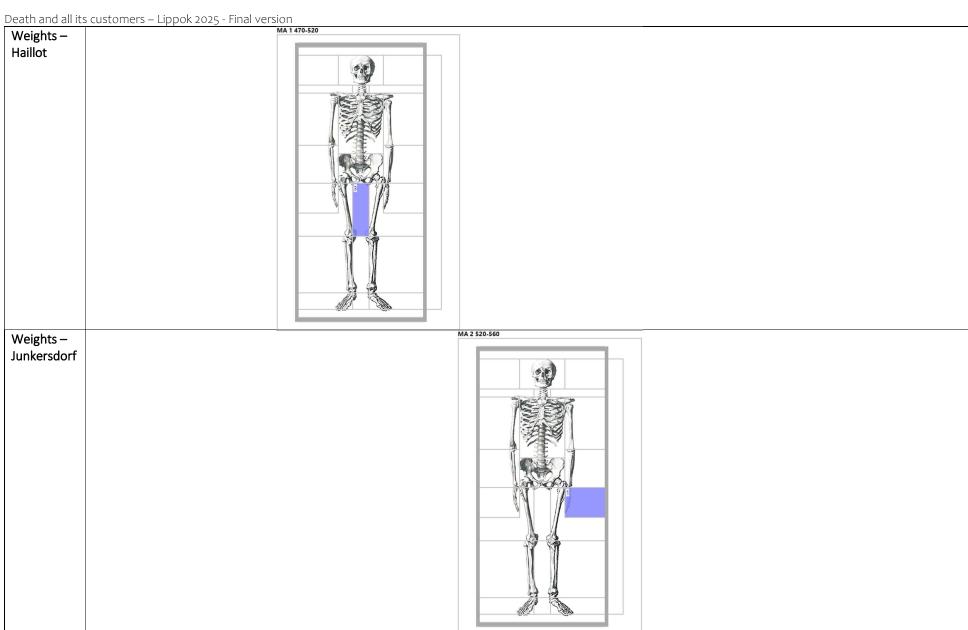


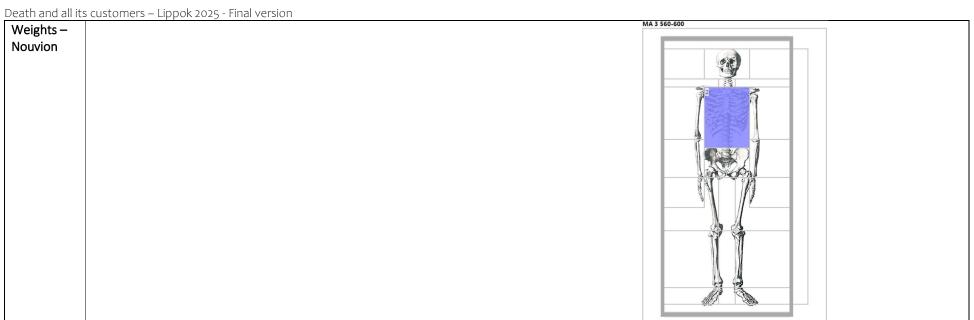




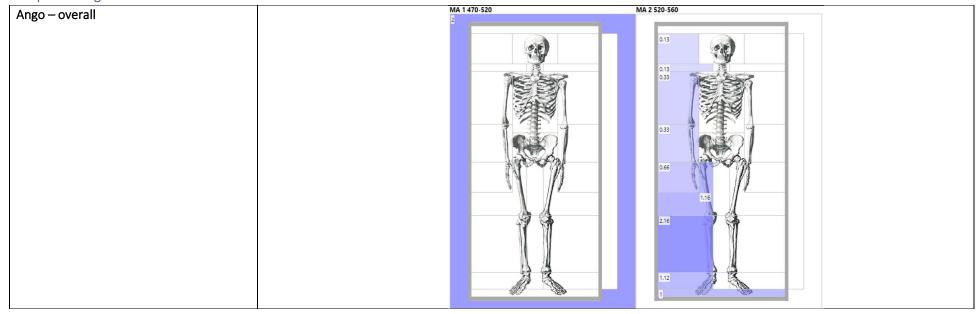
Utensils – Weights

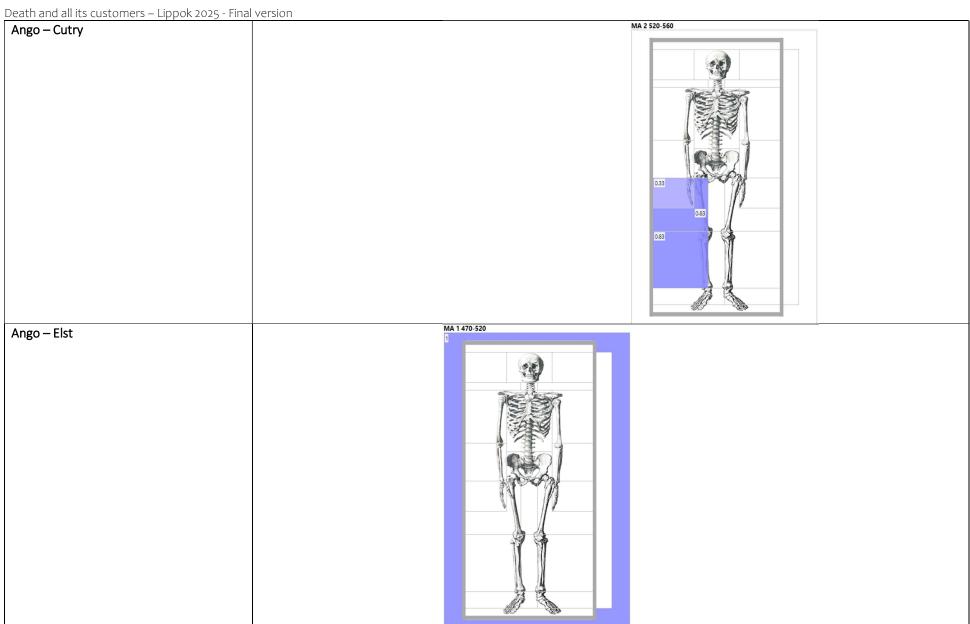


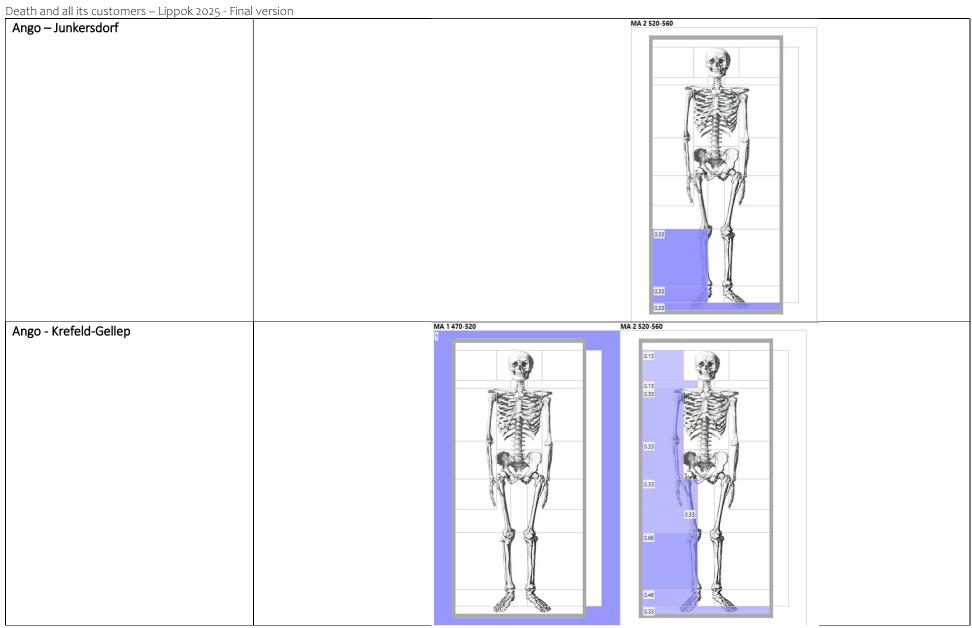


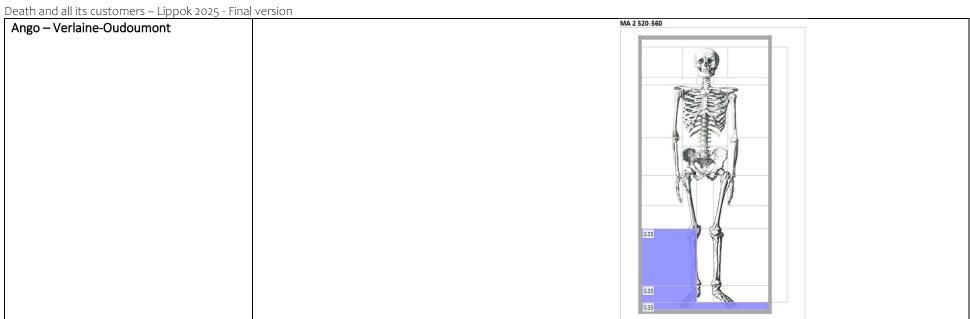


Weapons - Ango

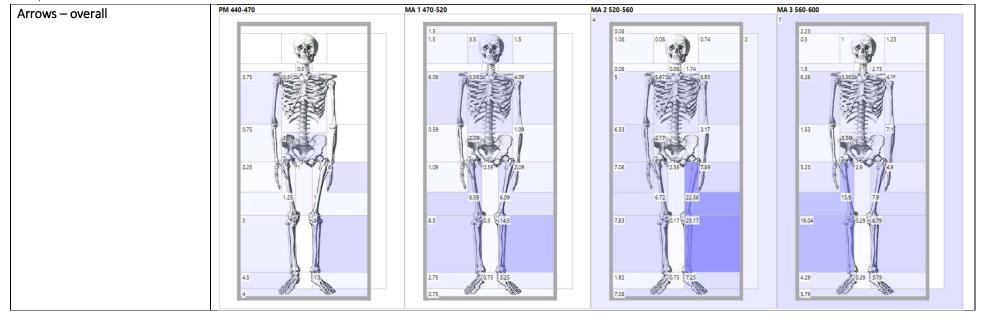


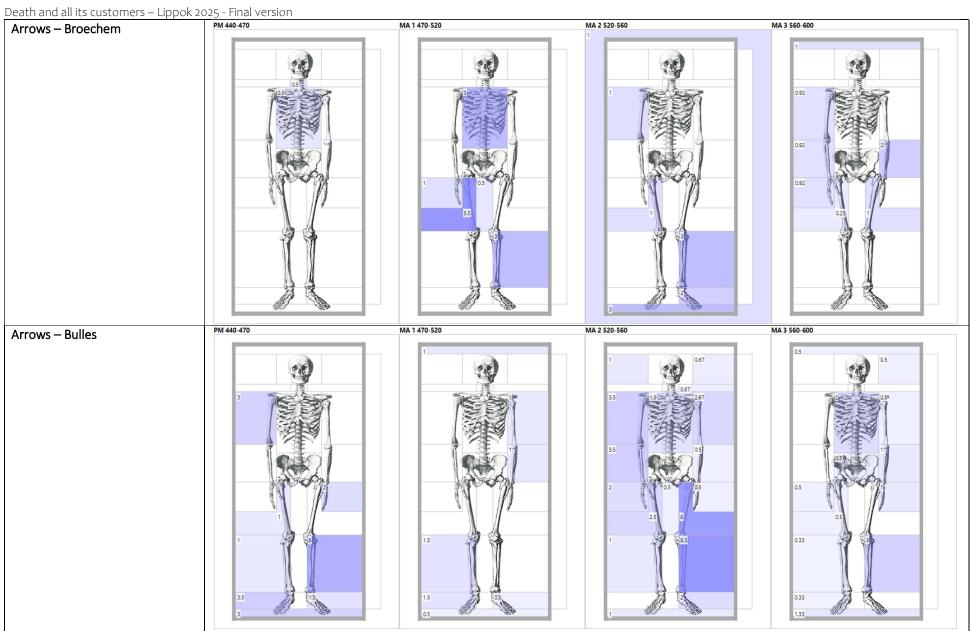


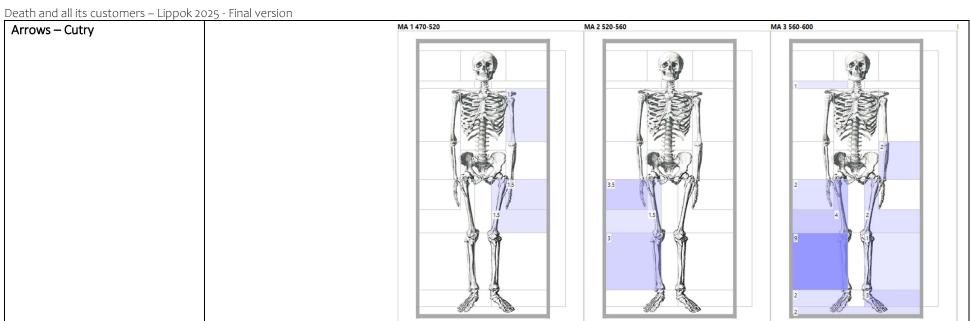


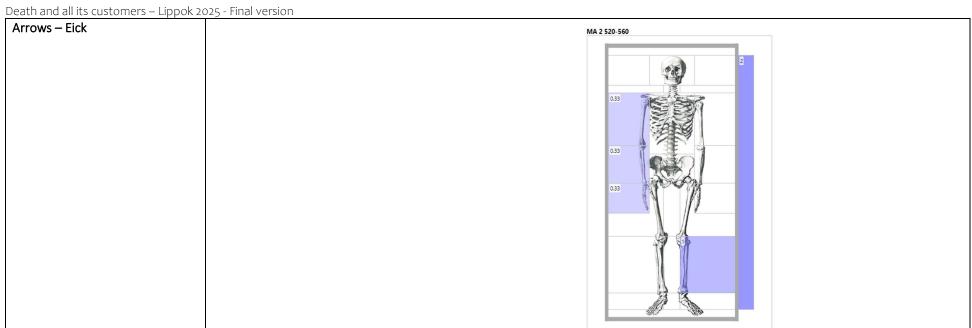


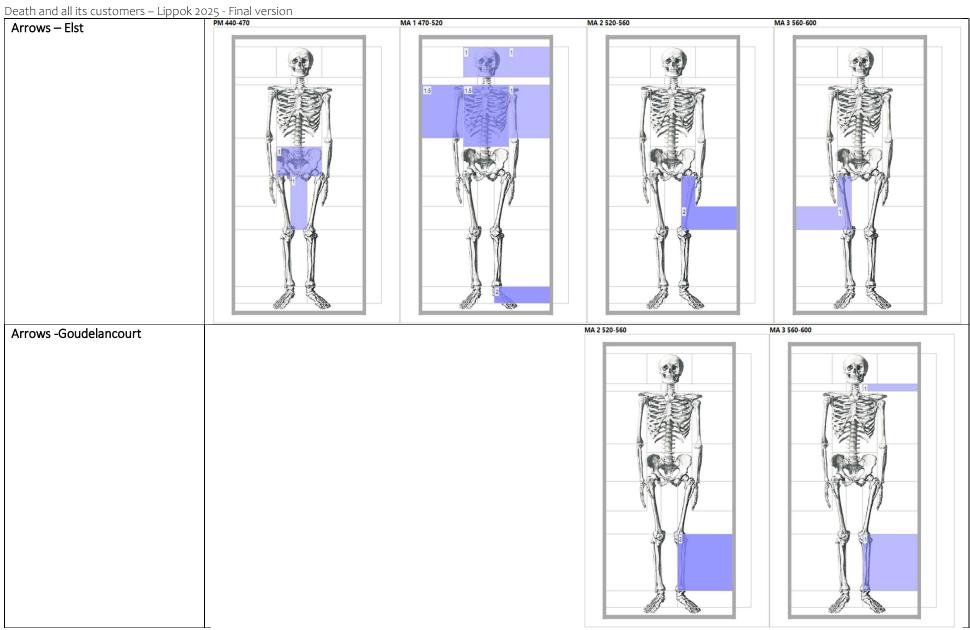
Weapons - Arrows

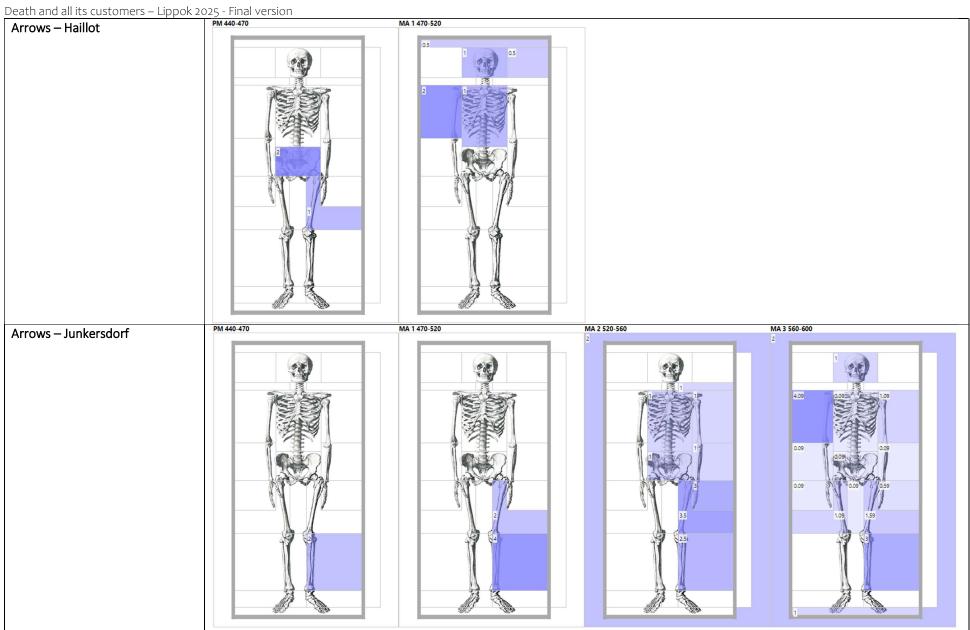


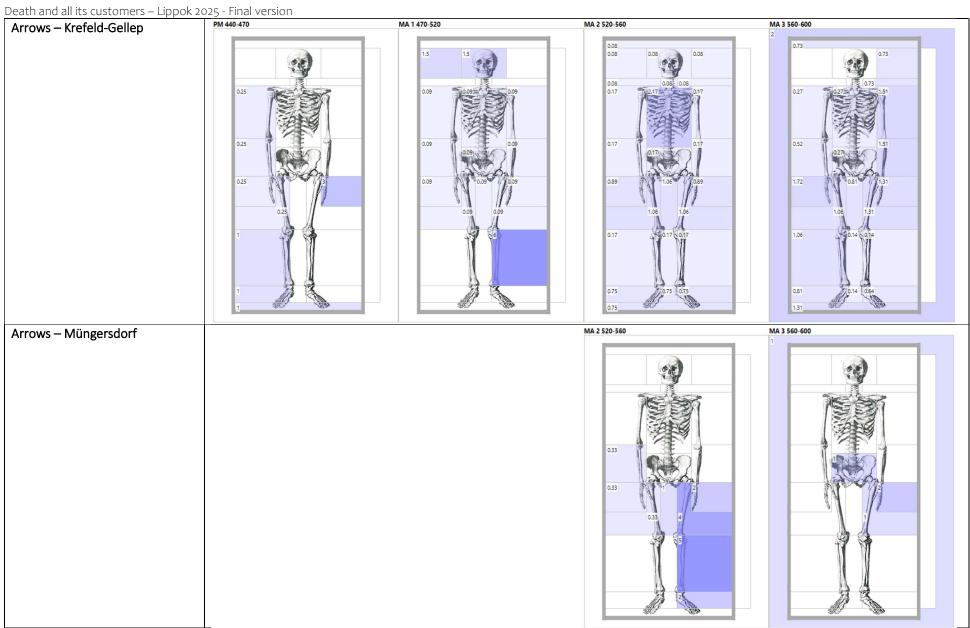


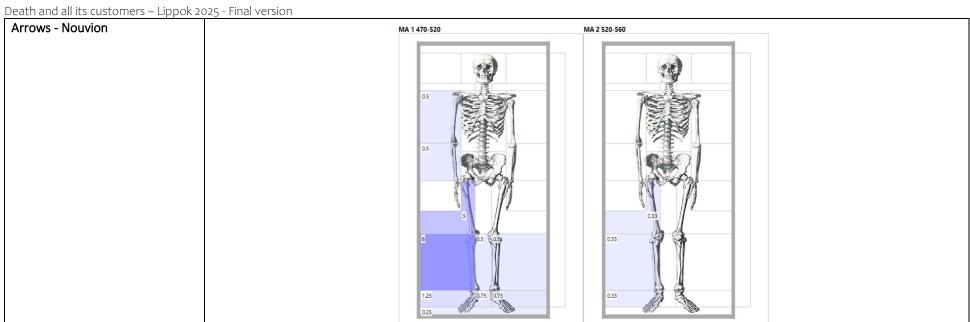


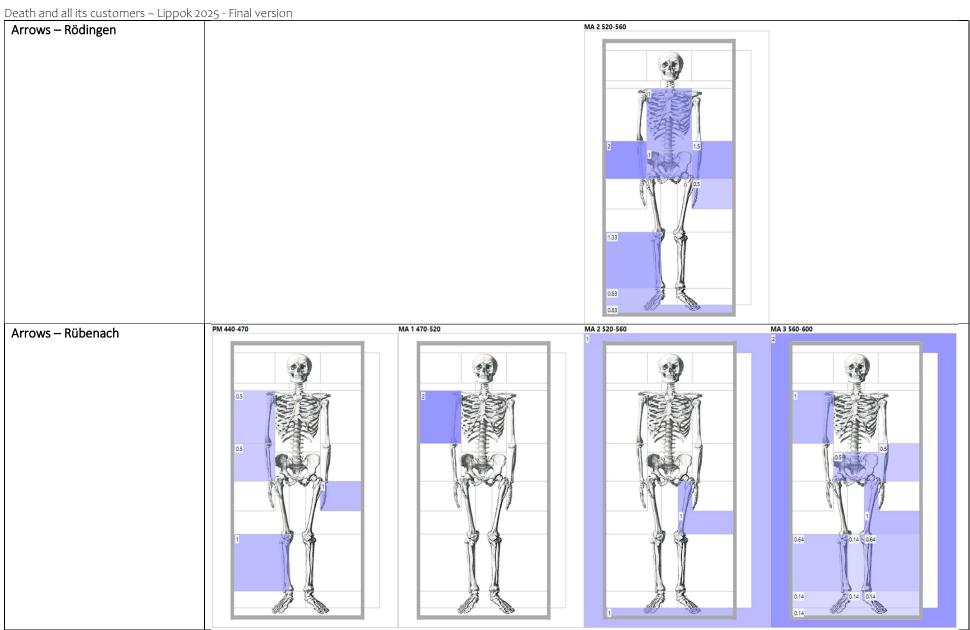


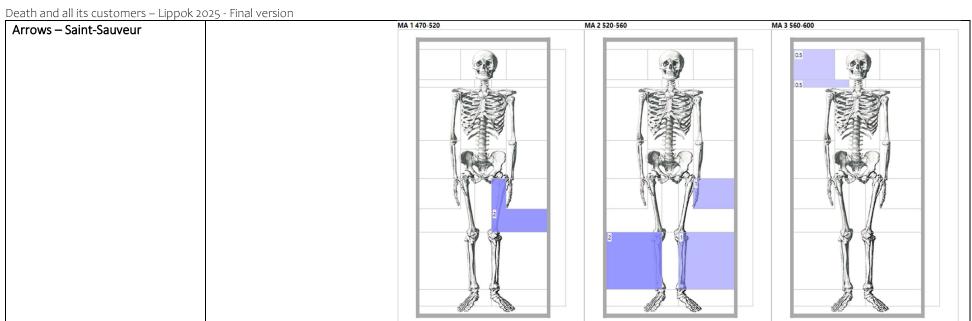


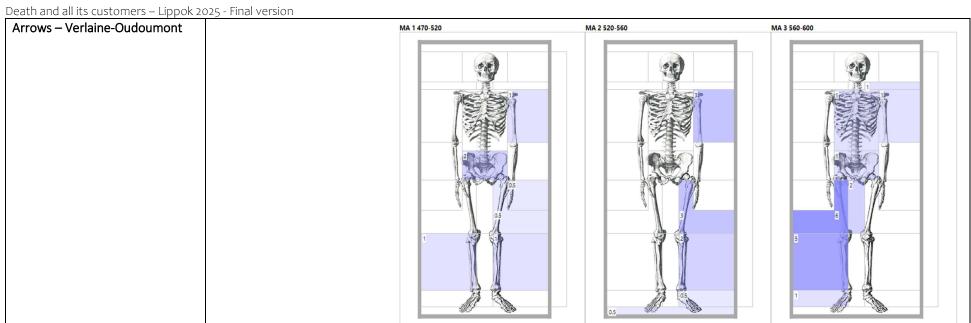




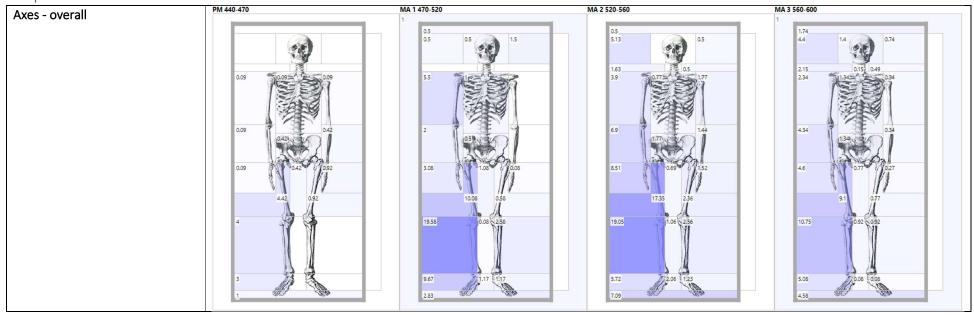


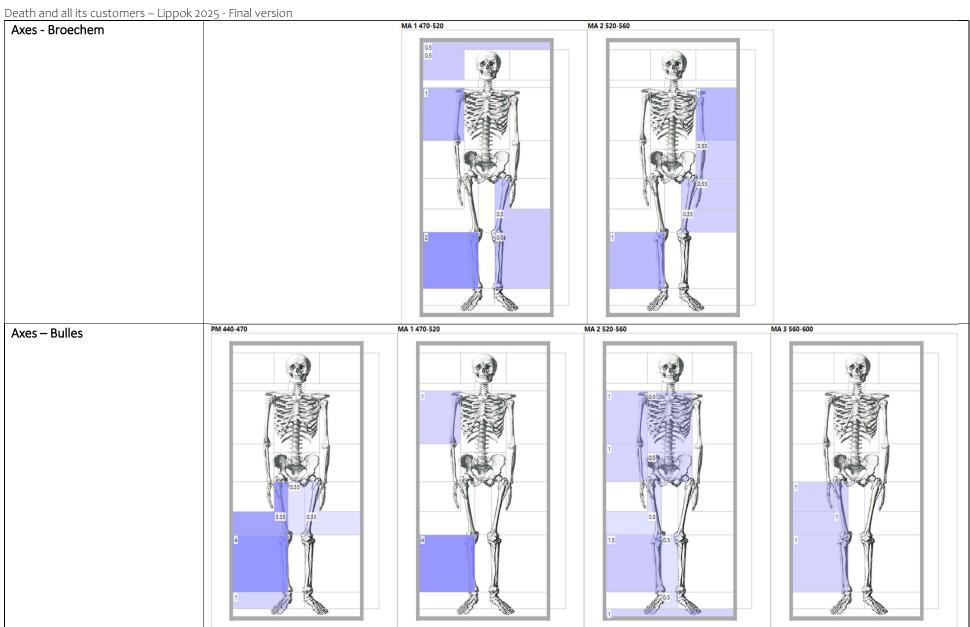


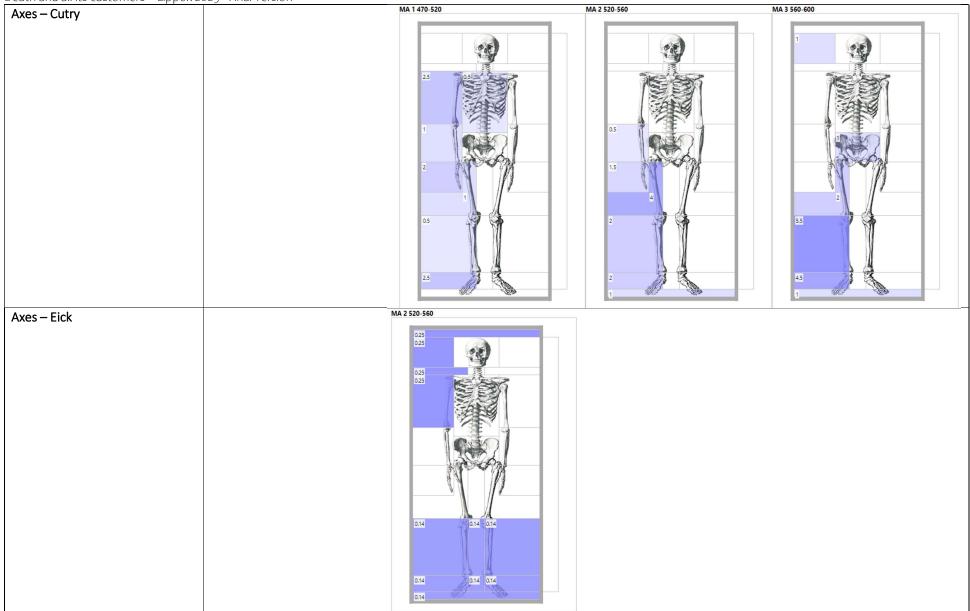


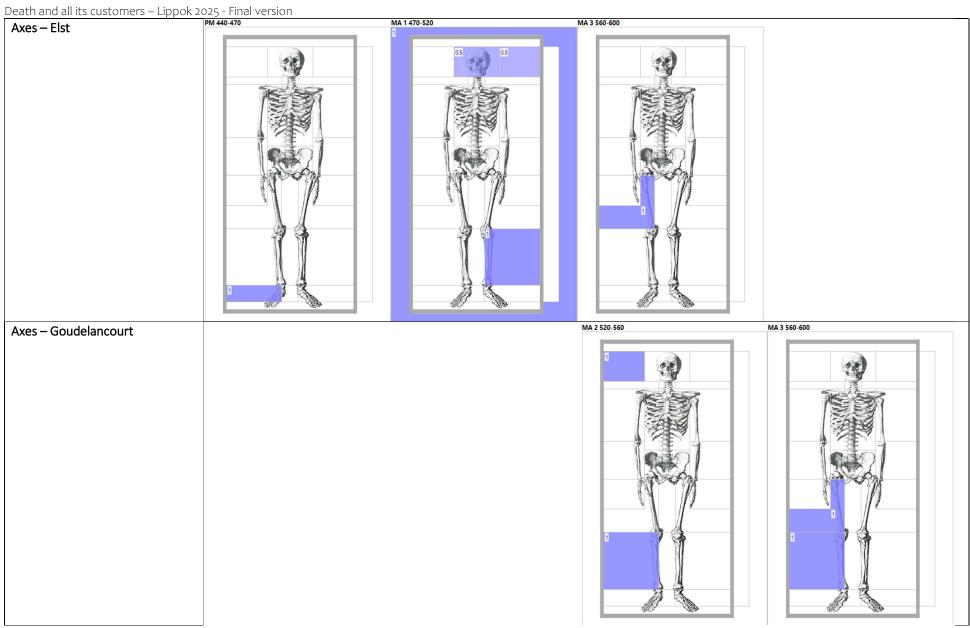


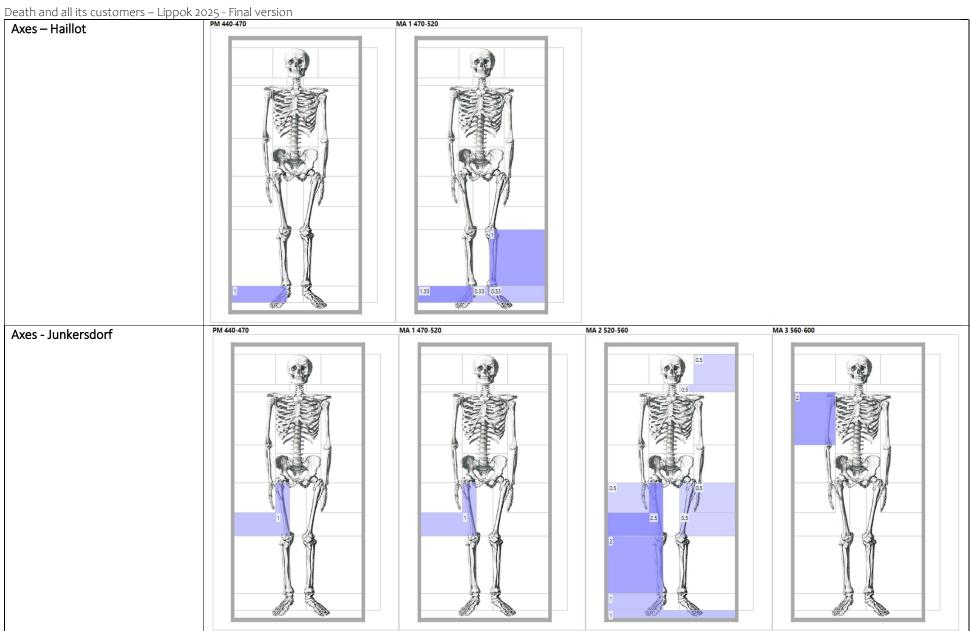
Weapons - Axes

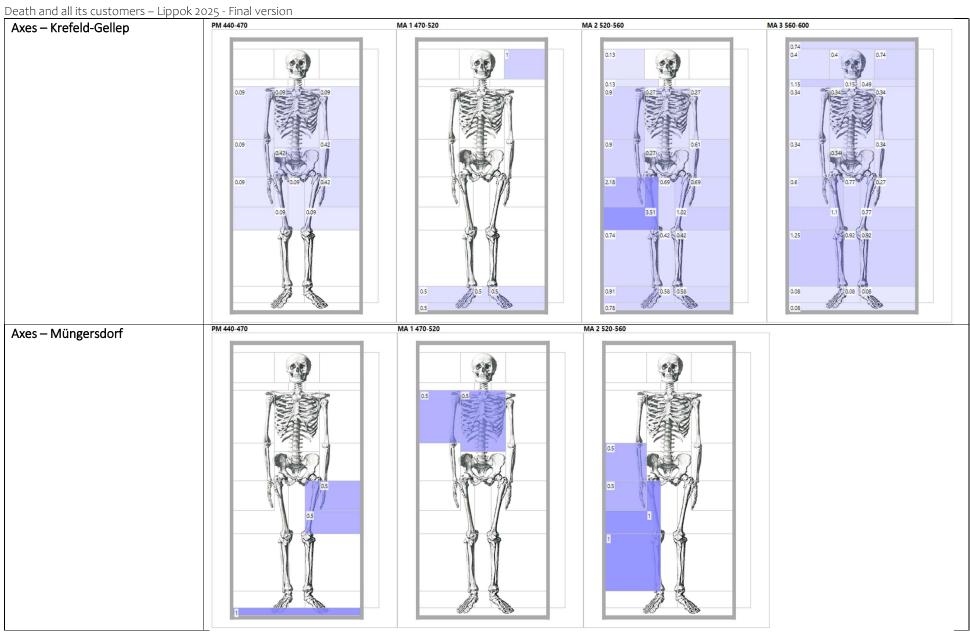


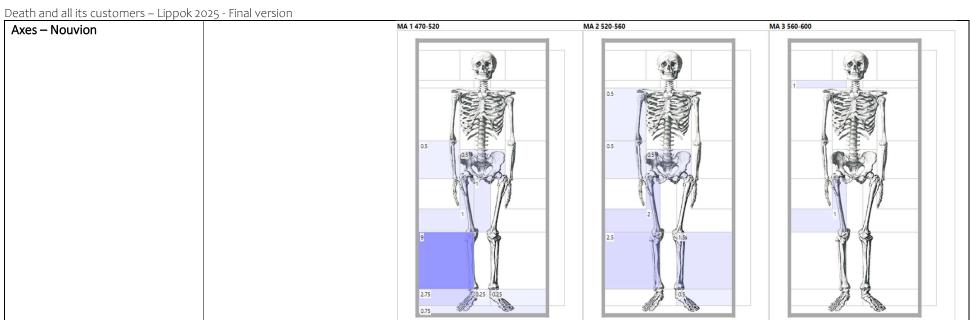


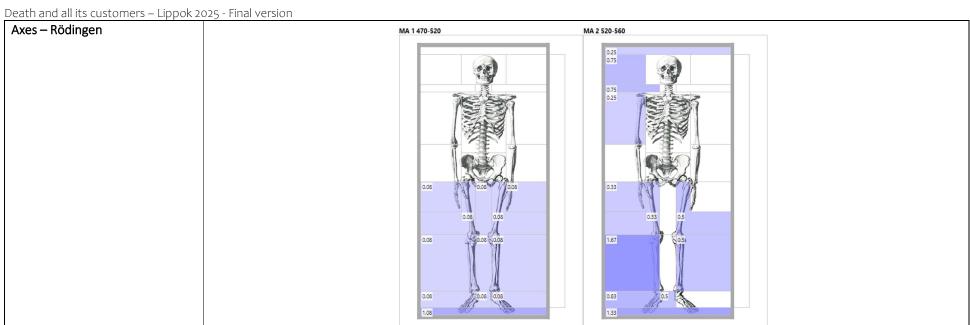


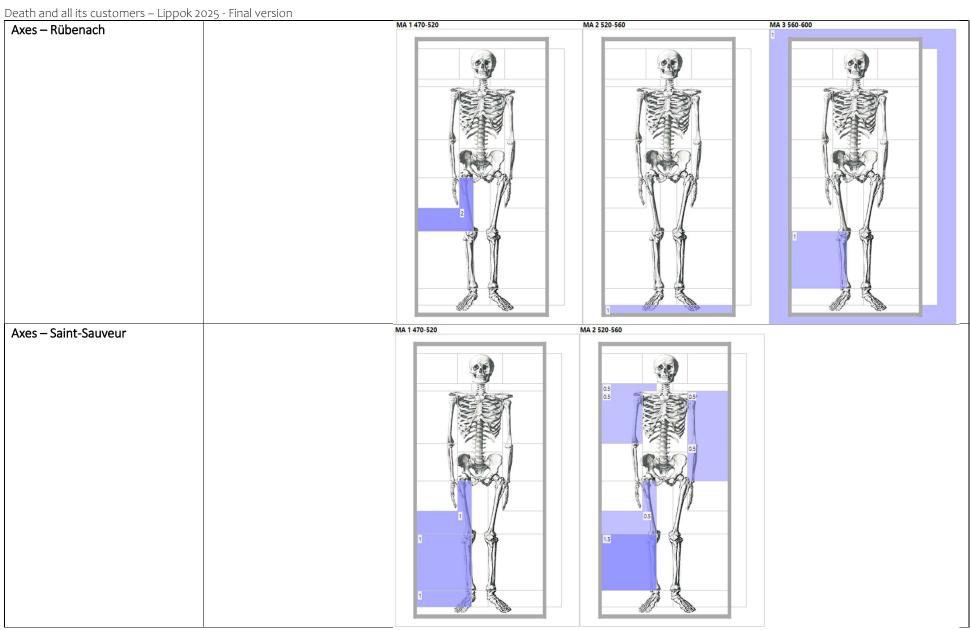


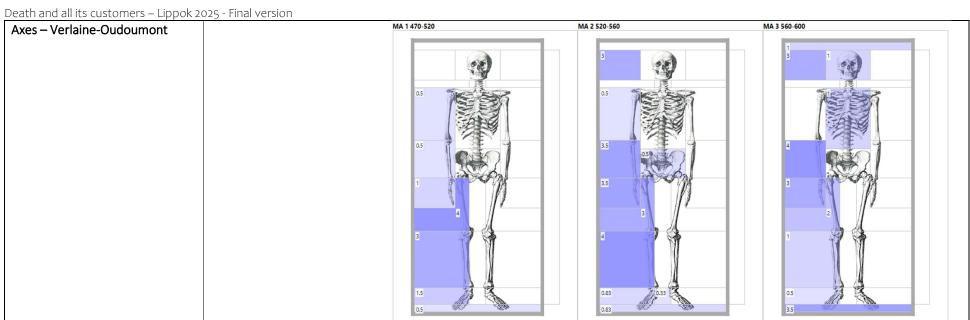




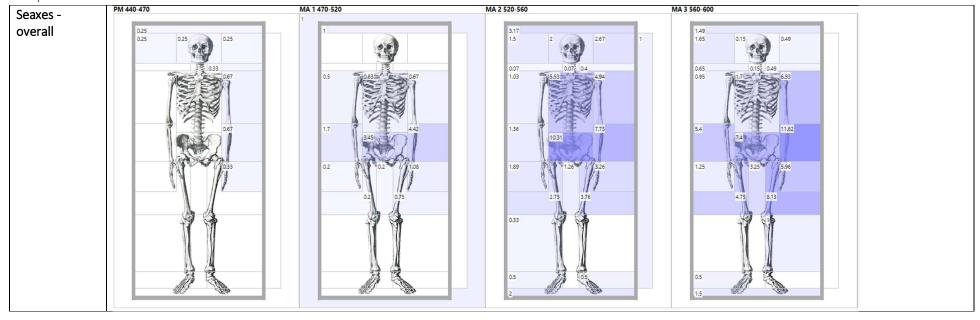


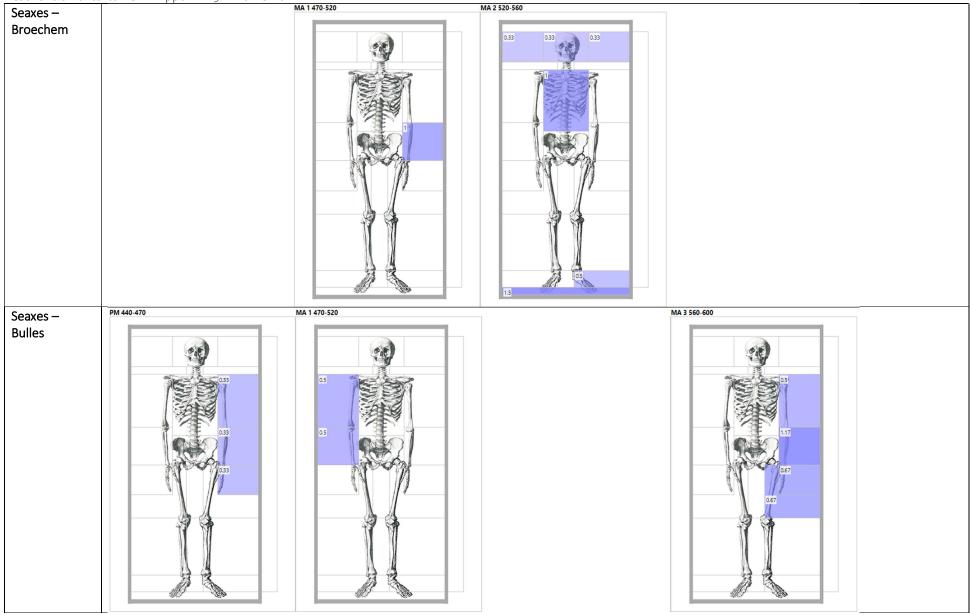


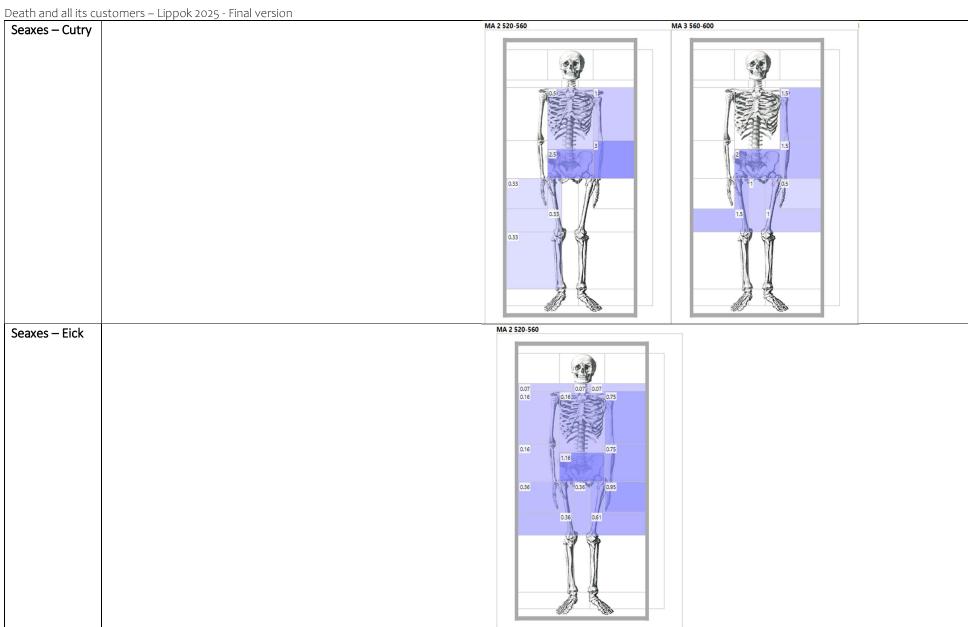


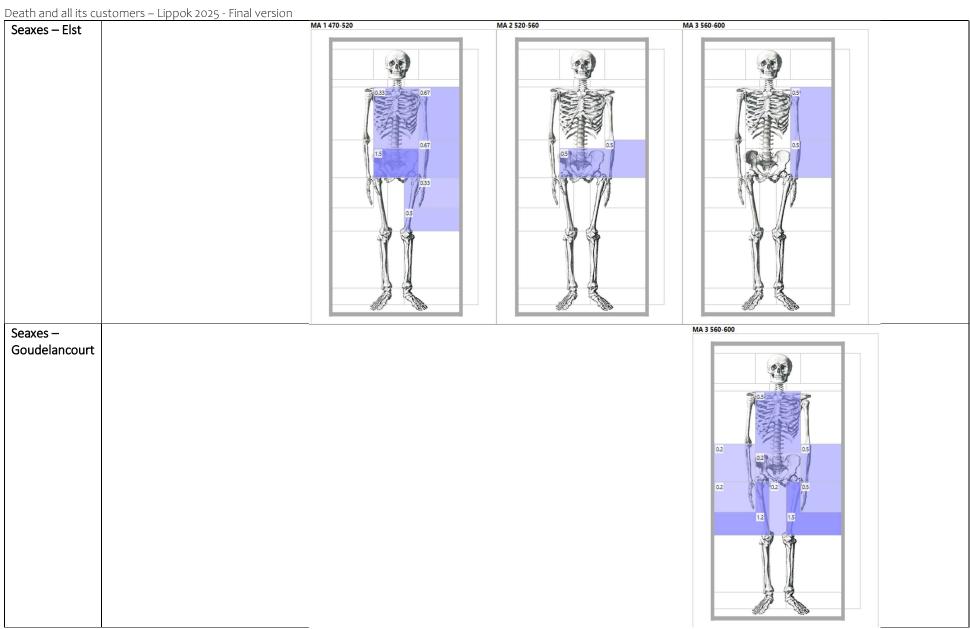


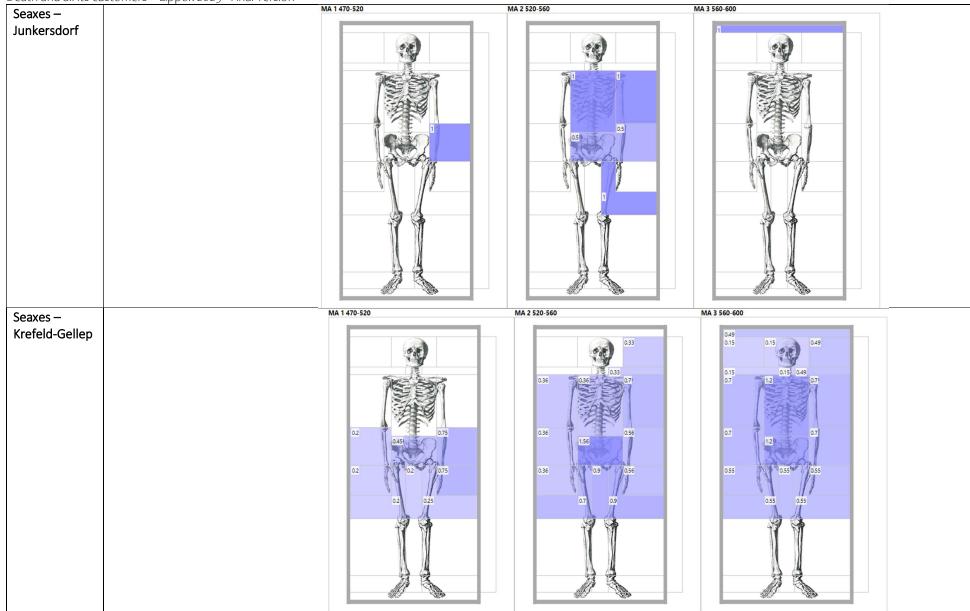
Weapons - Seax

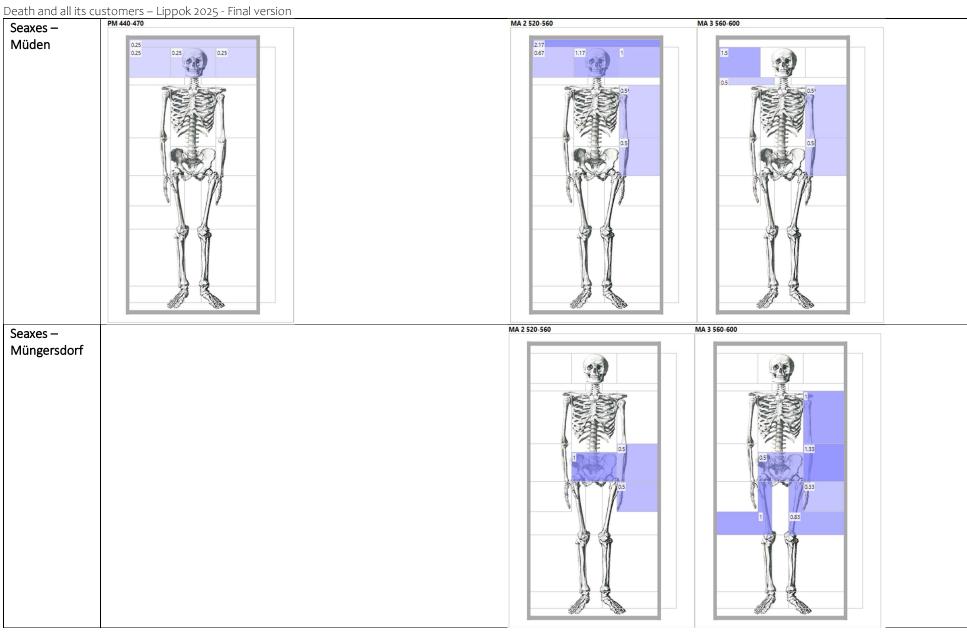


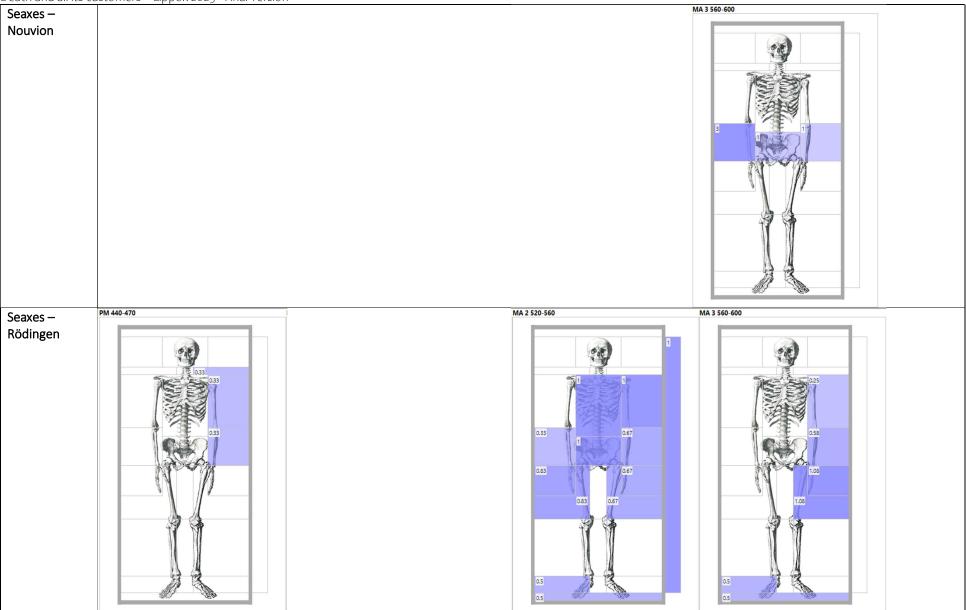


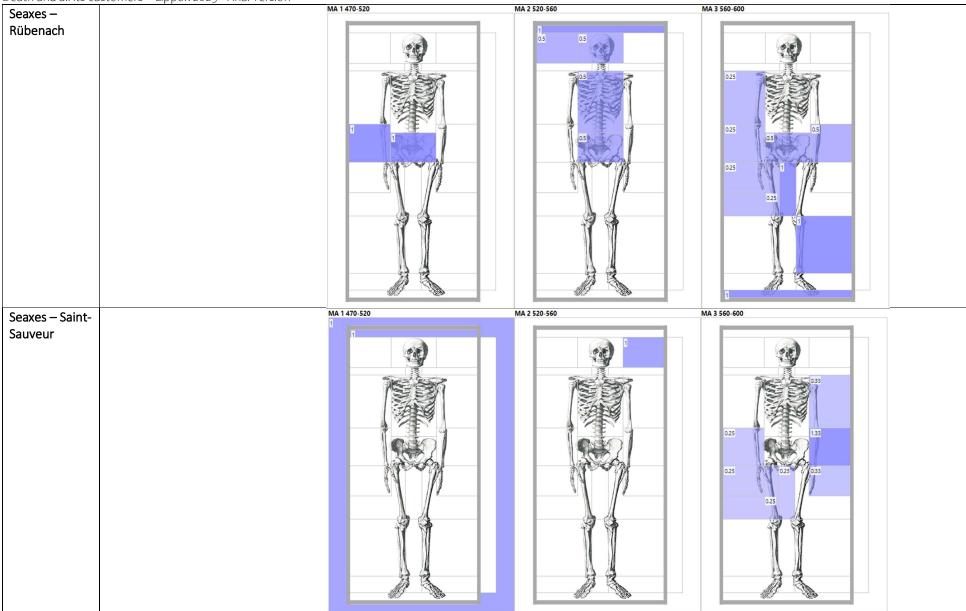


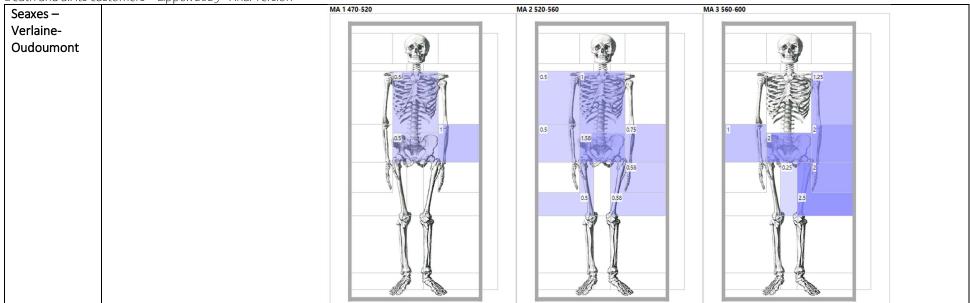


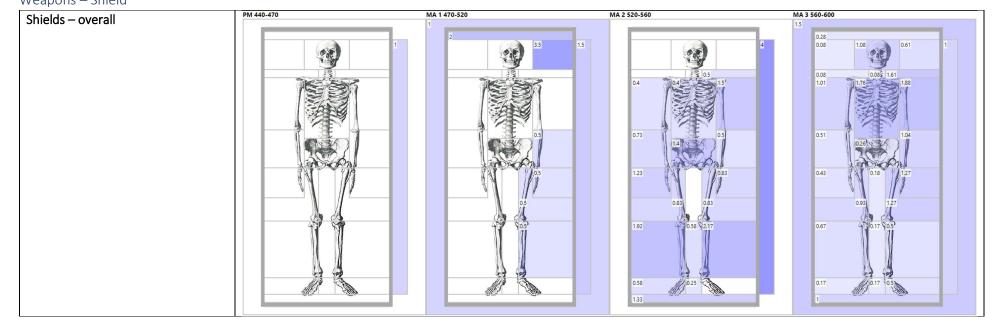


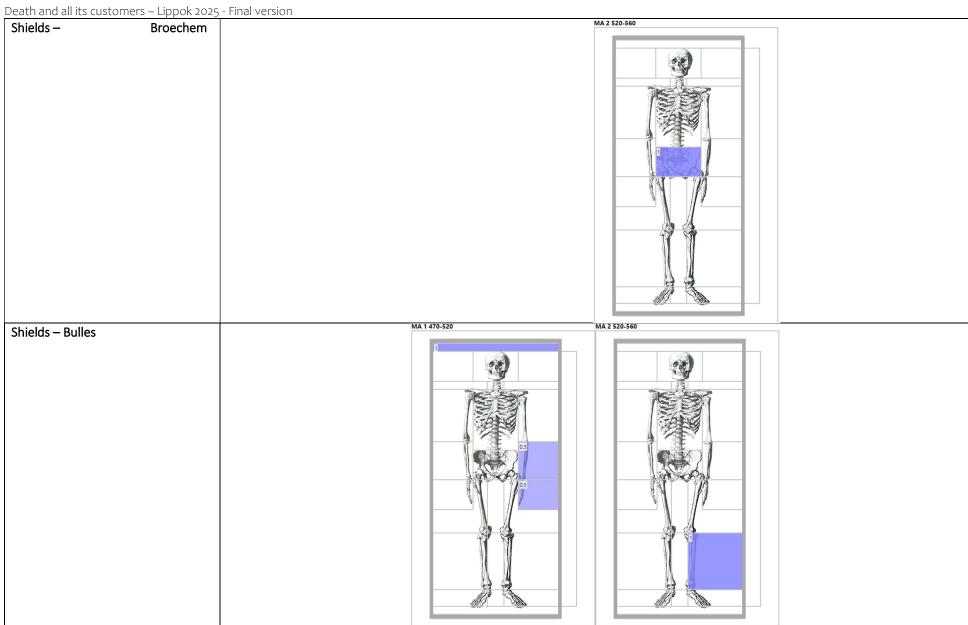


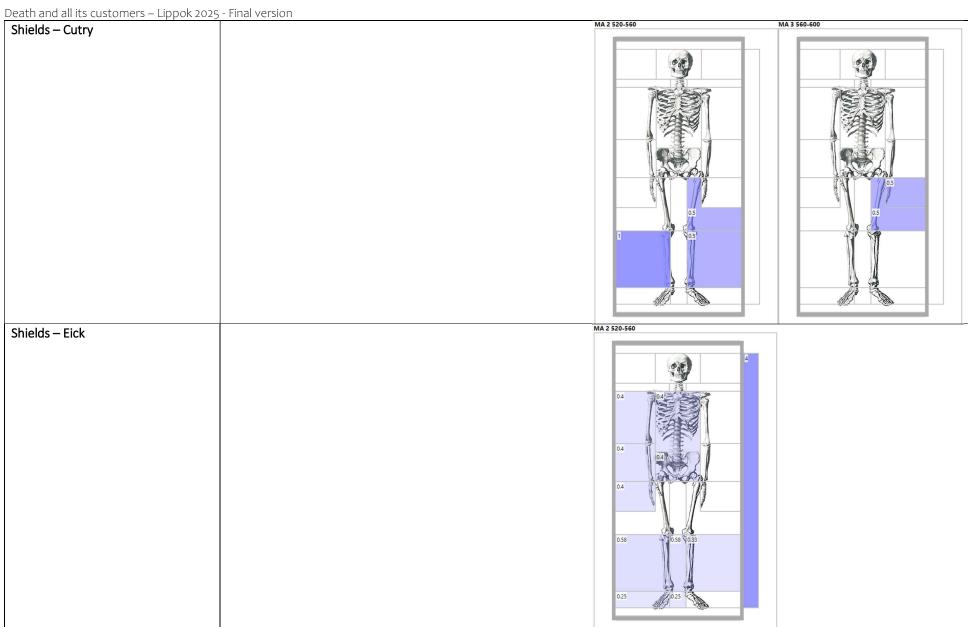


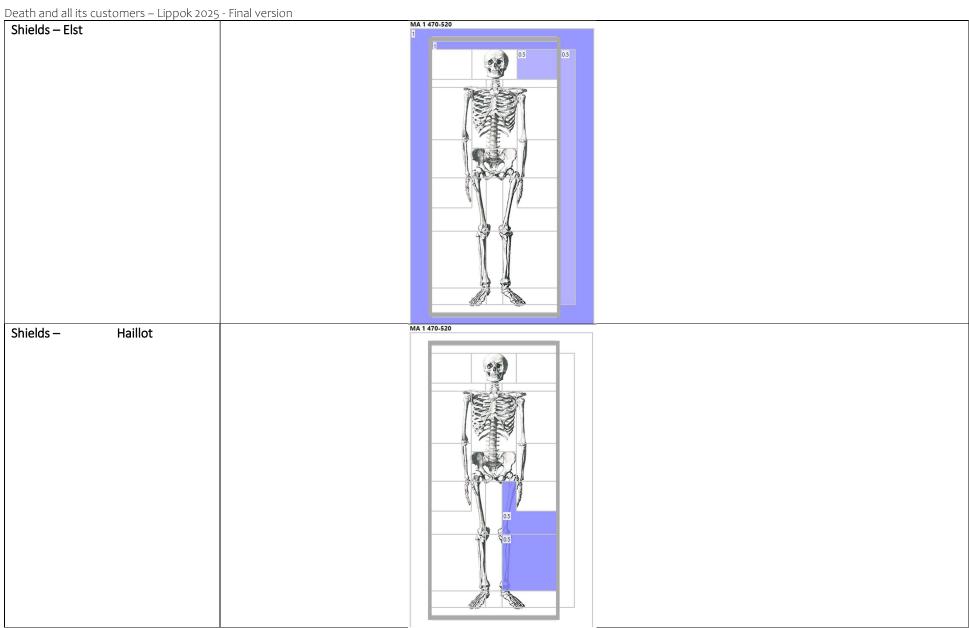


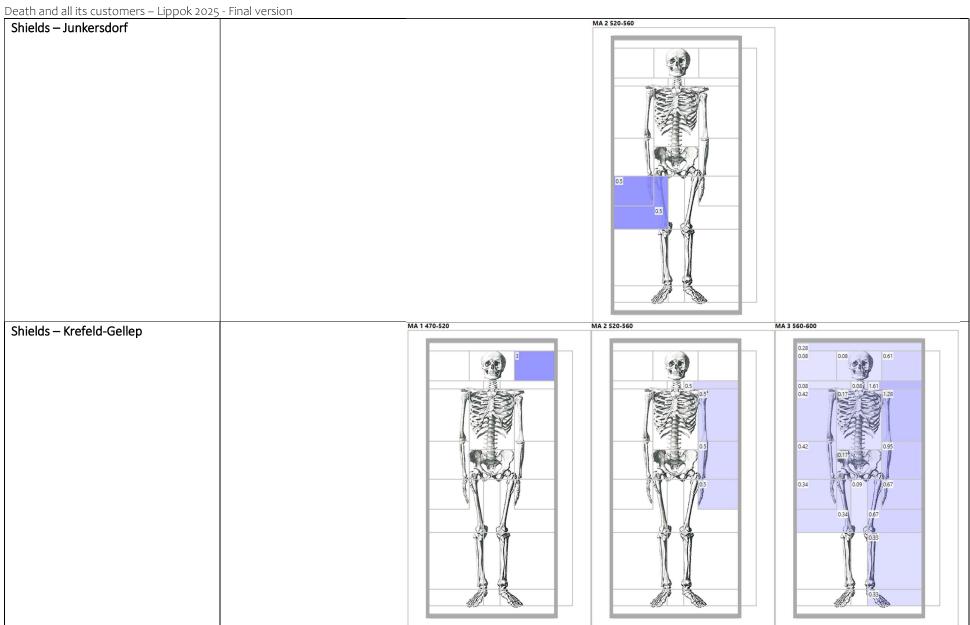




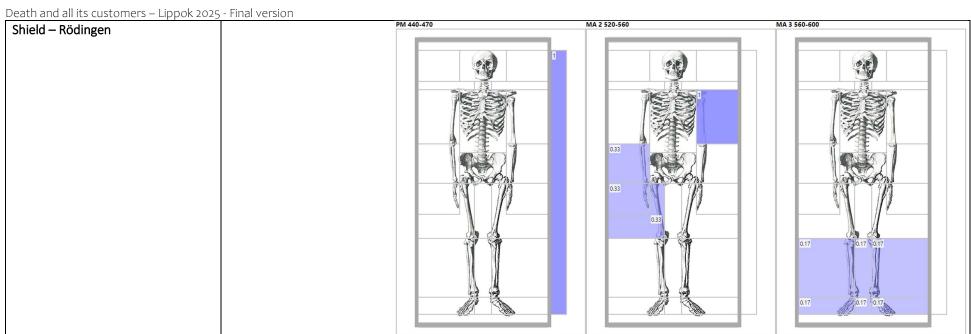


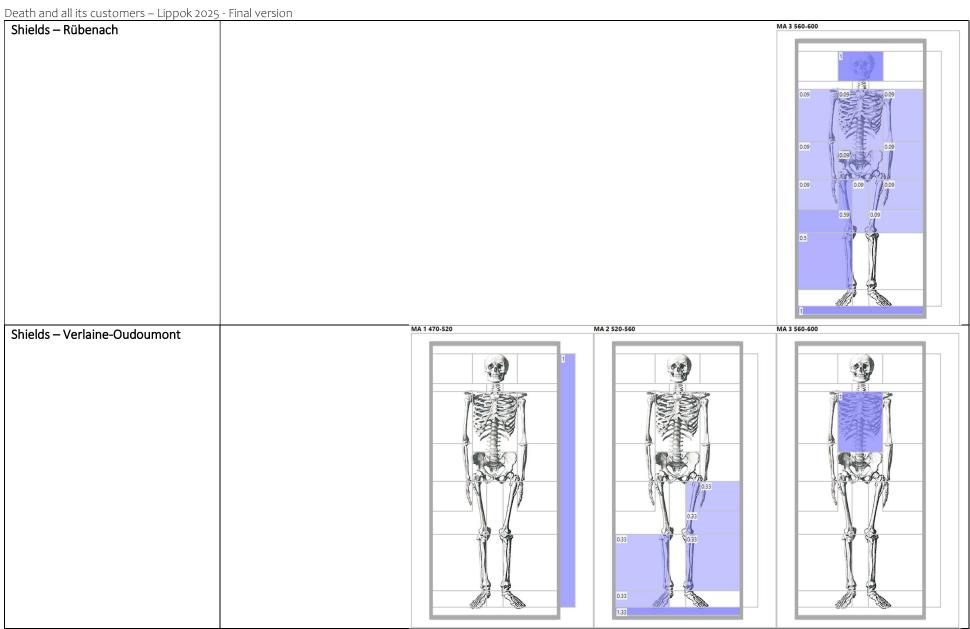






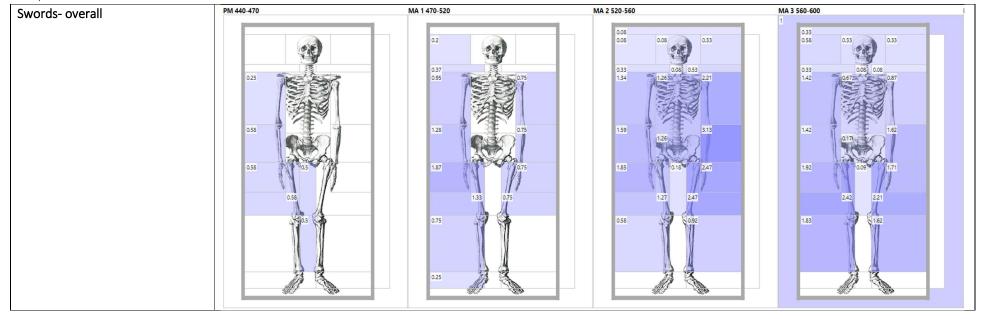


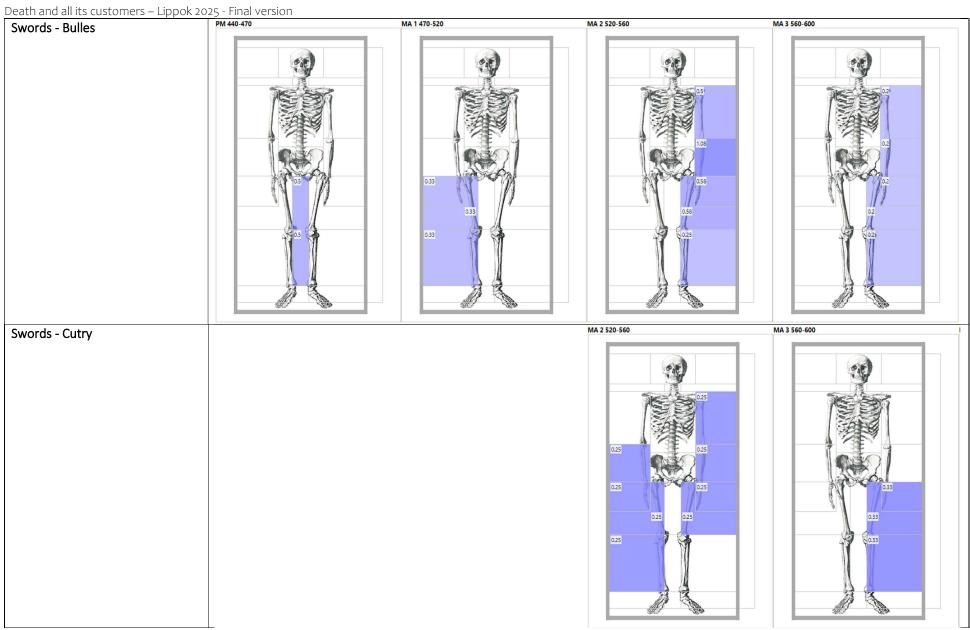


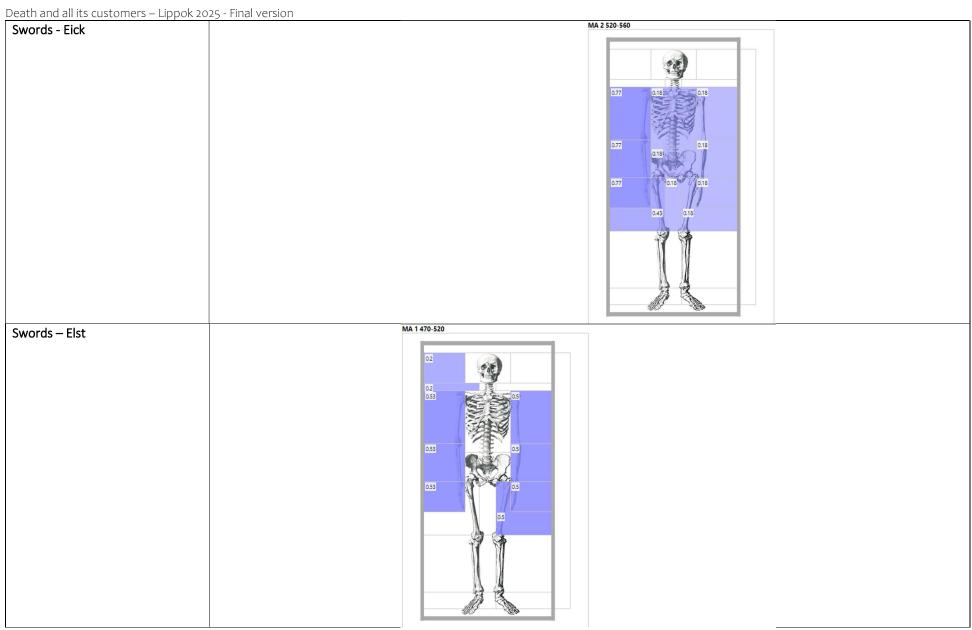


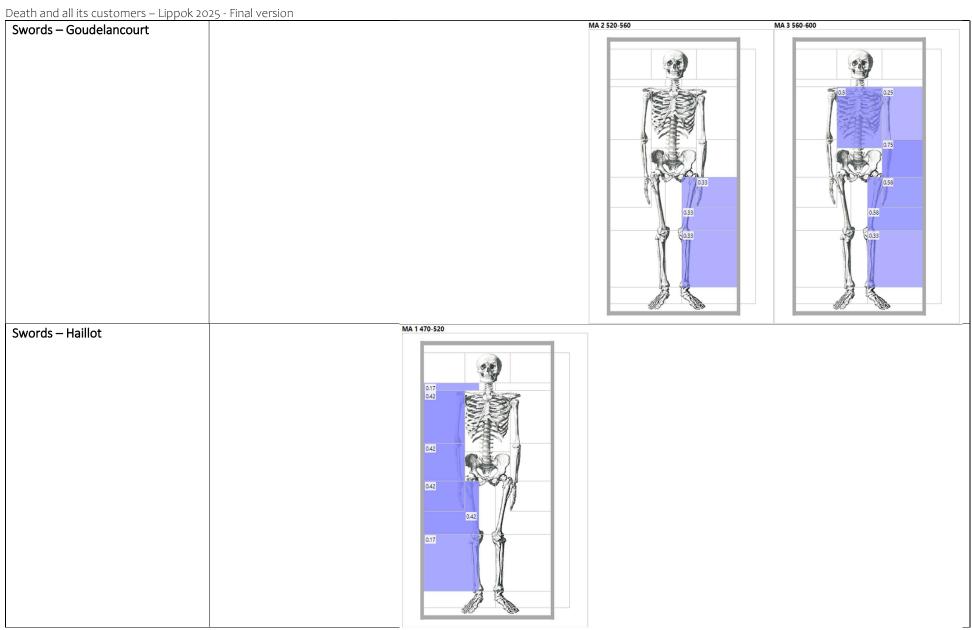
Appendix 14

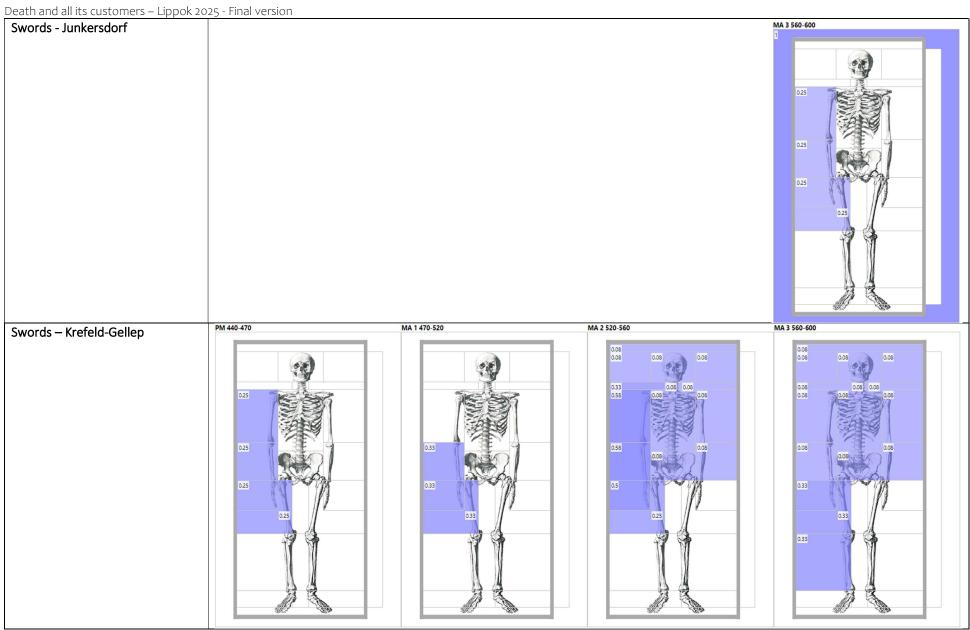
Weapons - Swords

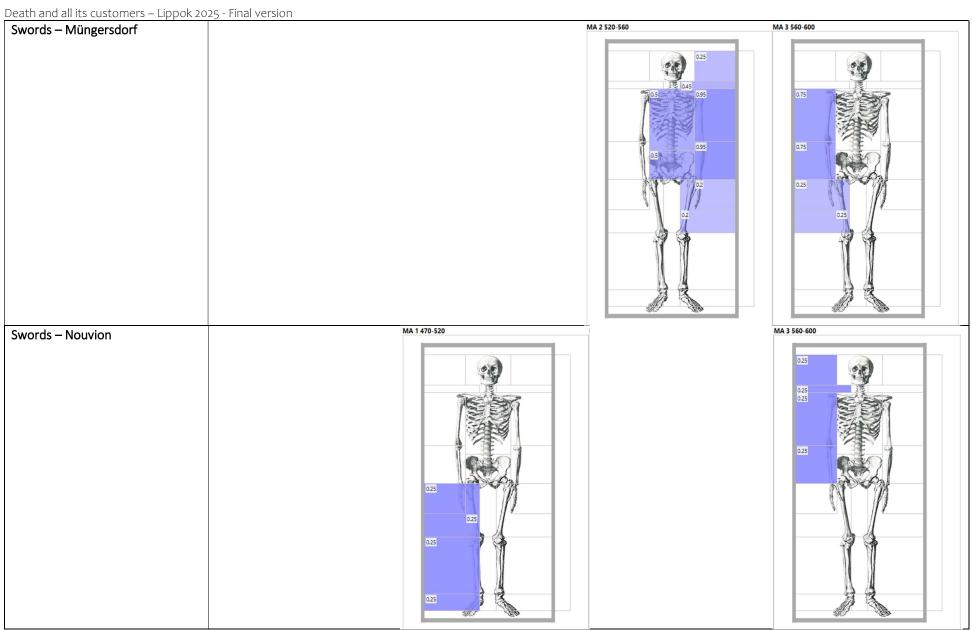


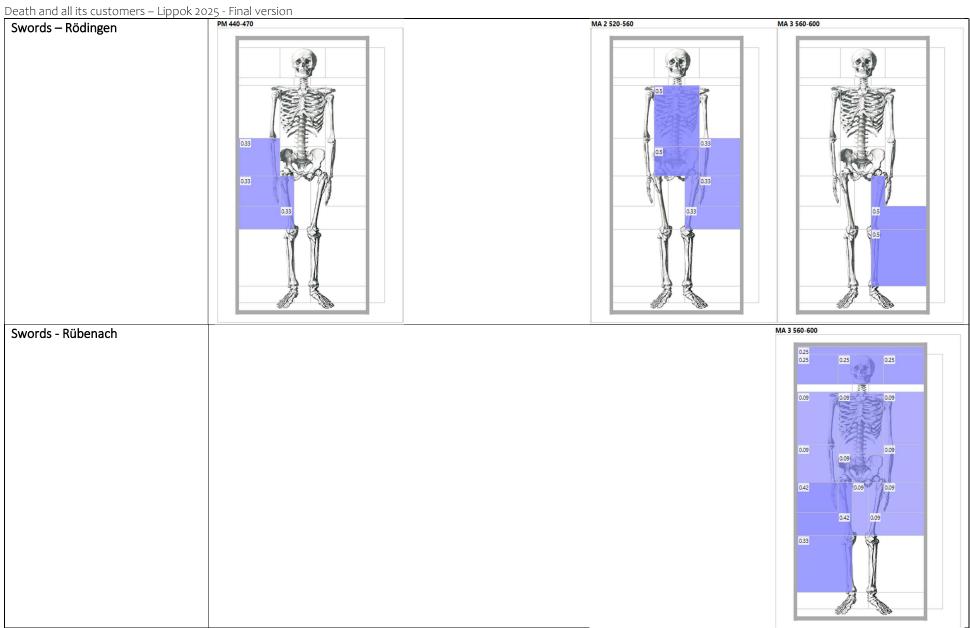


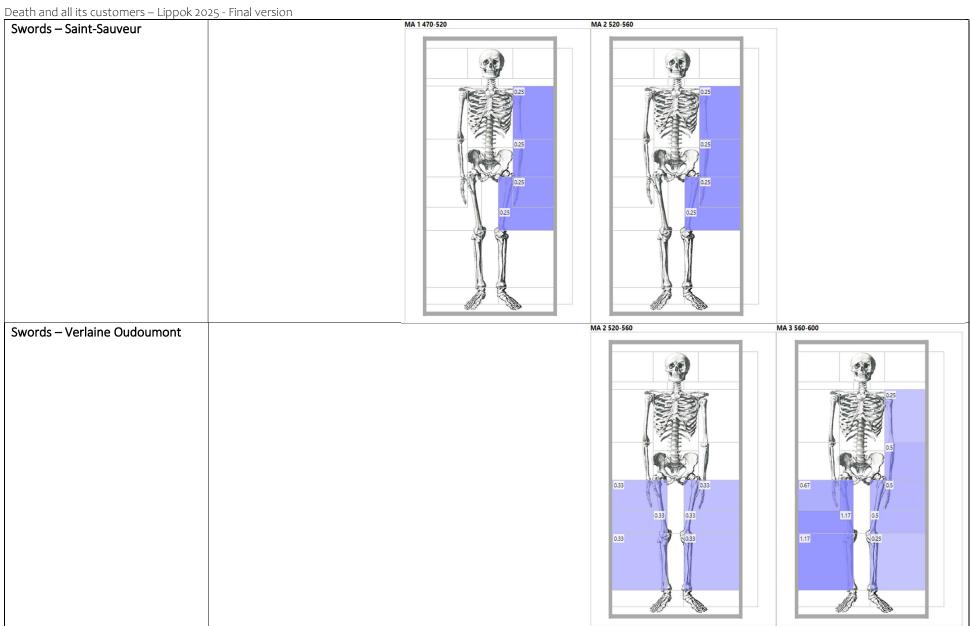






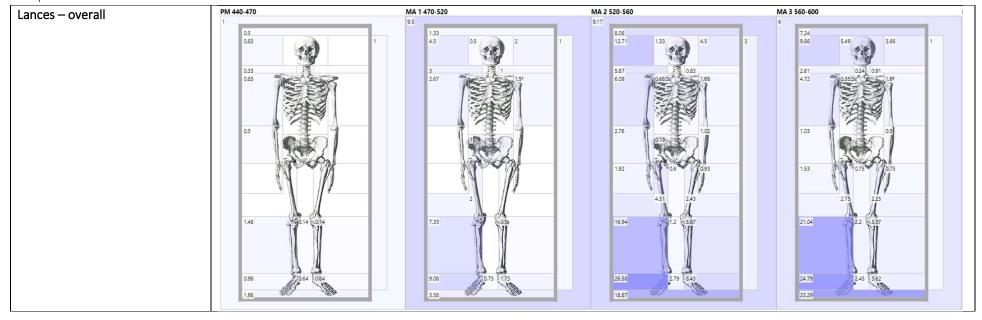


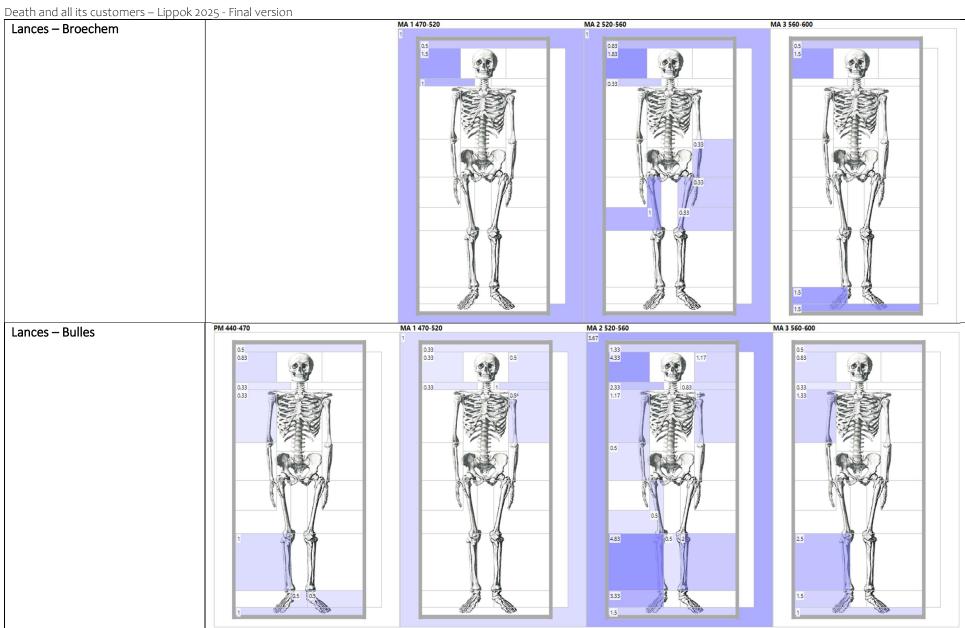


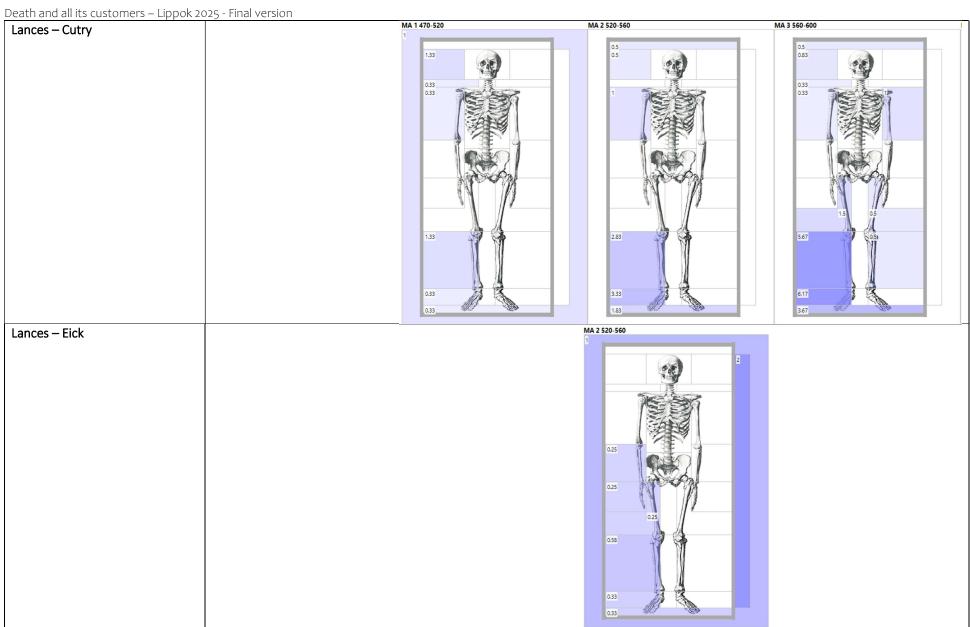


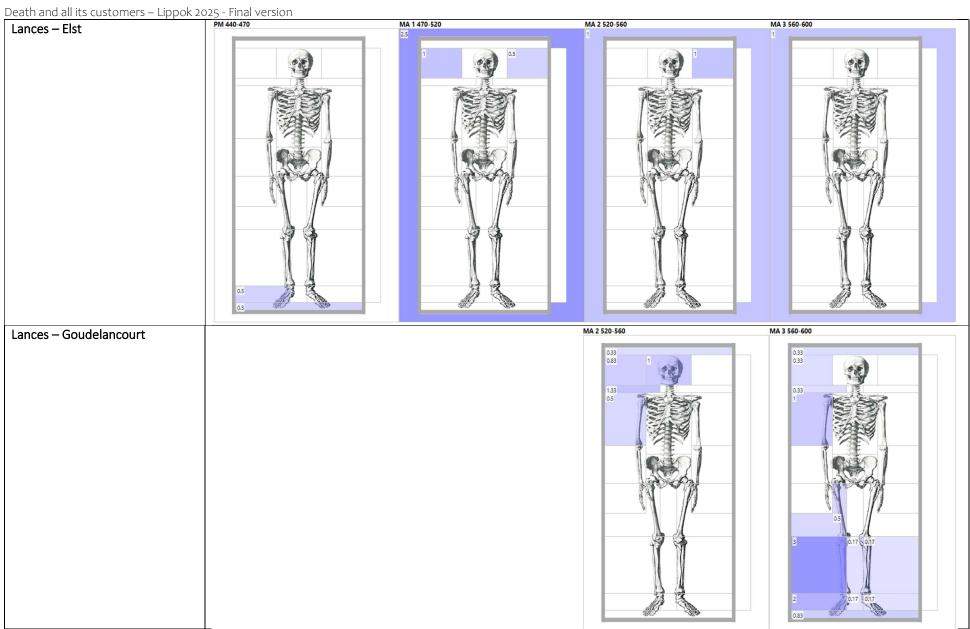
Appendix 14

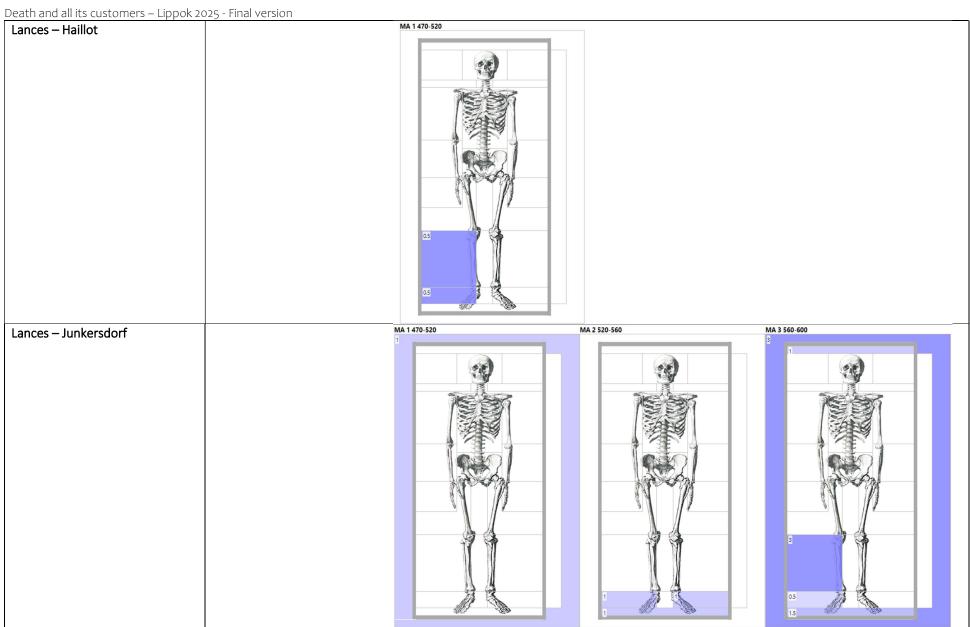
Weapons - Lances

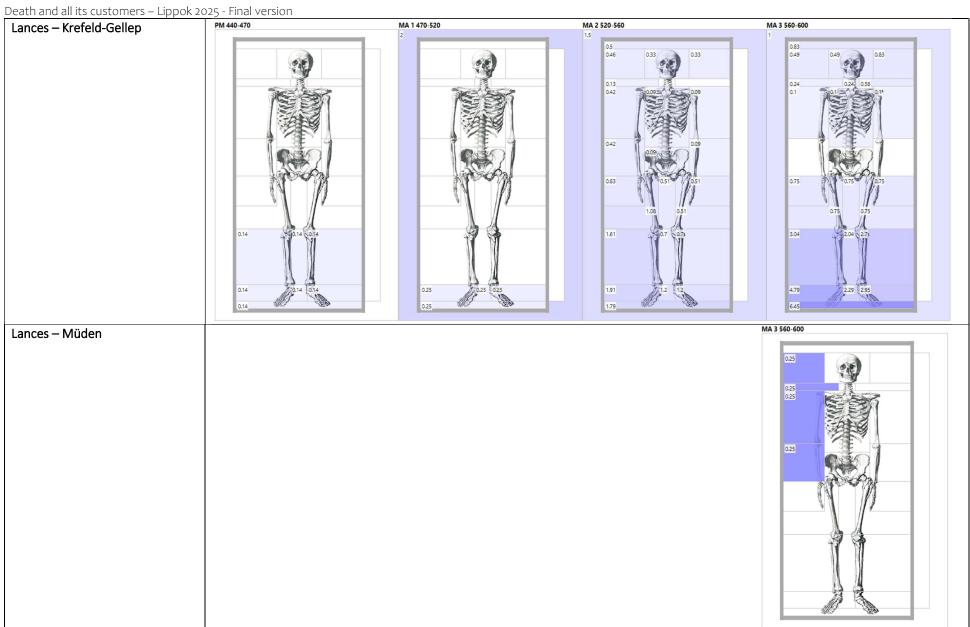


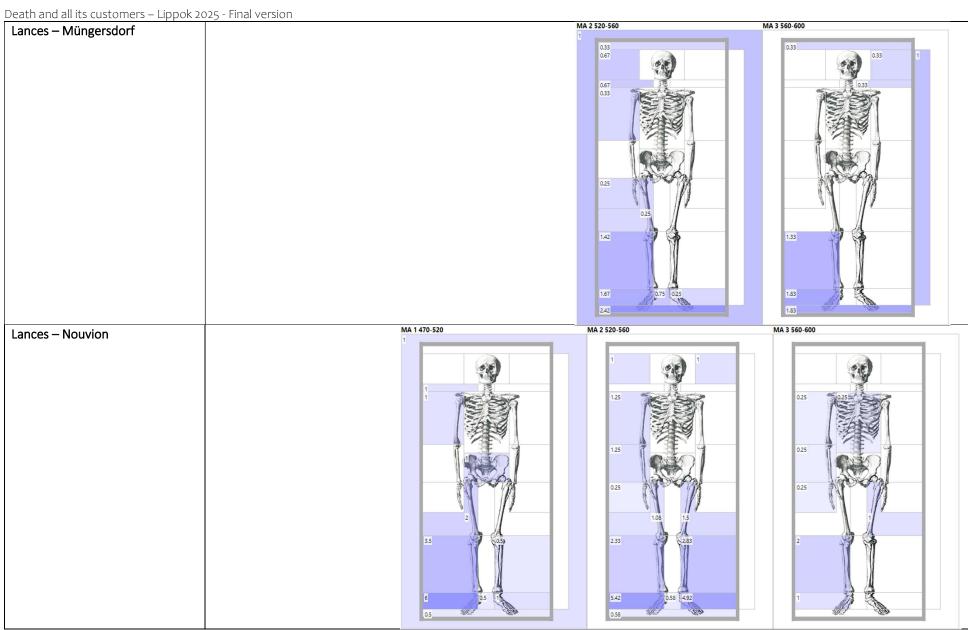


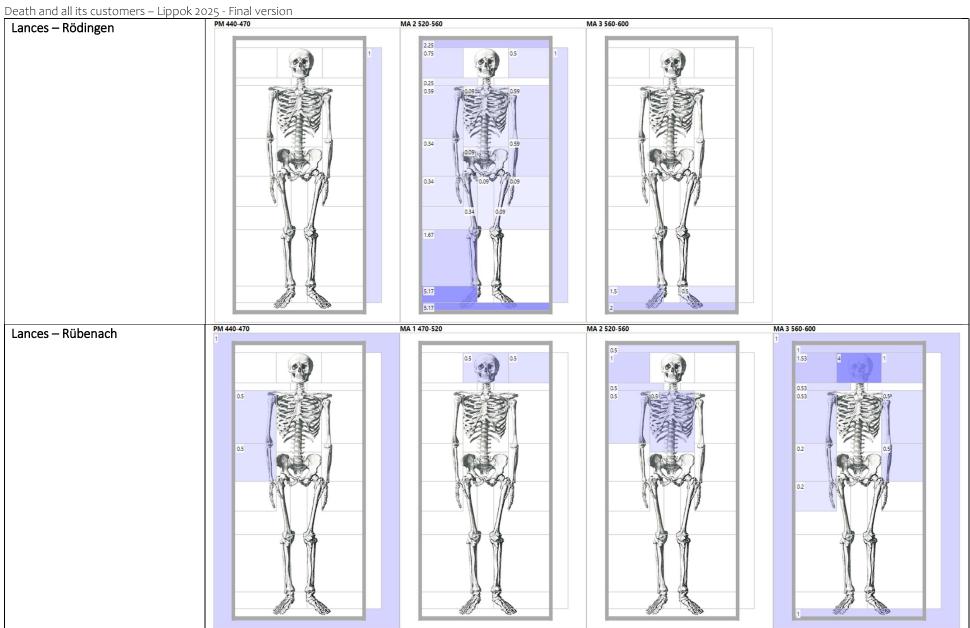


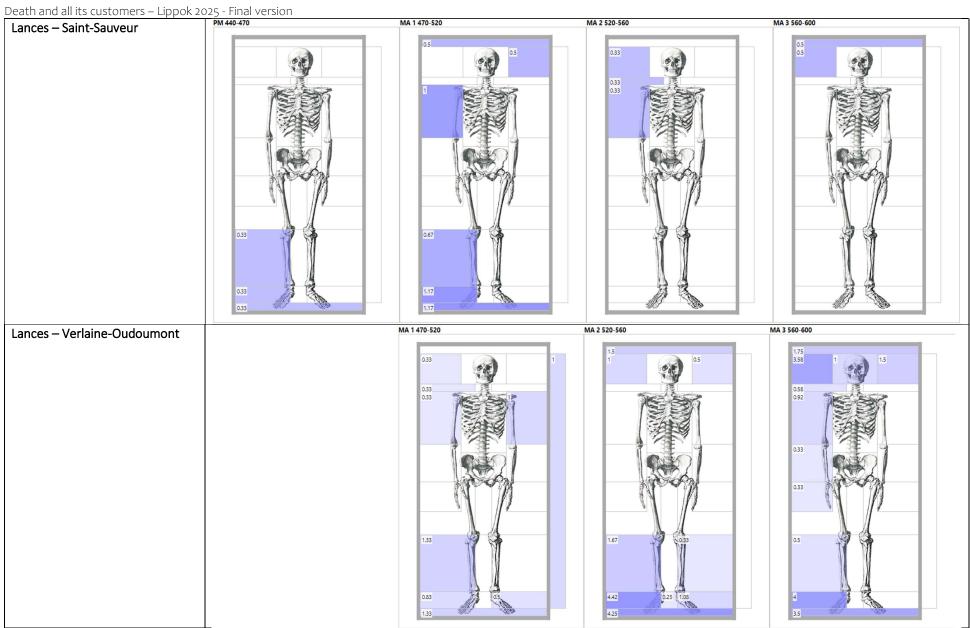






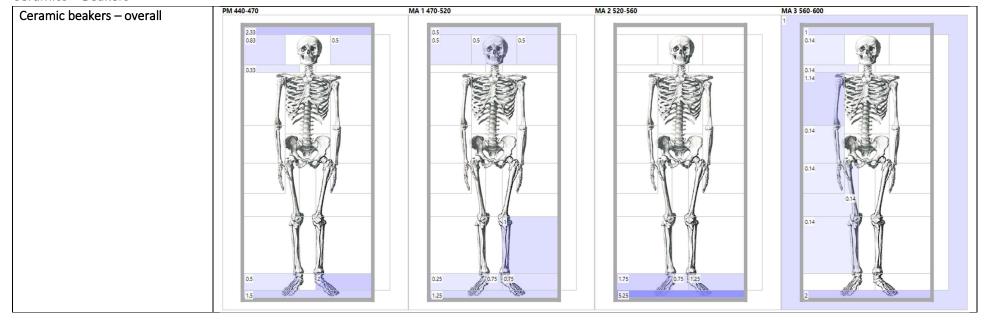


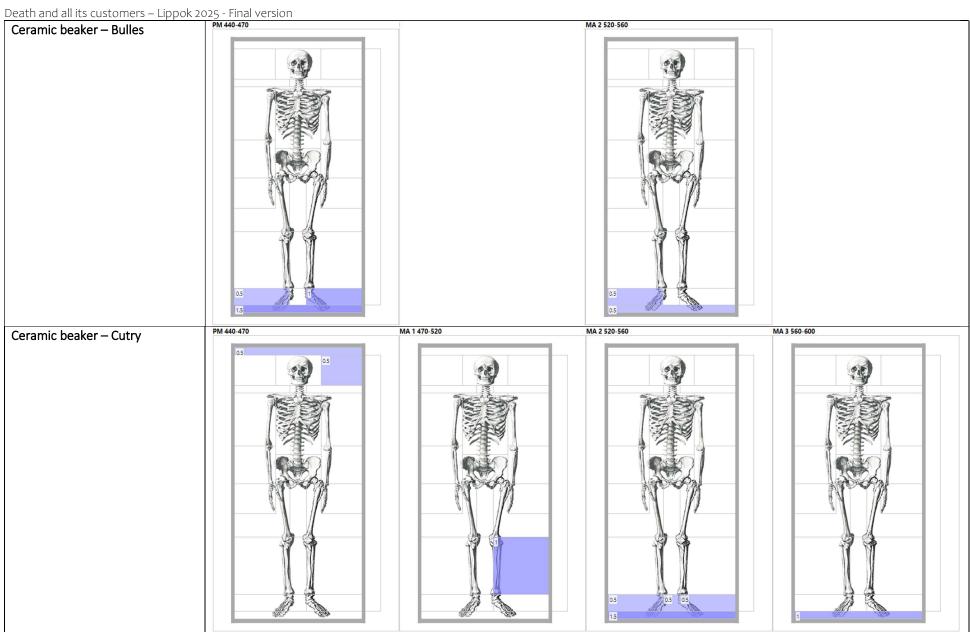


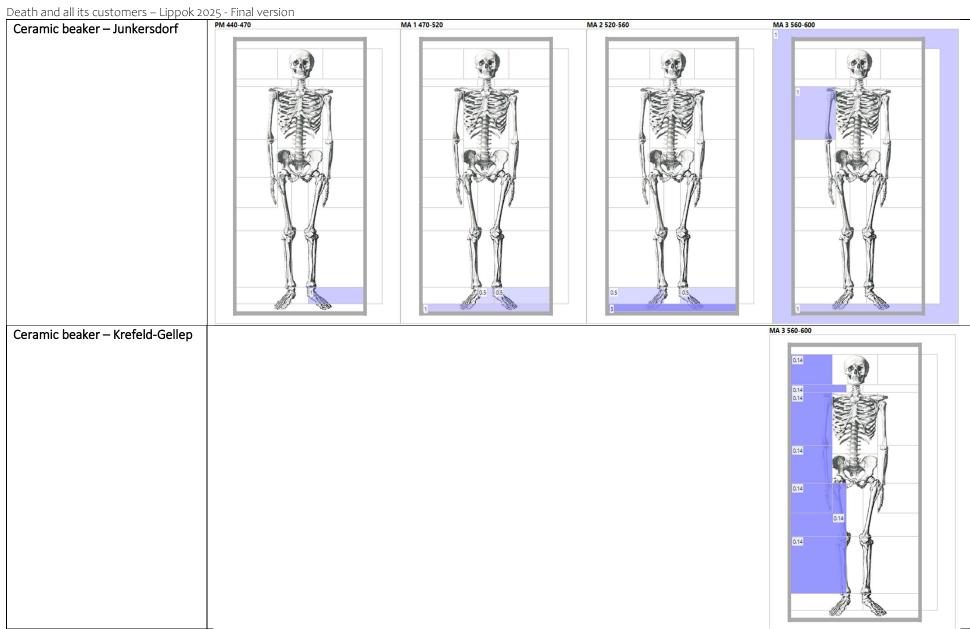


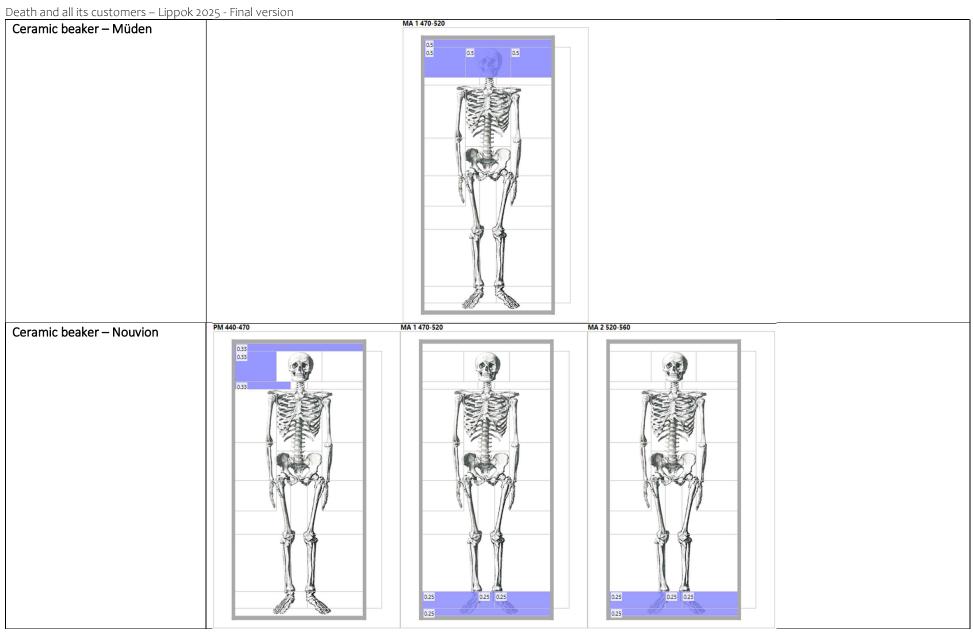
Appendix 14

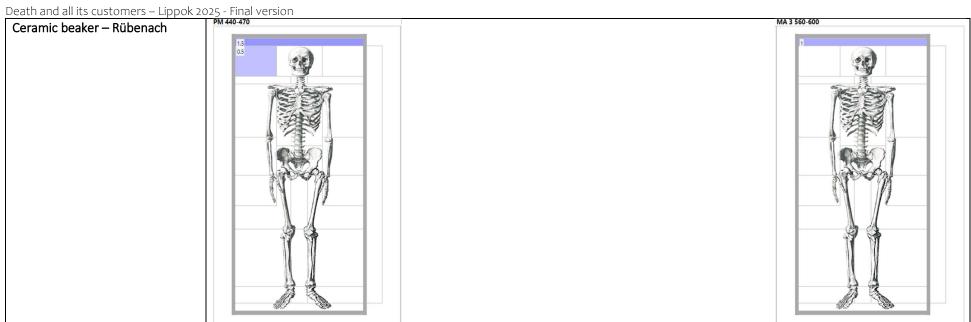
Ceramics – Beakers



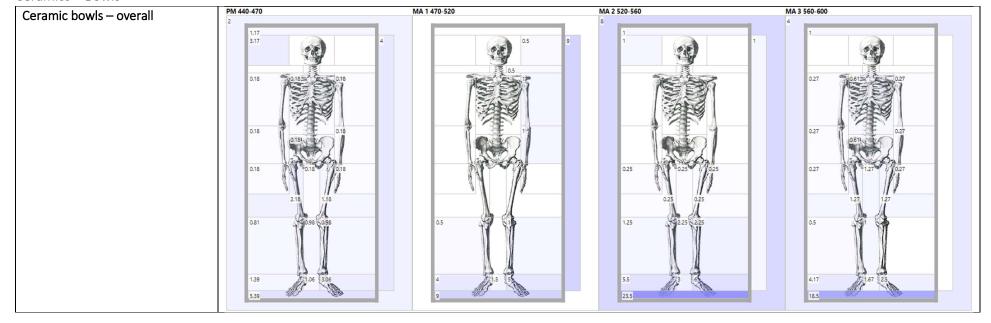




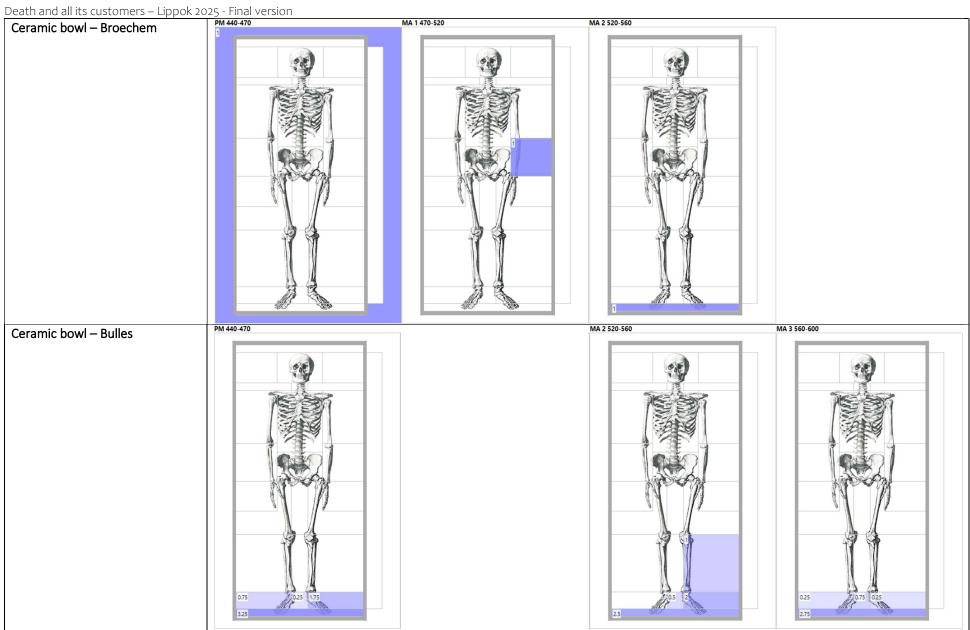


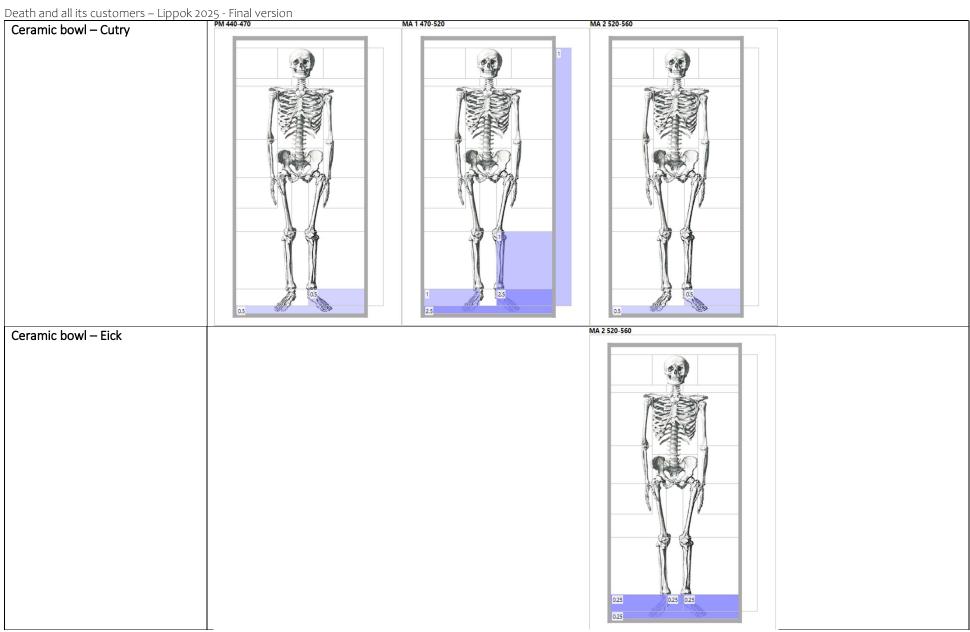


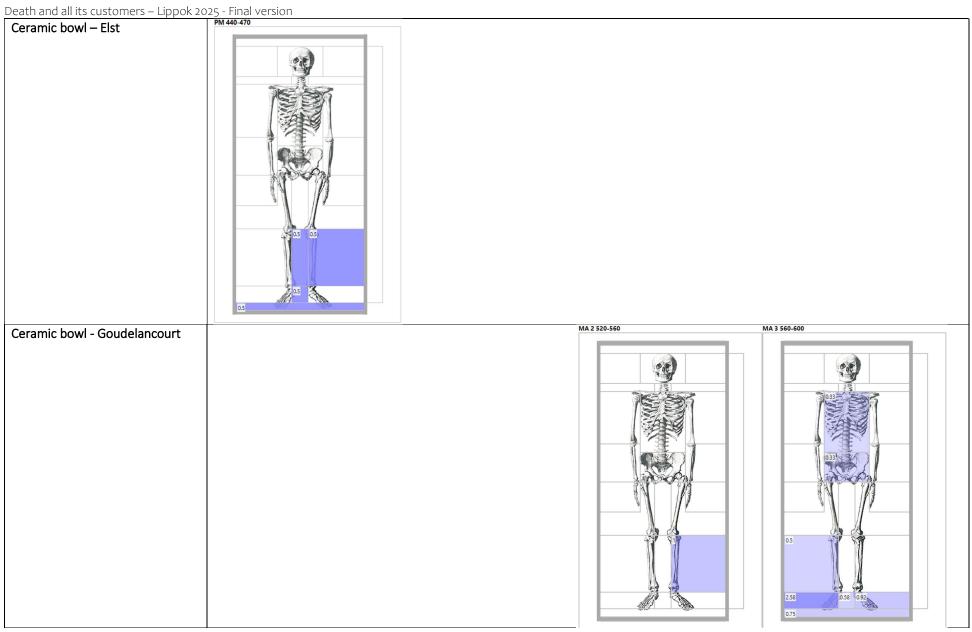
Ceramics – Bowls

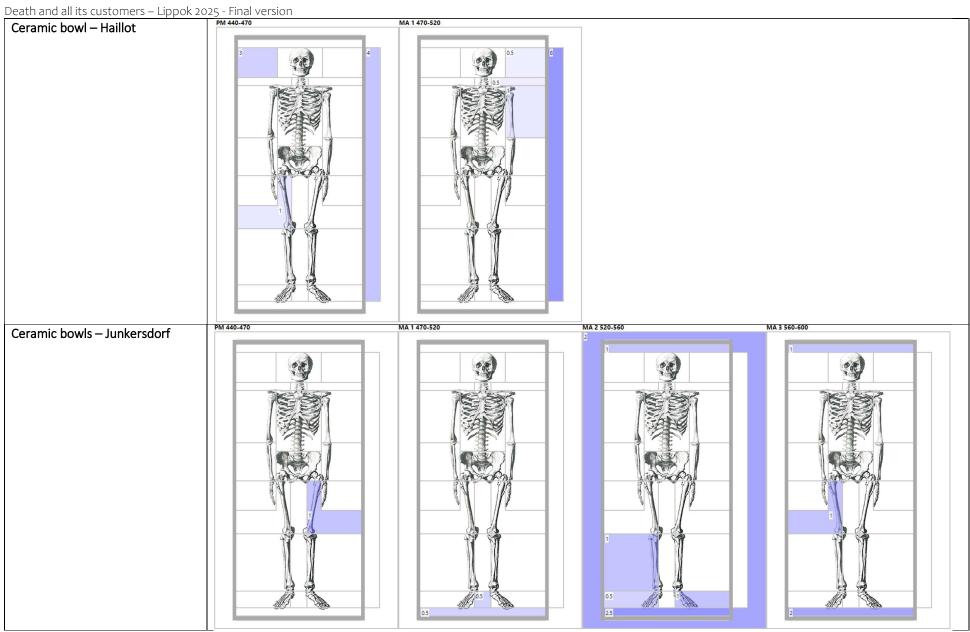


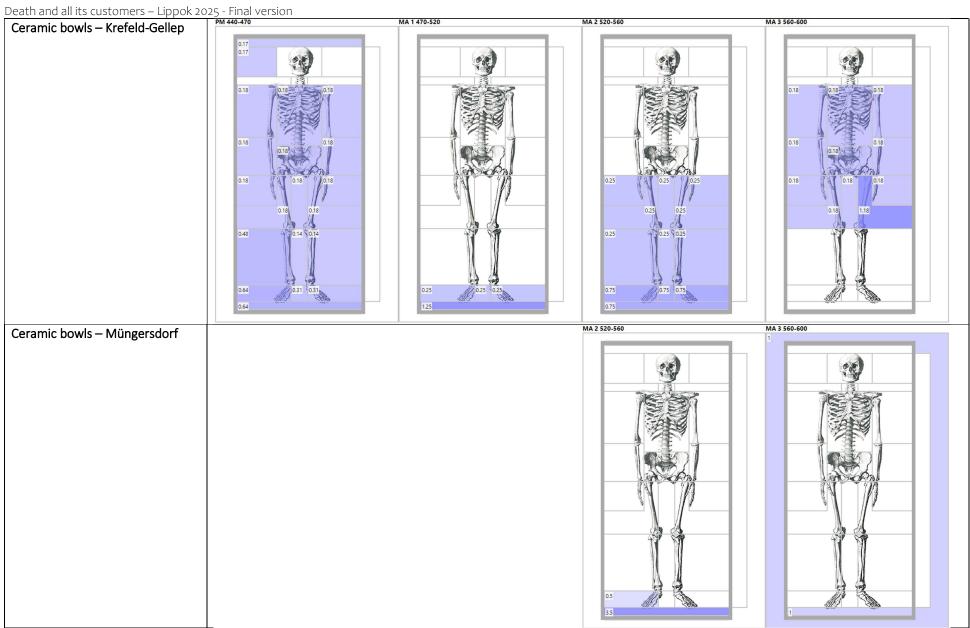
Appendix 14

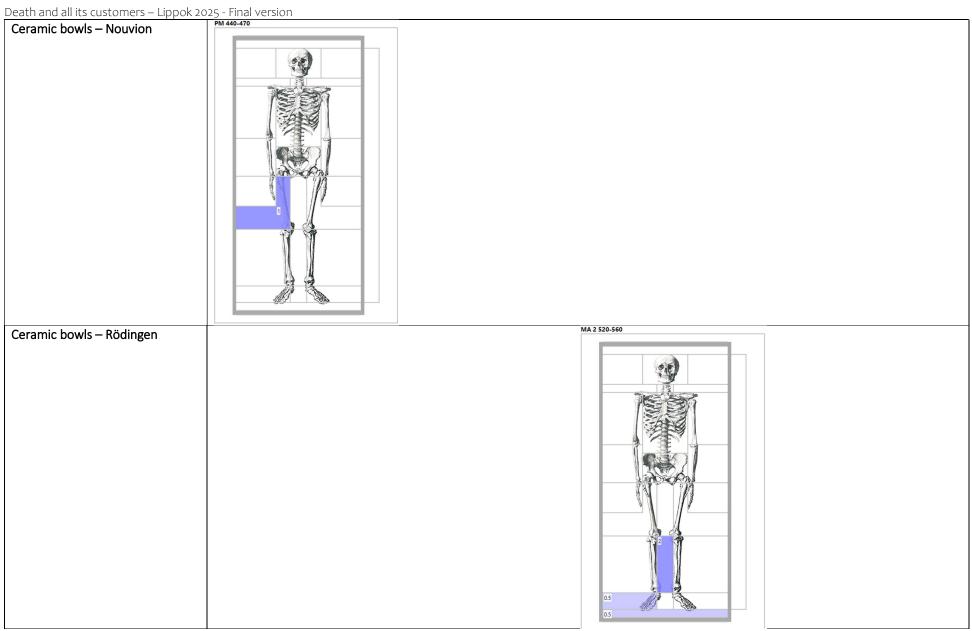


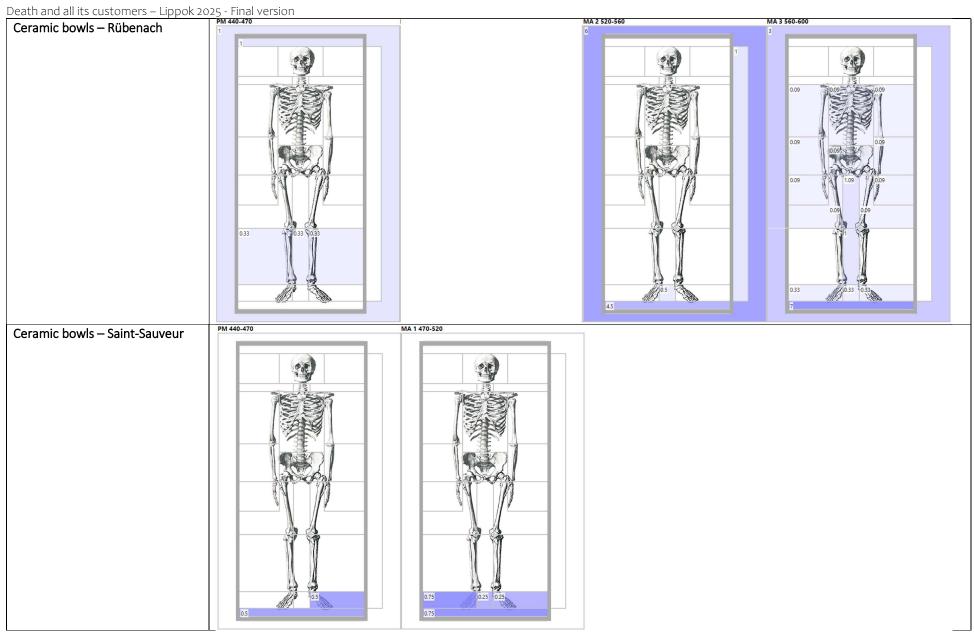


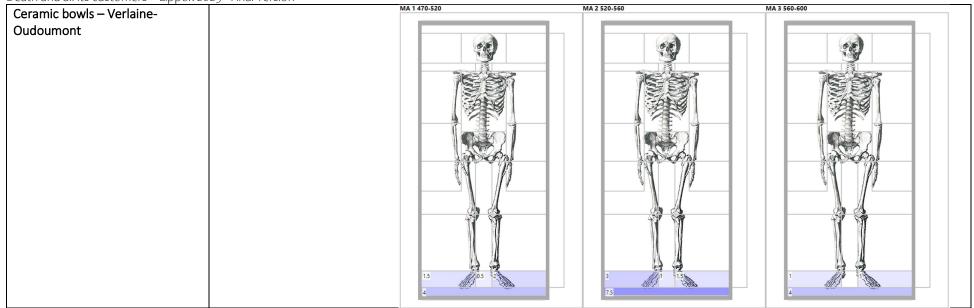




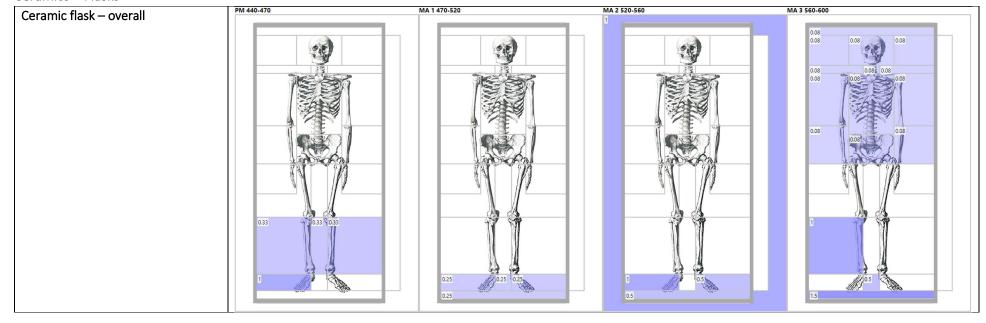


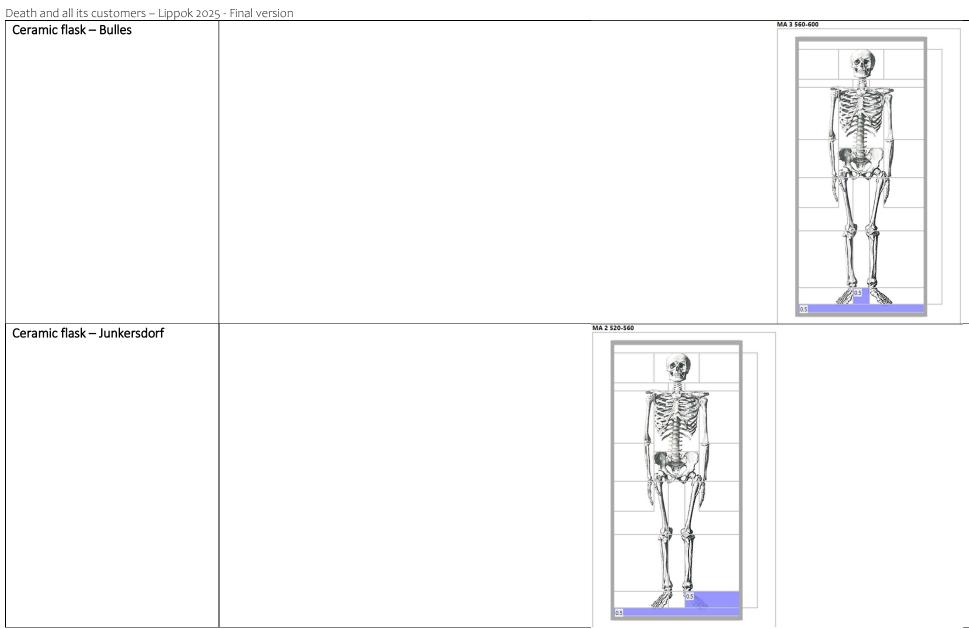




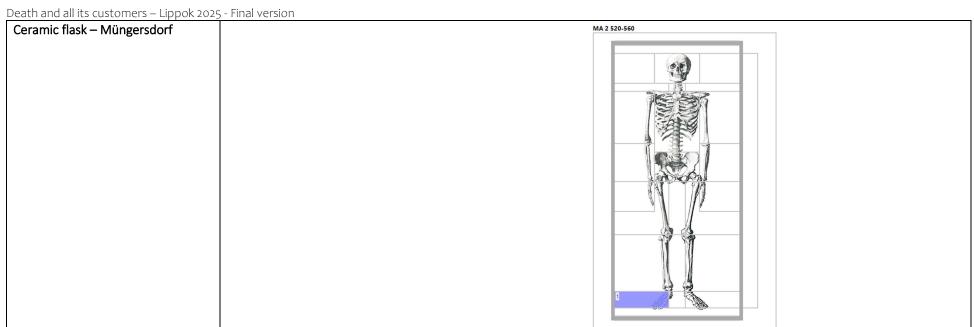


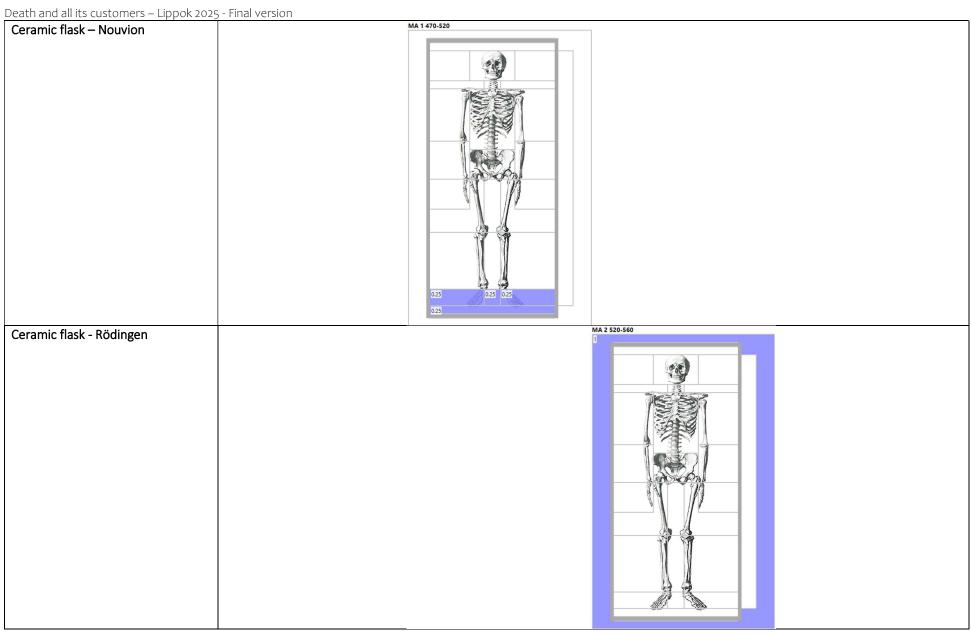
Ceramics – Flasks

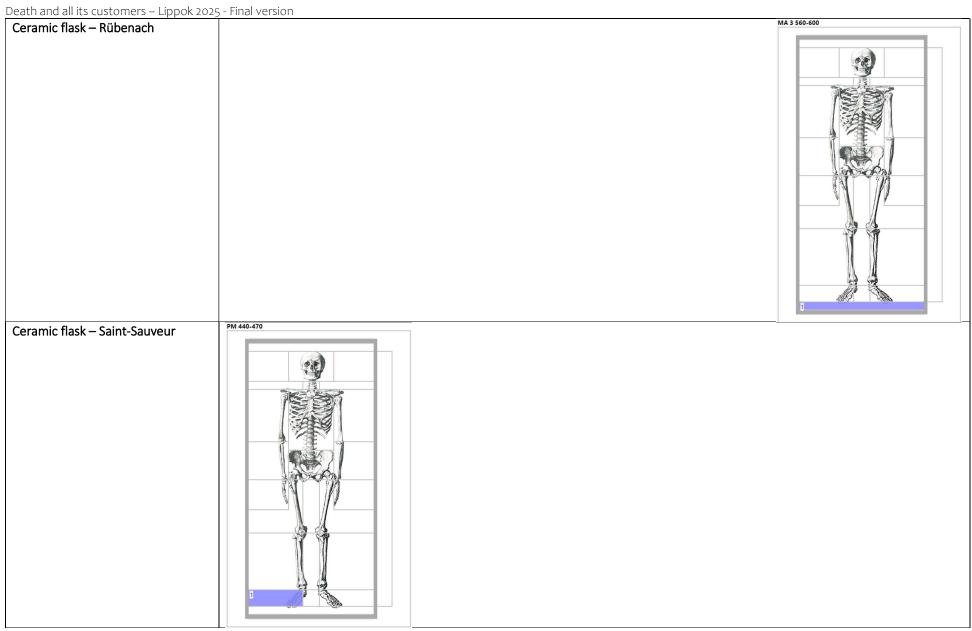






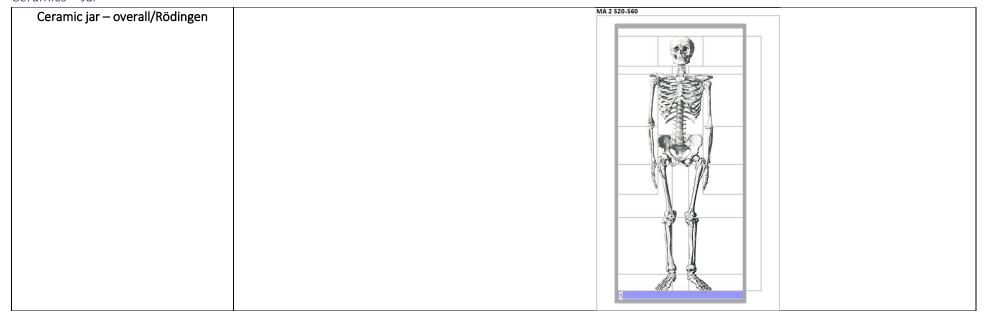




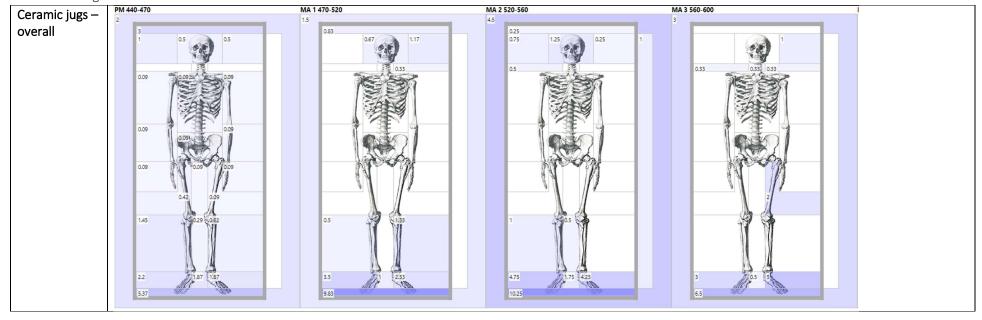


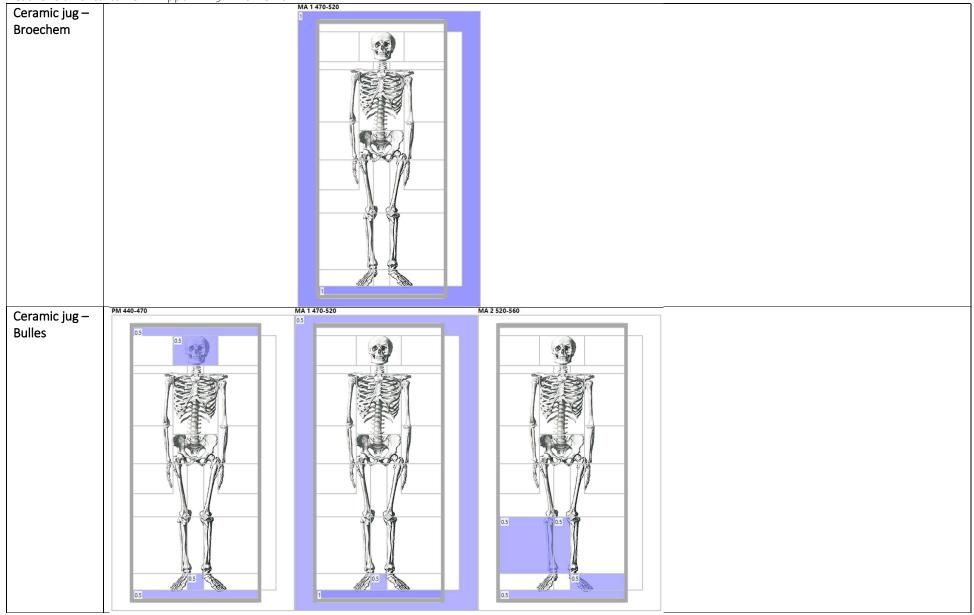


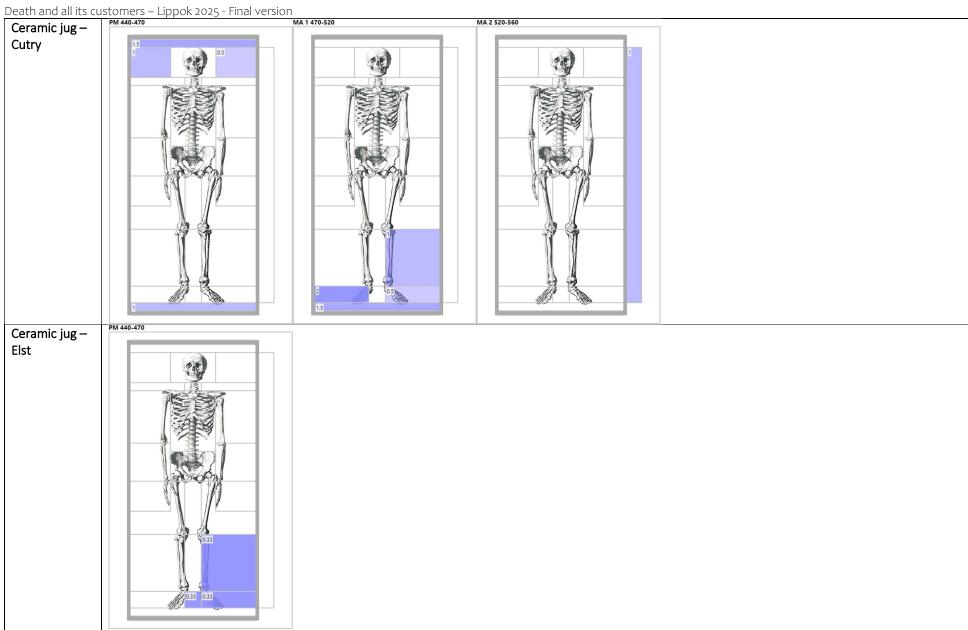
Ceramics – Jar

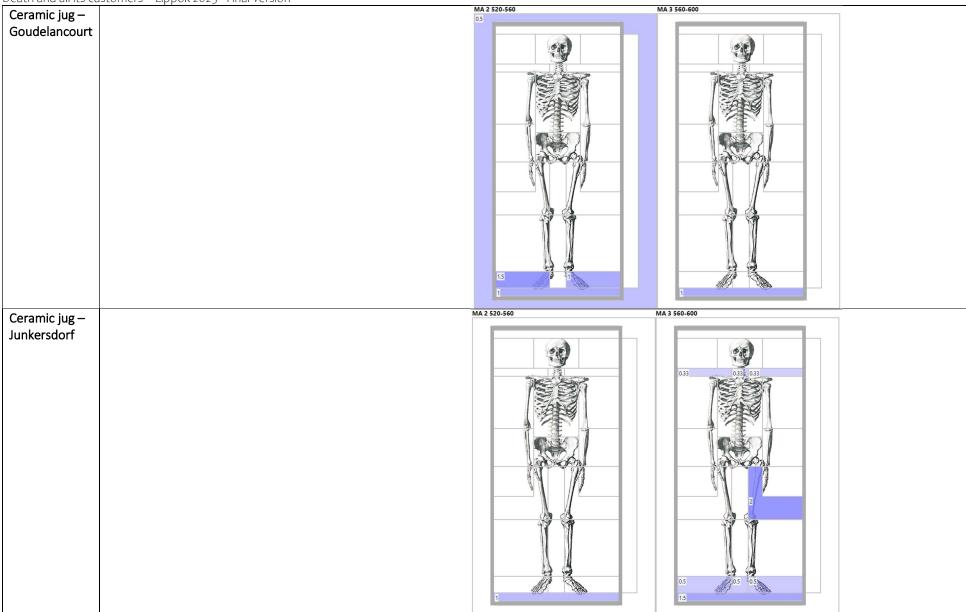


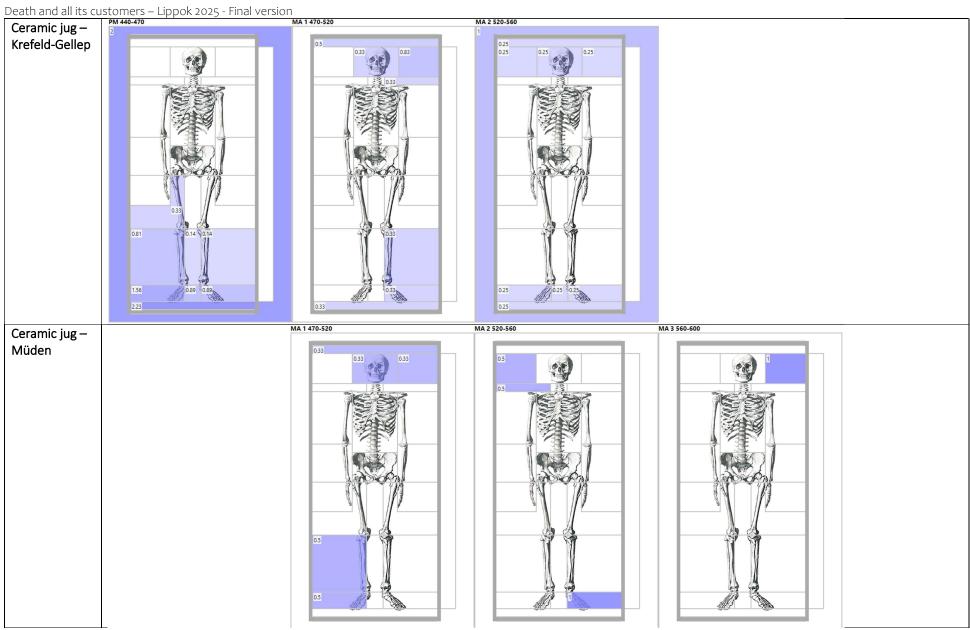
Ceramics – Jugs

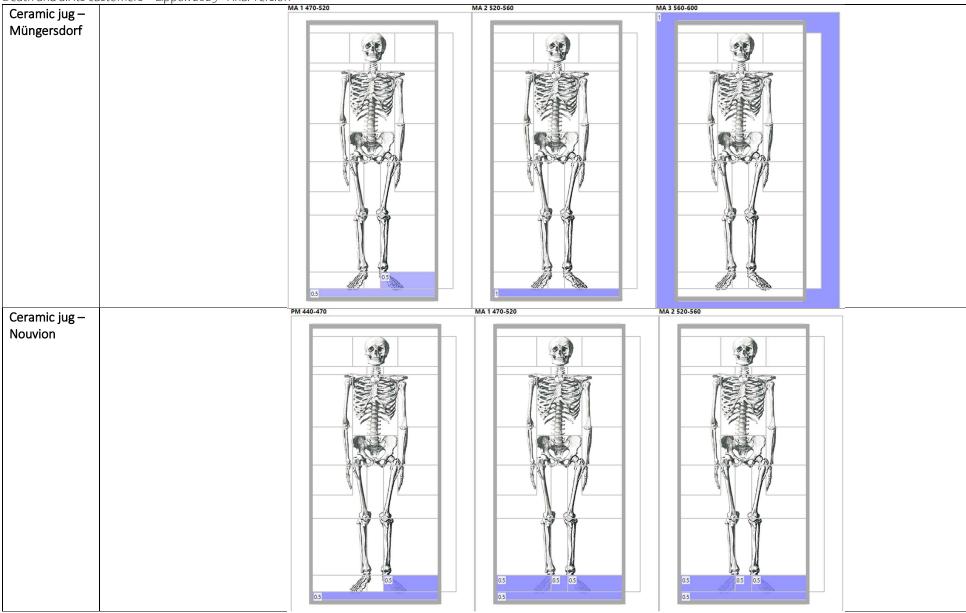




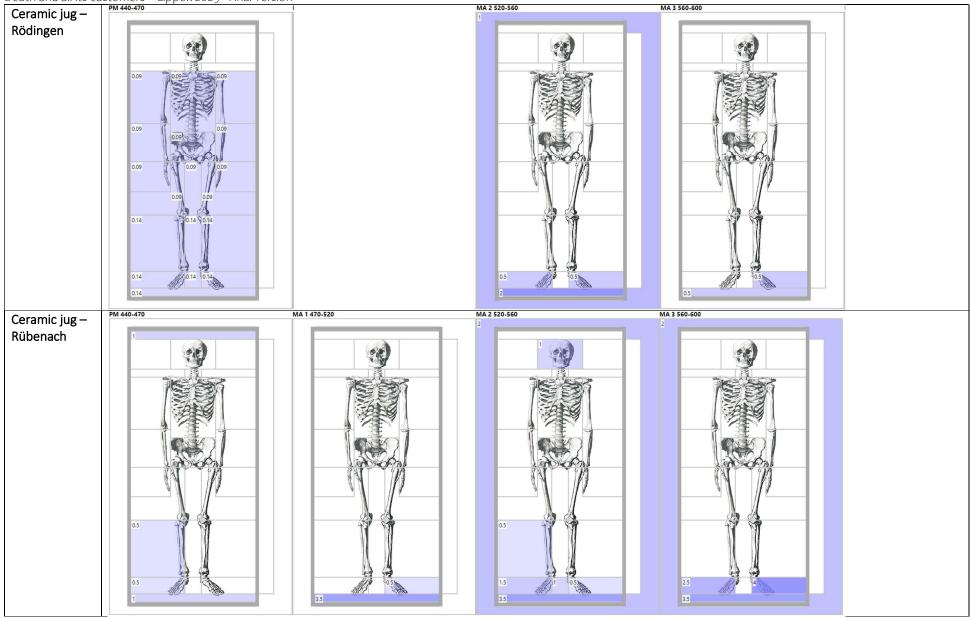


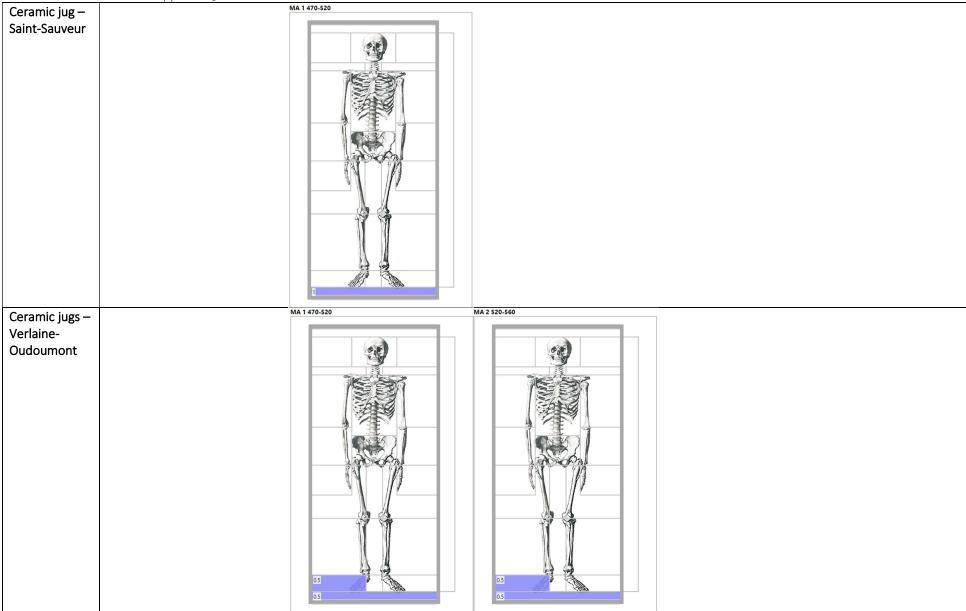






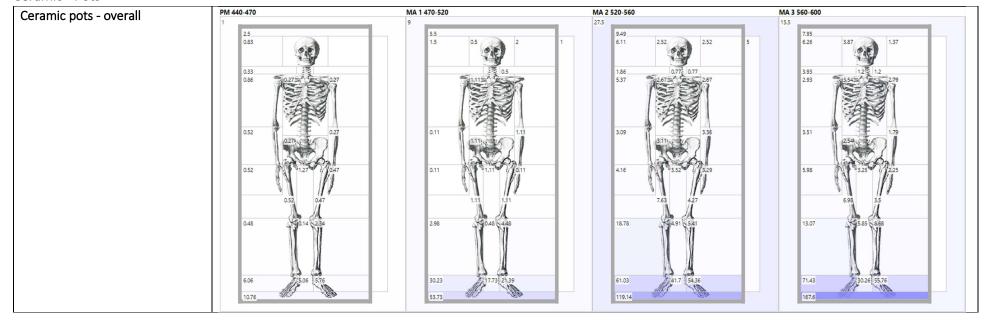
Death and all its customers – Lippok 2025 - Final version Ceramic jug –

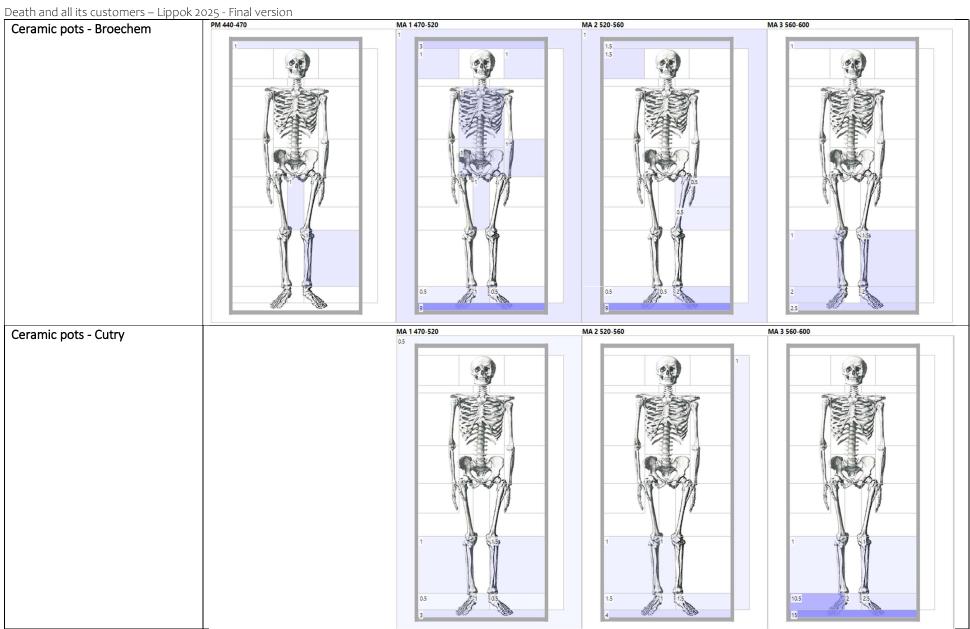


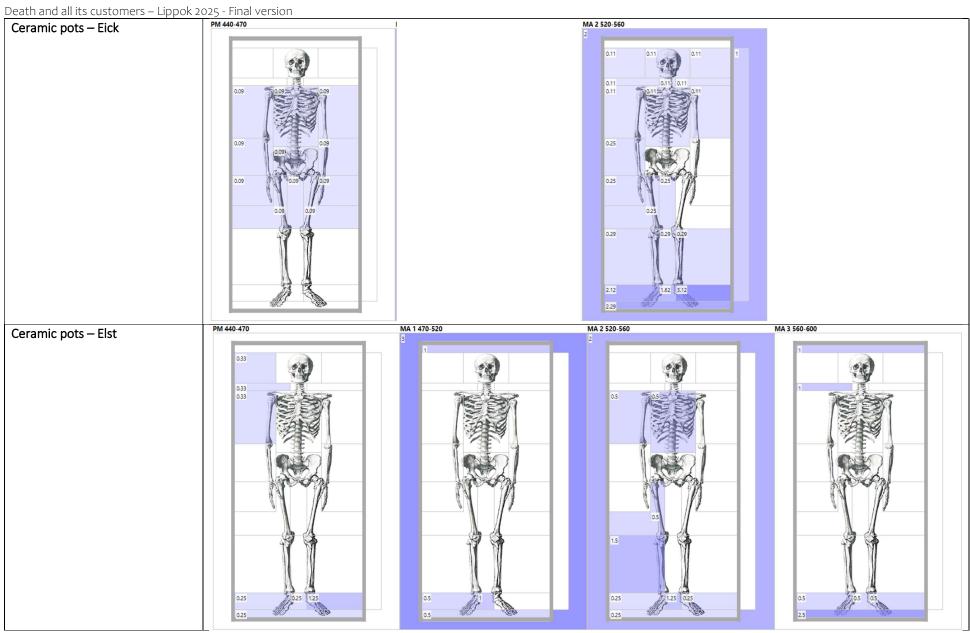


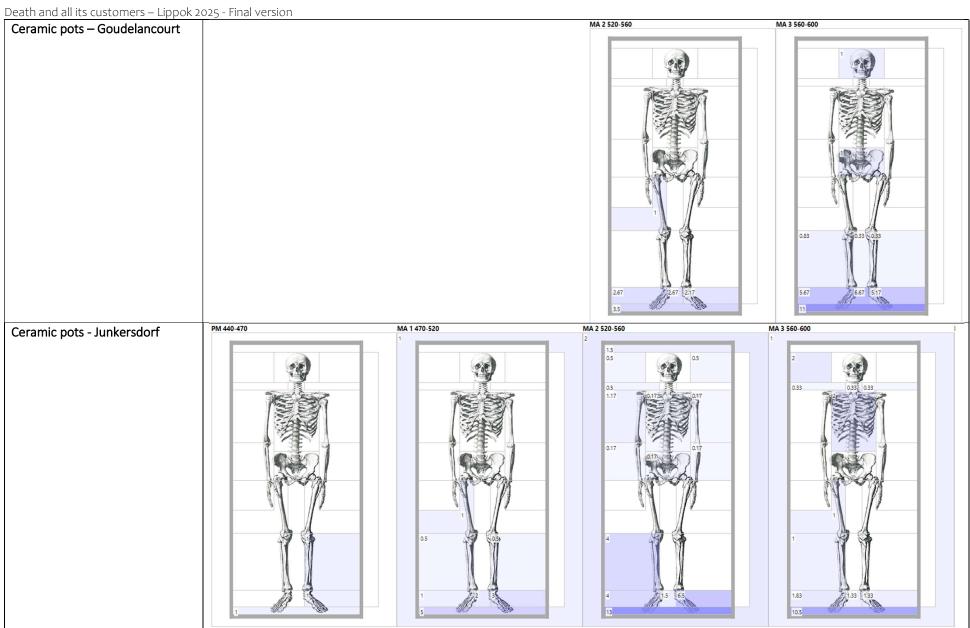
Appendix 14

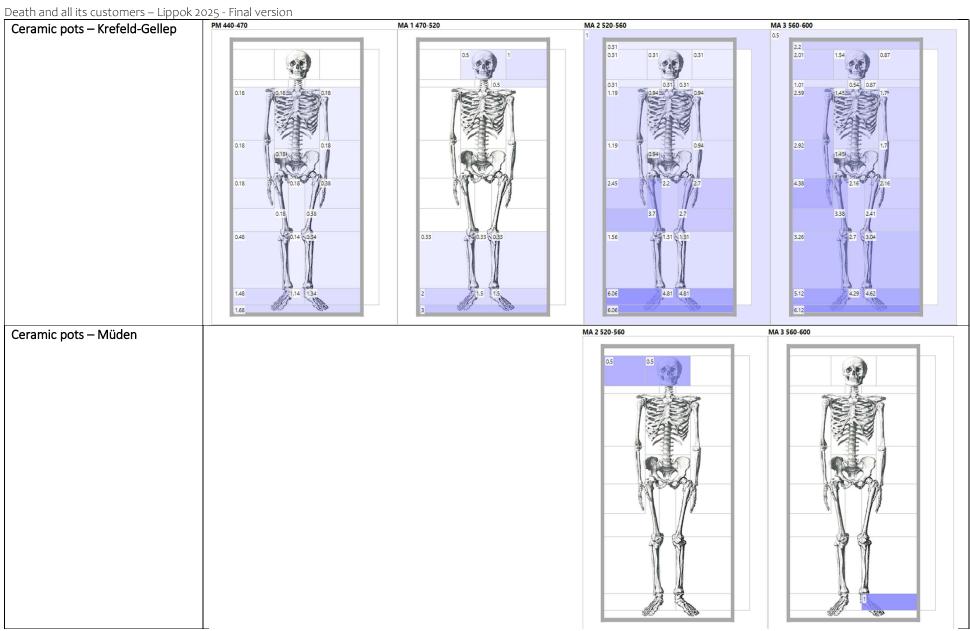
Ceramic - Pots

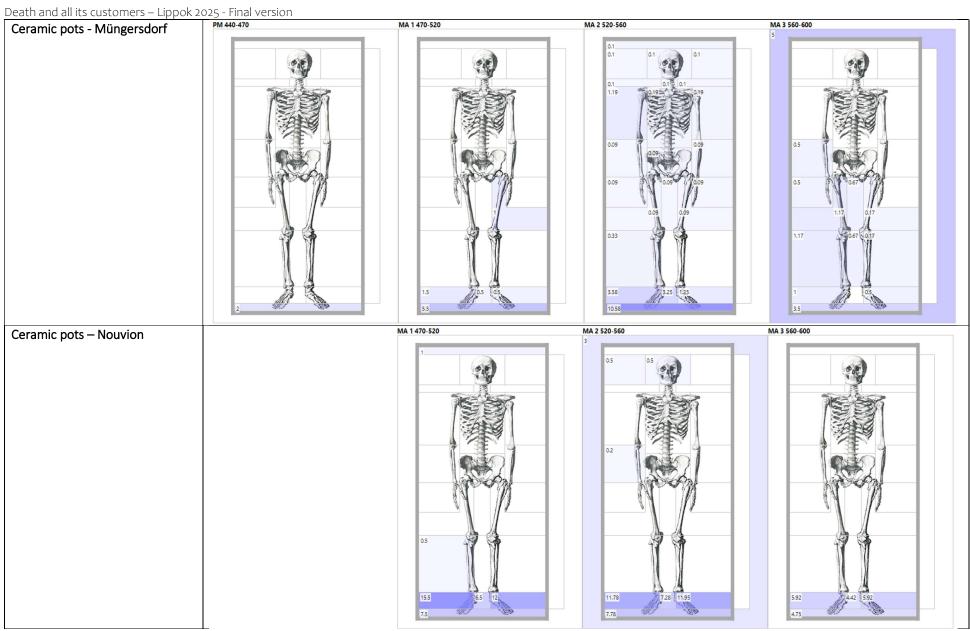


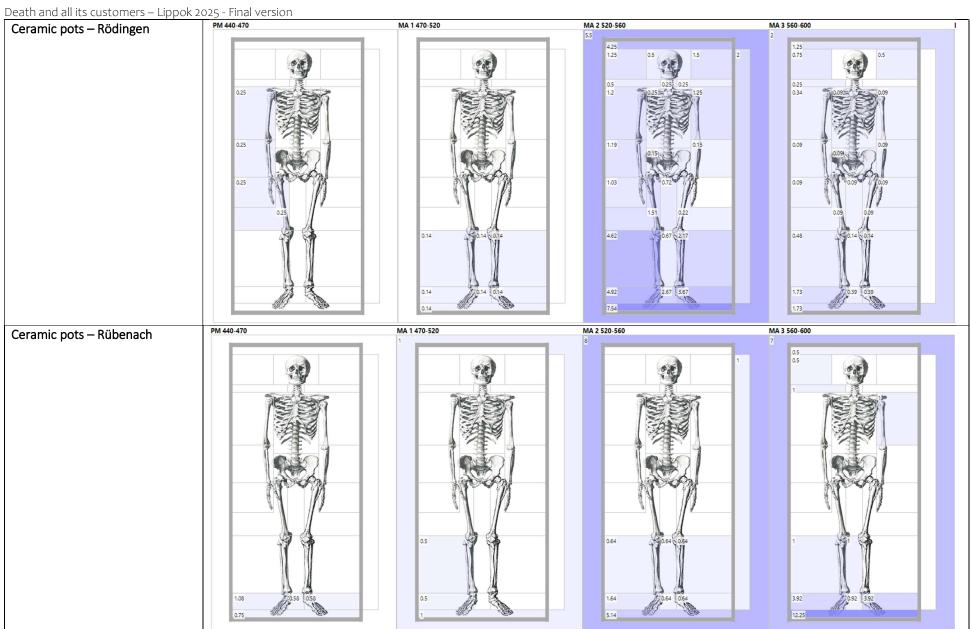


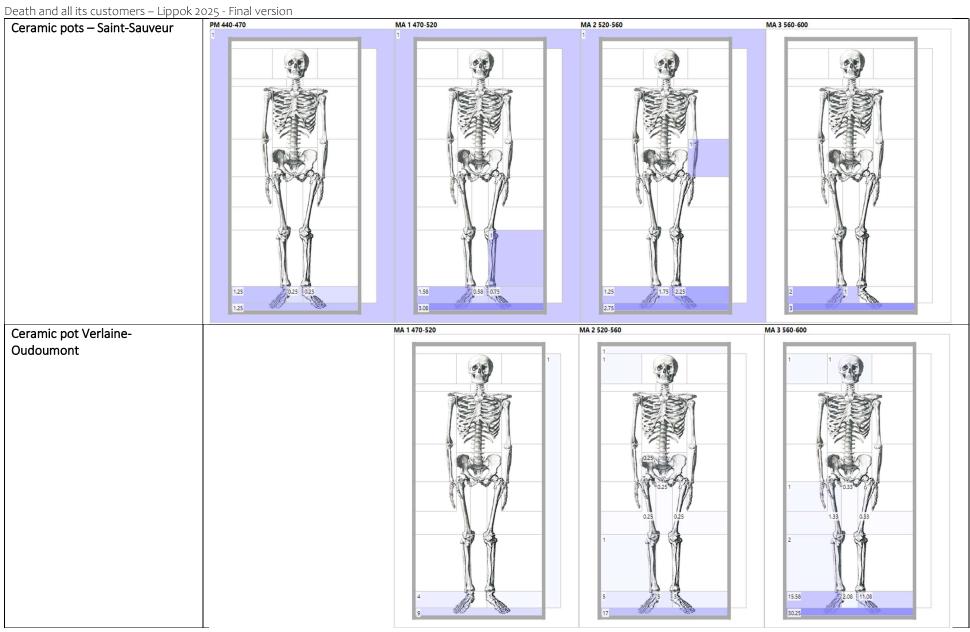




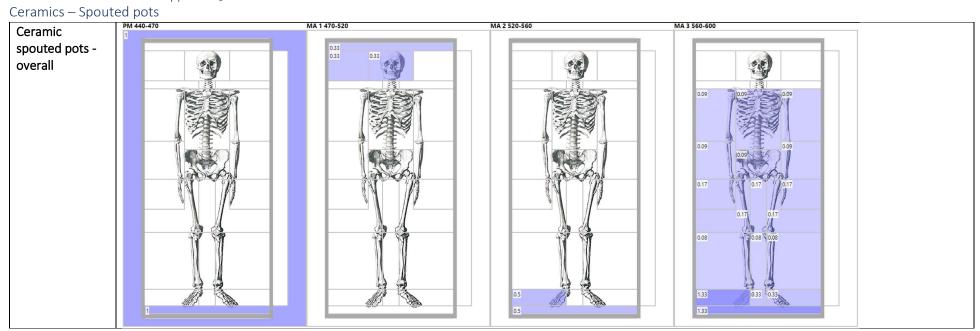




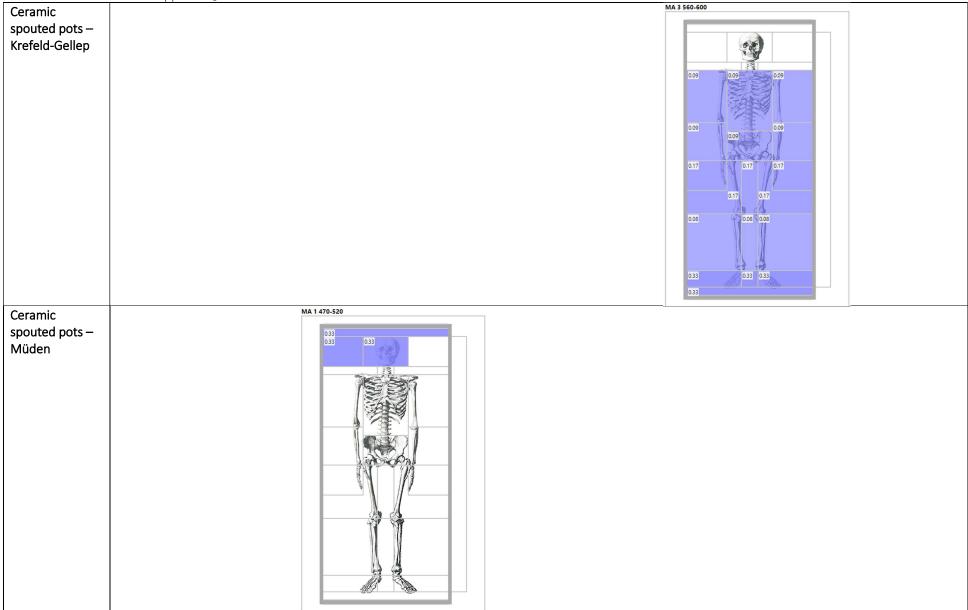




Appendix 14

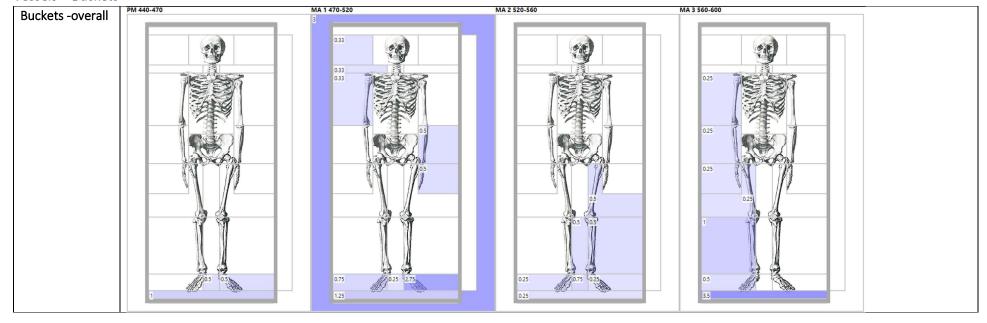


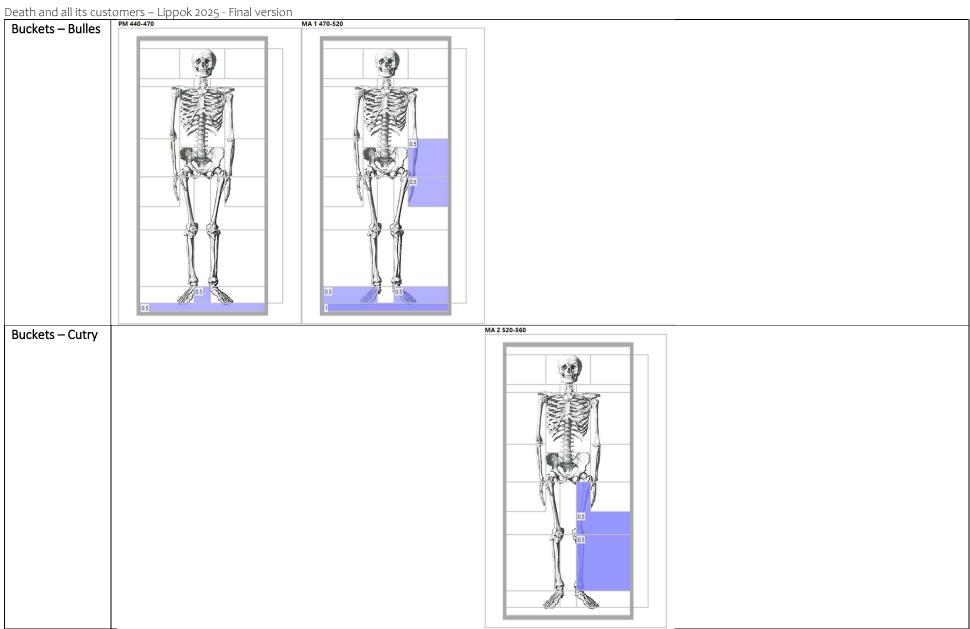
Death and all its customers – Lippok 2025 - Final version Ceramic spouted pot -Broechem MA 2 520-560 MA 3 560-600 Ceramic spouted pots -Bulles

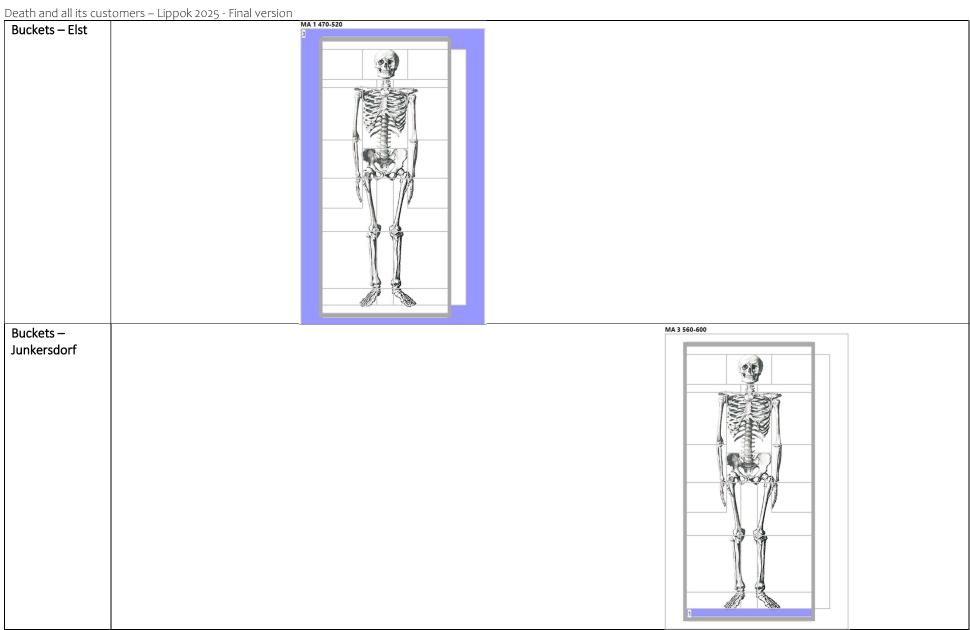


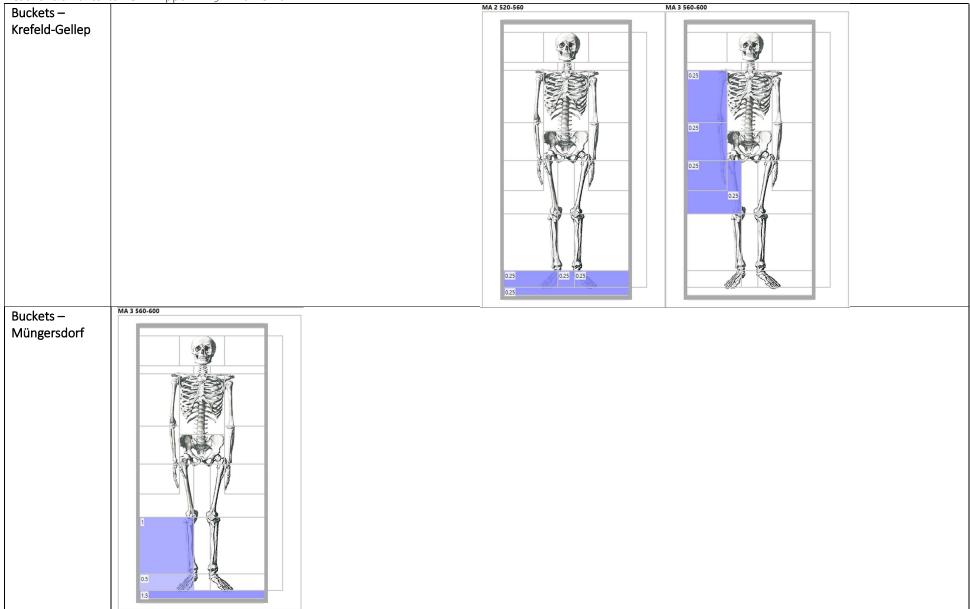


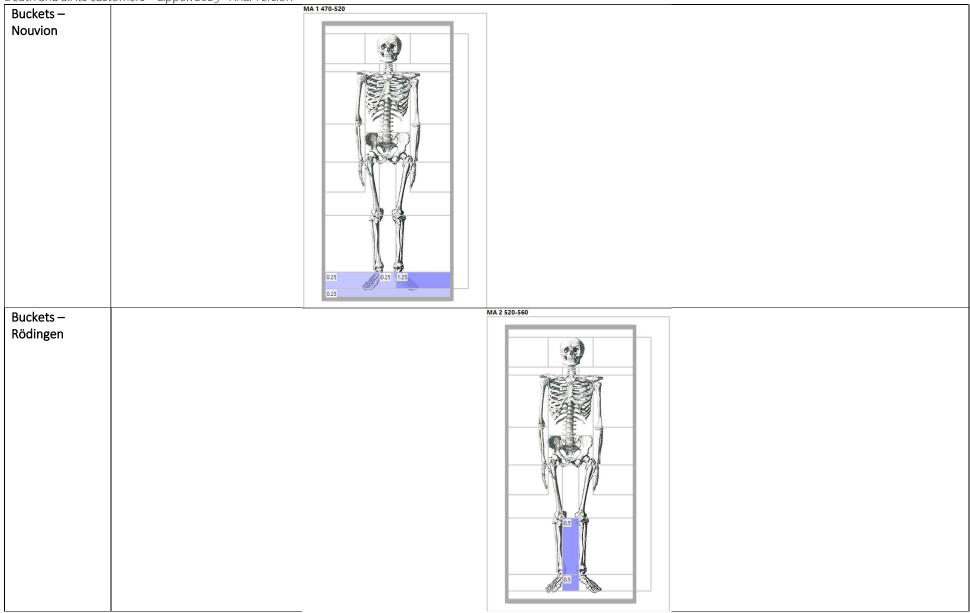
Vessels – Buckets

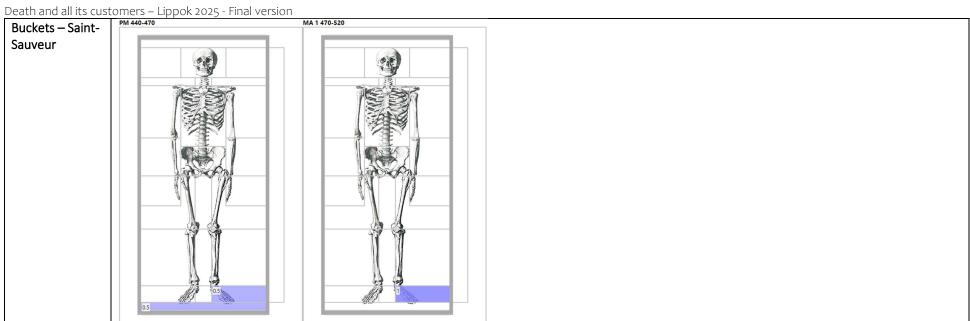


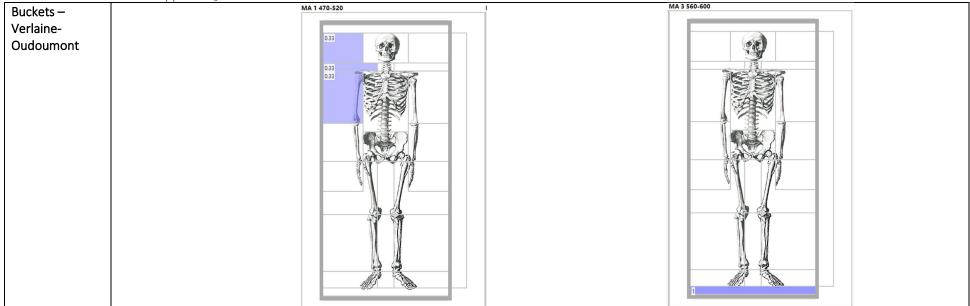


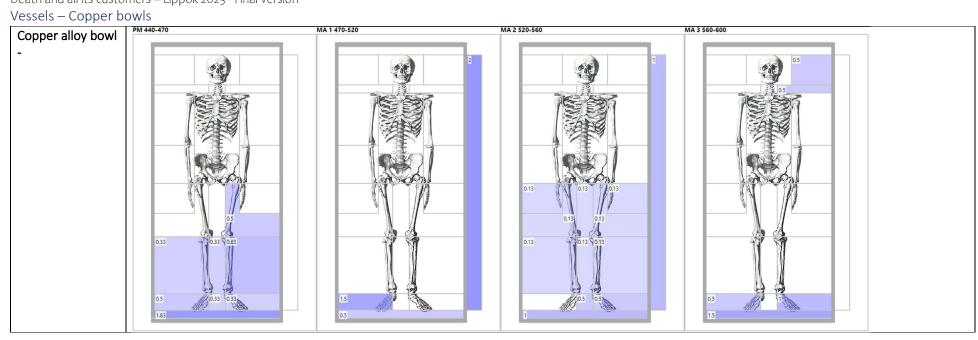


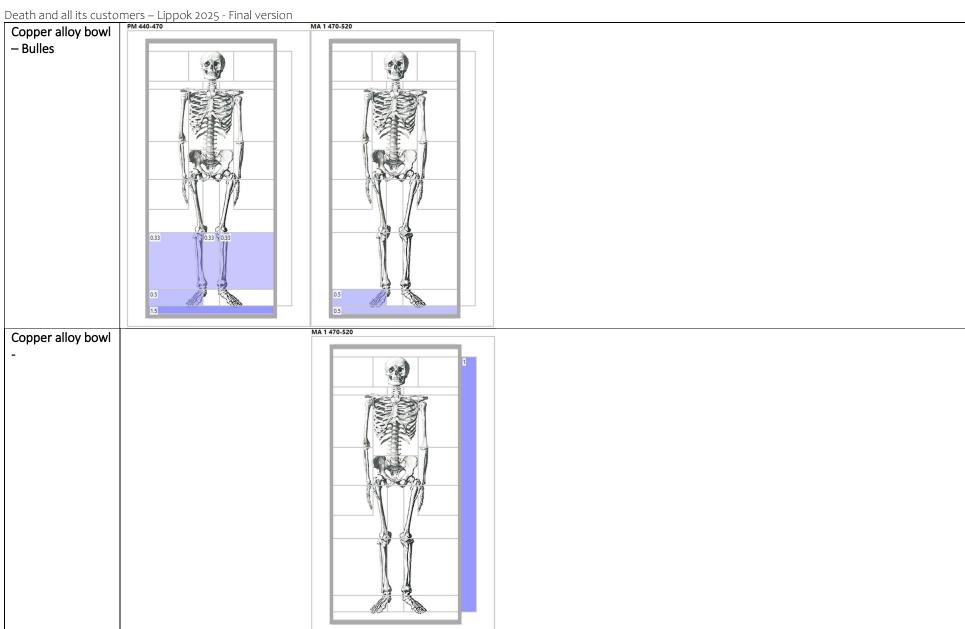






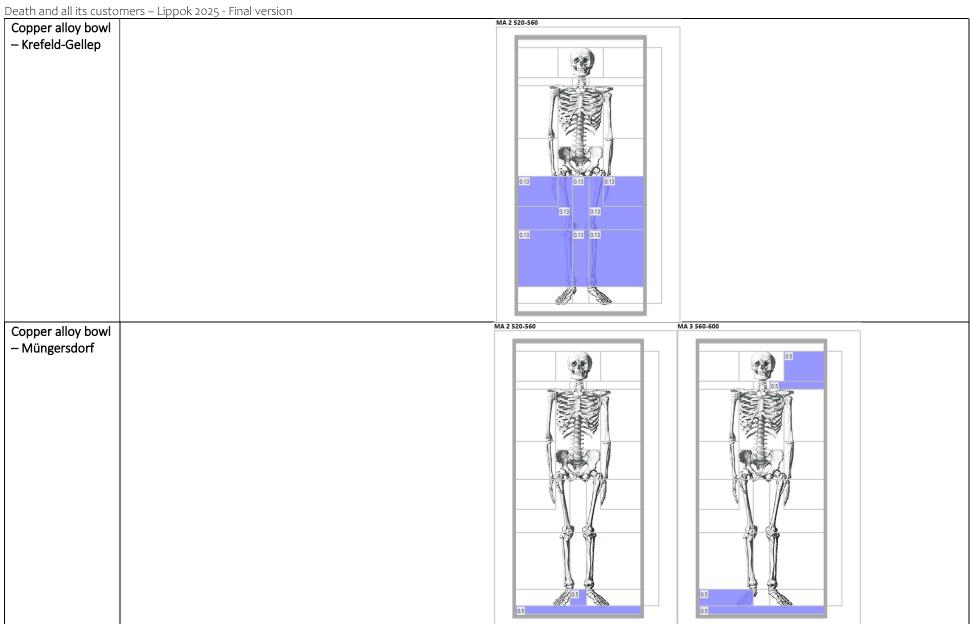






Death and all its customers – Lippok 2025 - Final version

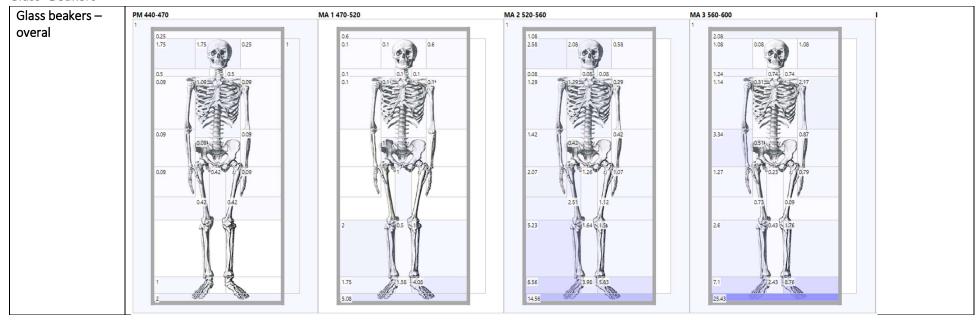
Copper alloy bowl MA 1 470-520 – Haillot MA 2 520-560 MA 3 560-600 Copper alloy bowl – Junkersdorf

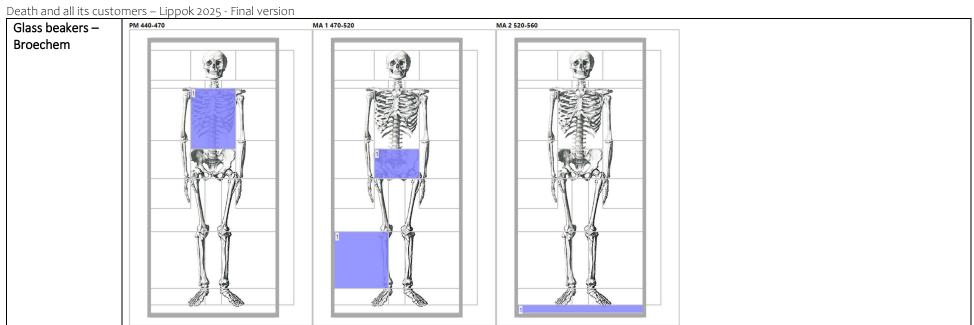


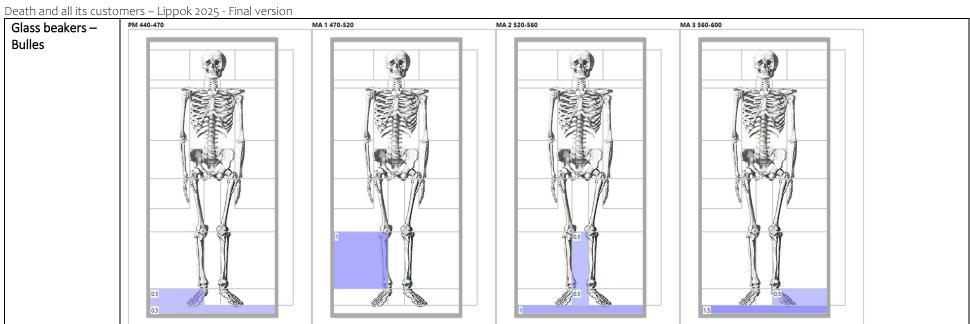
Death and all its customers – Lippok 2025 - Final version Copper alloy bowl MA 1 470-520 Nouvion PM 440-470 Copper alloy bowl – Saint-Sauveur

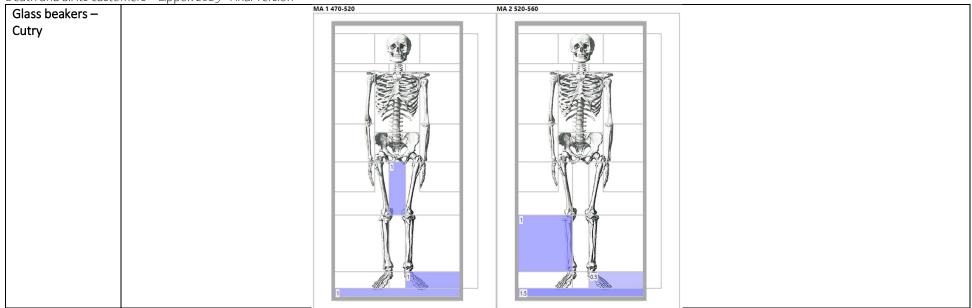
Appendix 14

Glass -Beakers

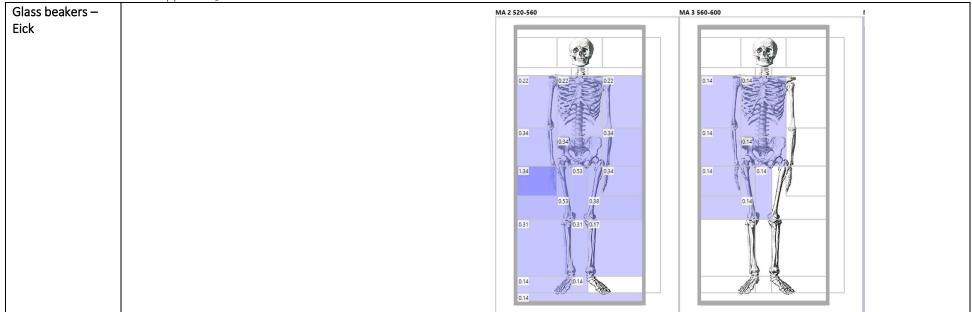


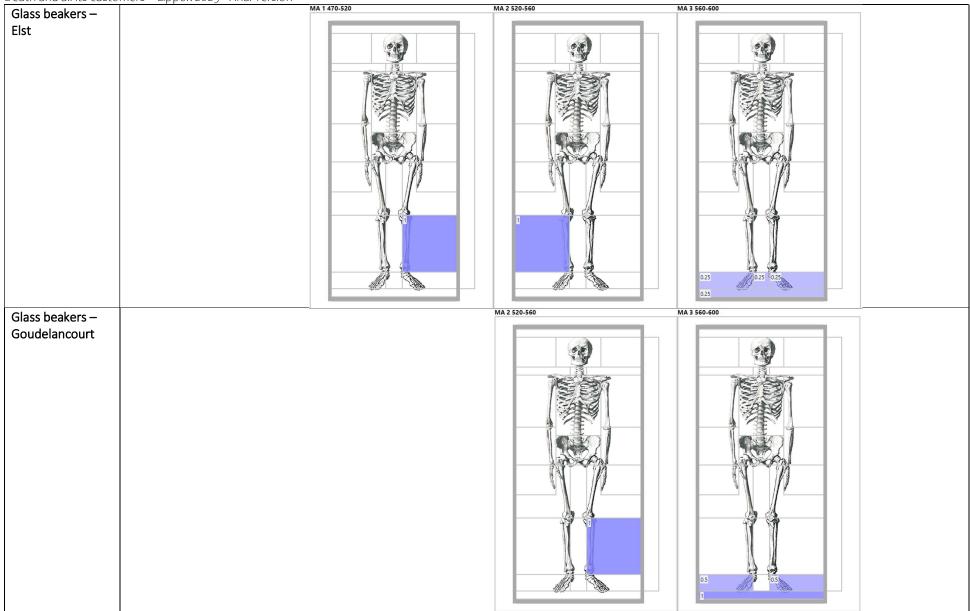






Appendix 14



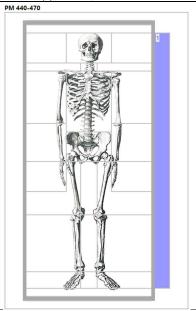


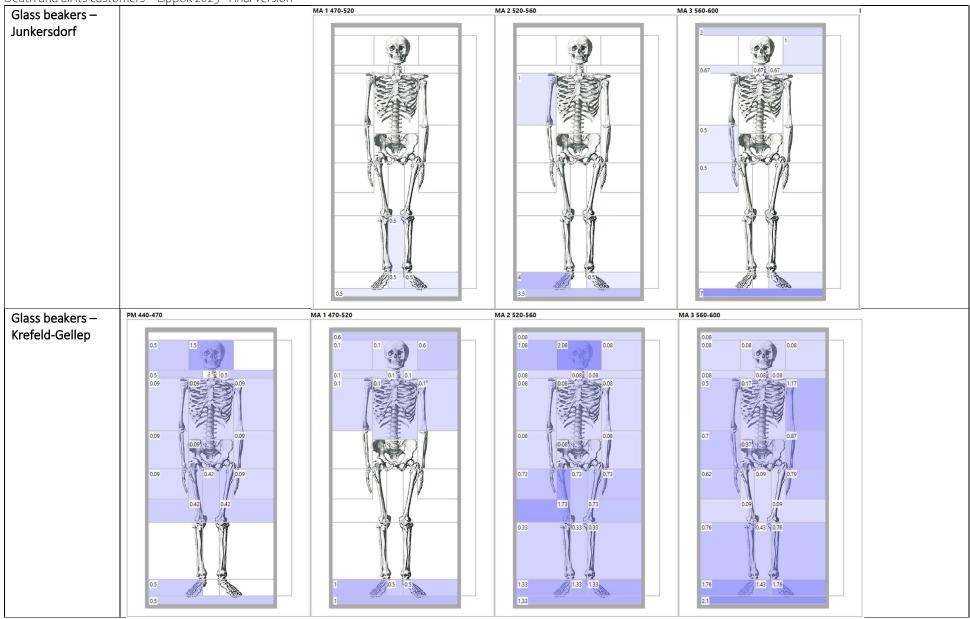
Death and all its customers – Lippok 2025 - Final version

Glass beakers –

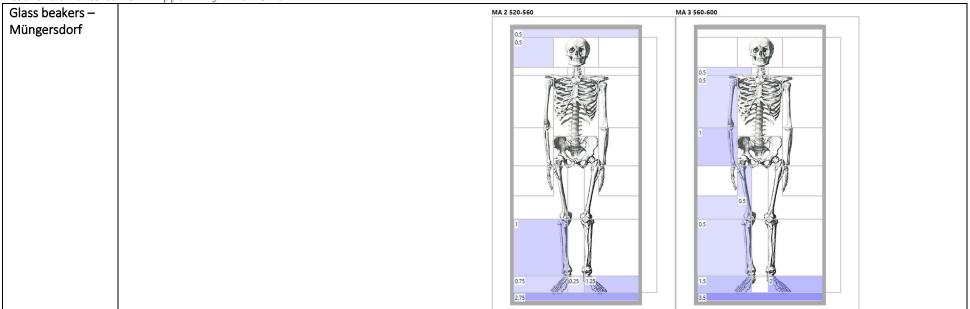
PM 440-470

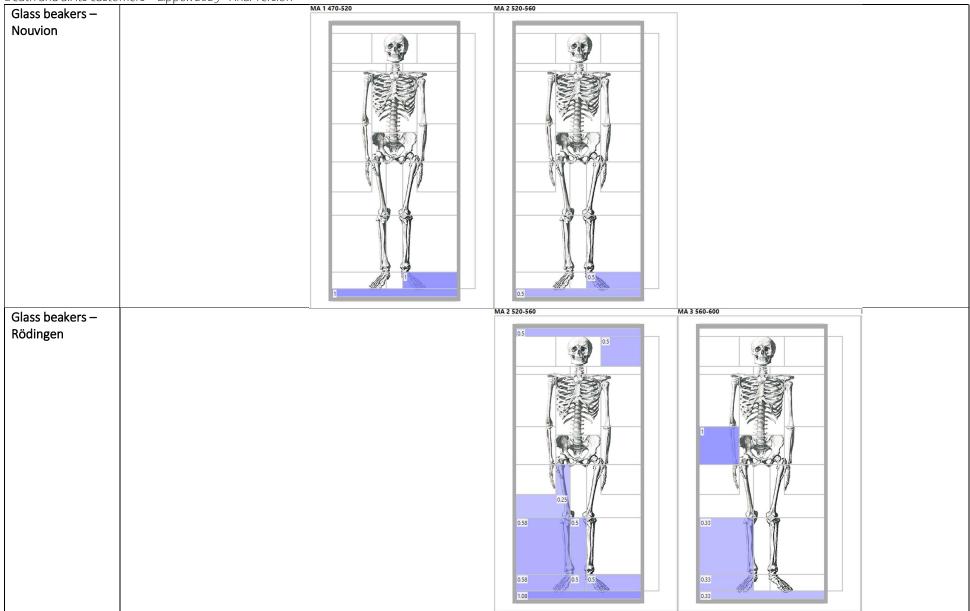


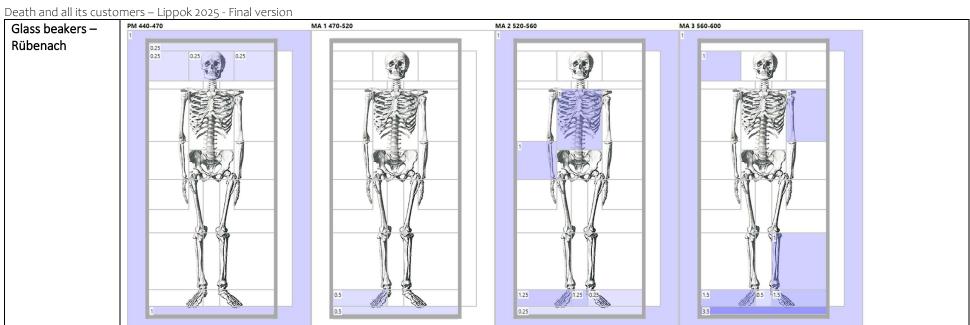


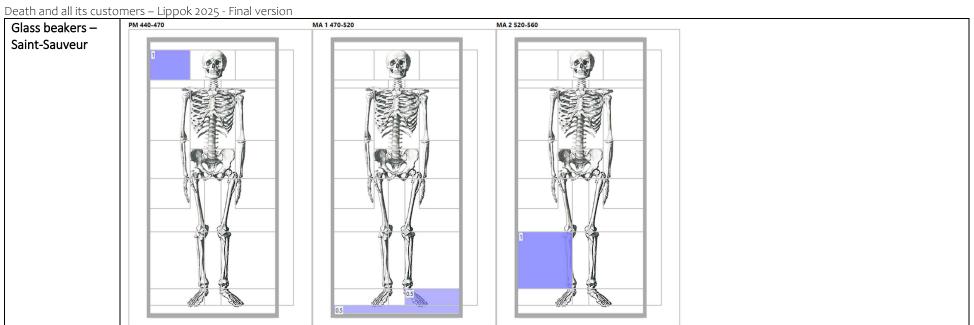




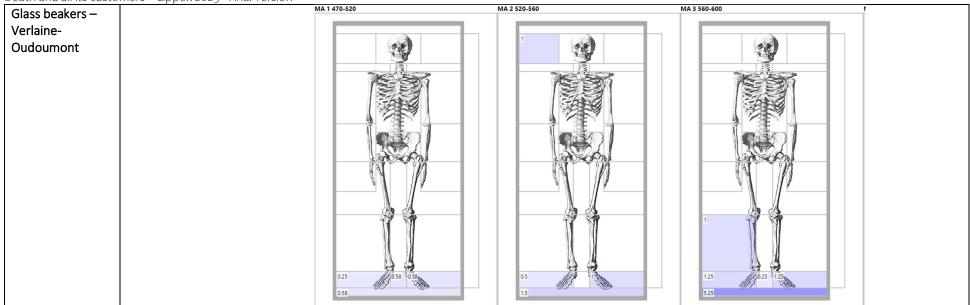




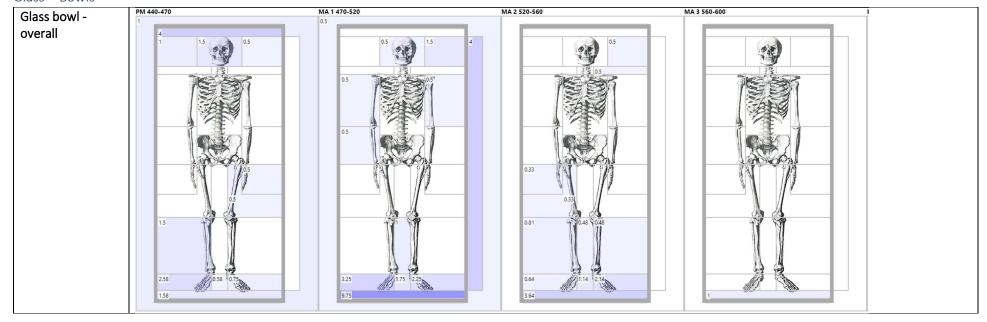


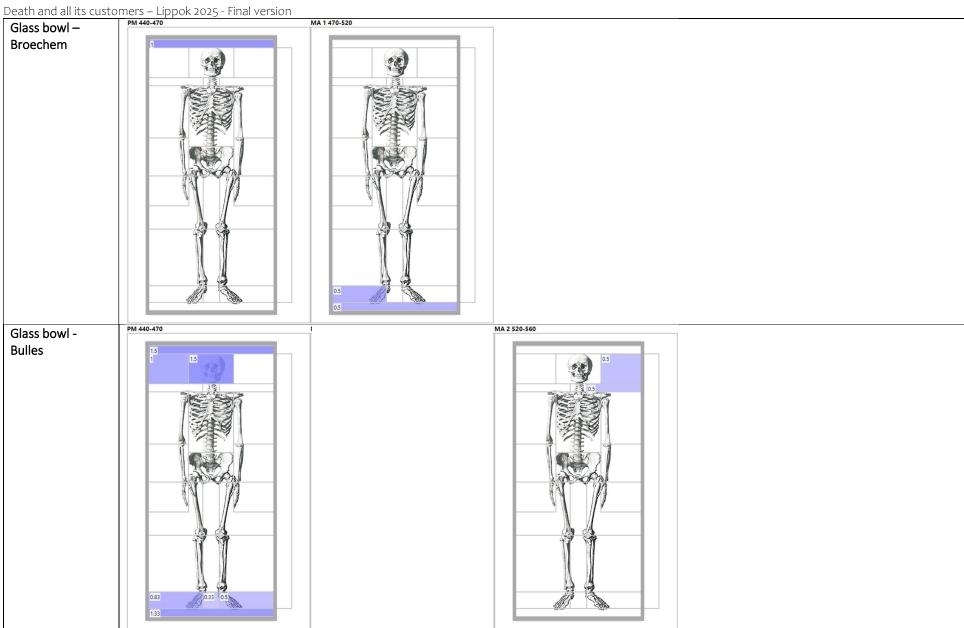


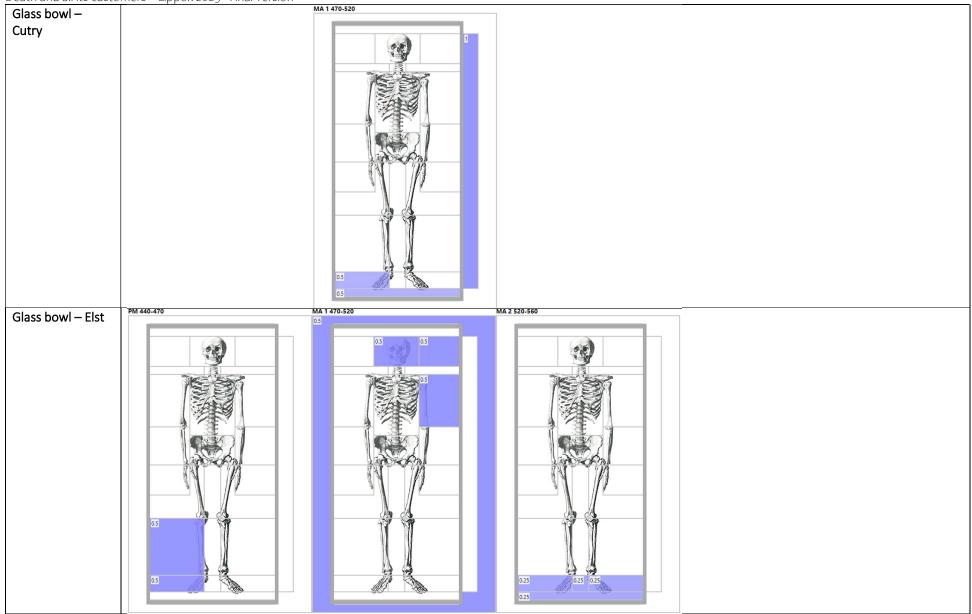
407 Appendix 14

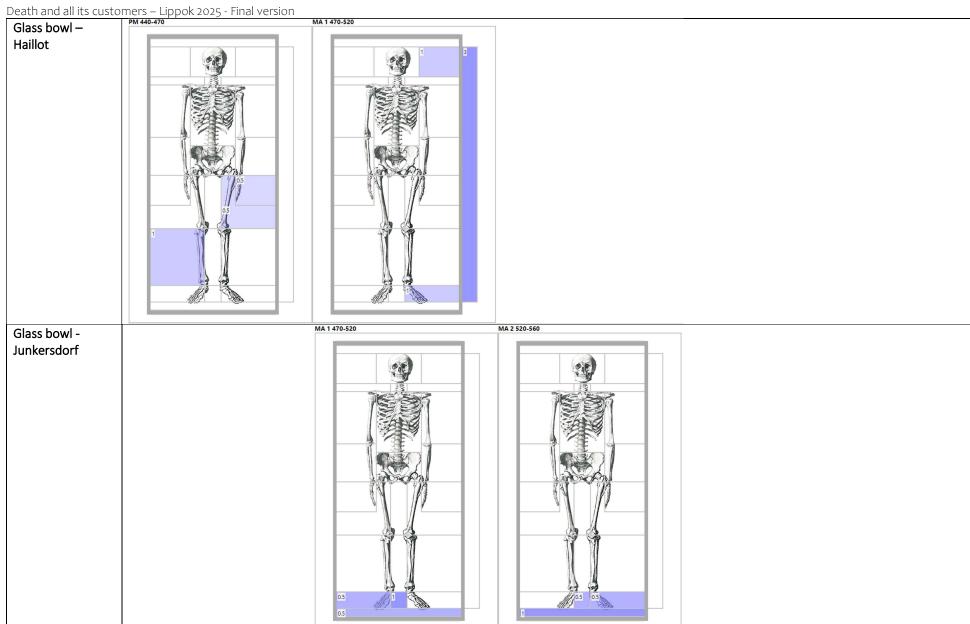


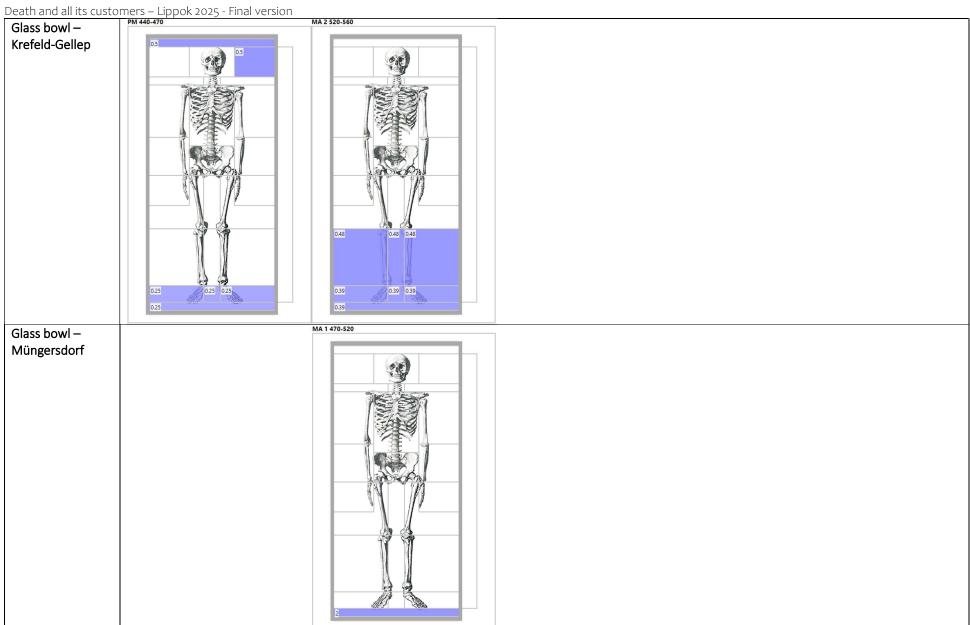
Glass – Bowls

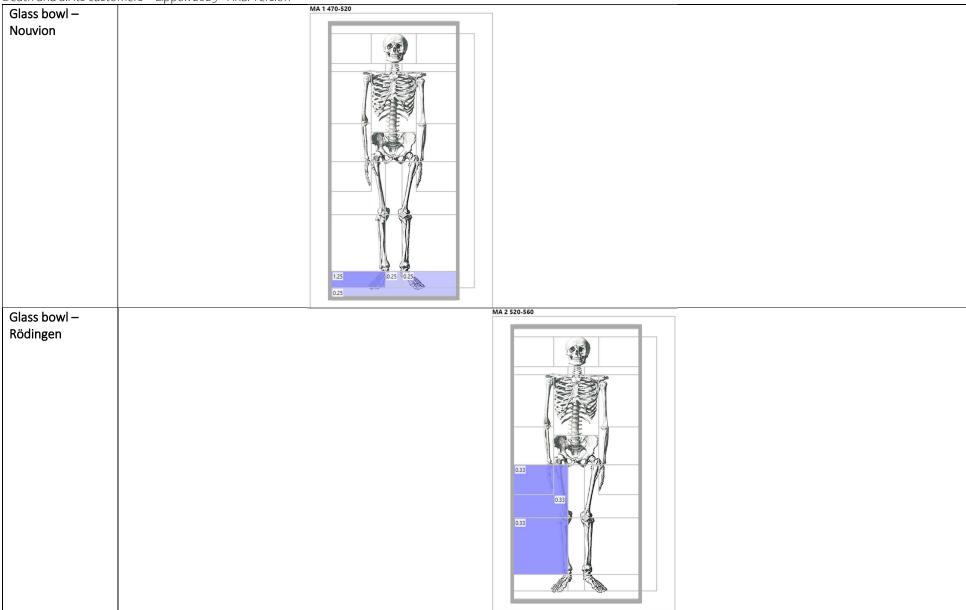


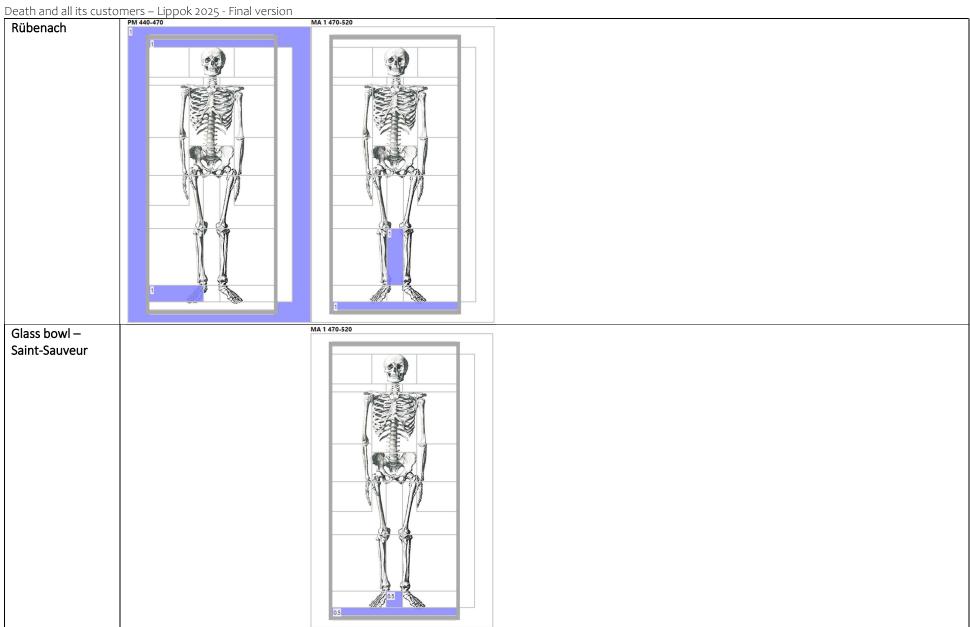


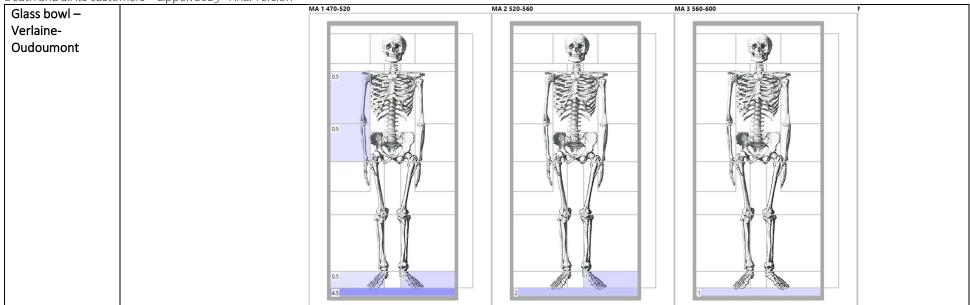




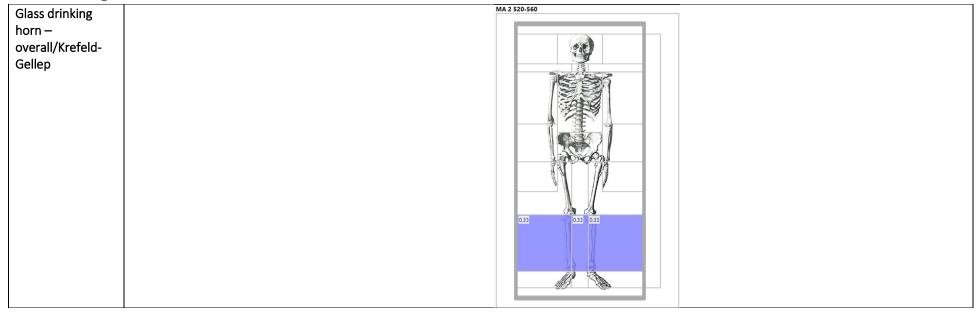






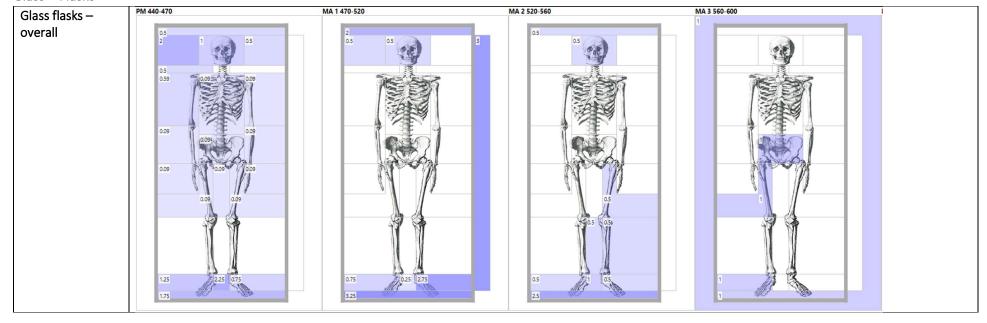


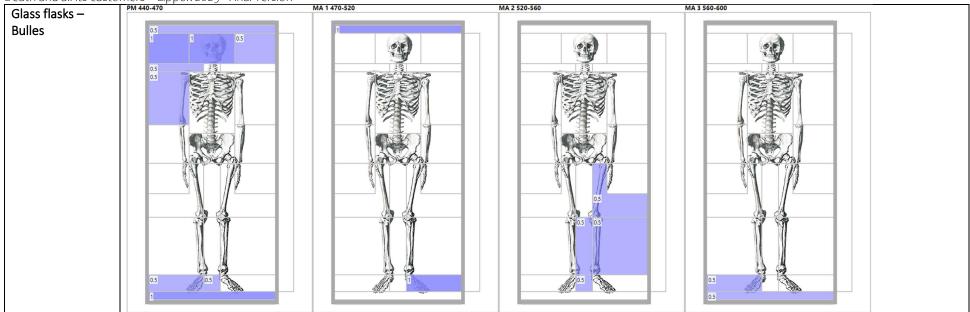
Glass – Drinkinghorn

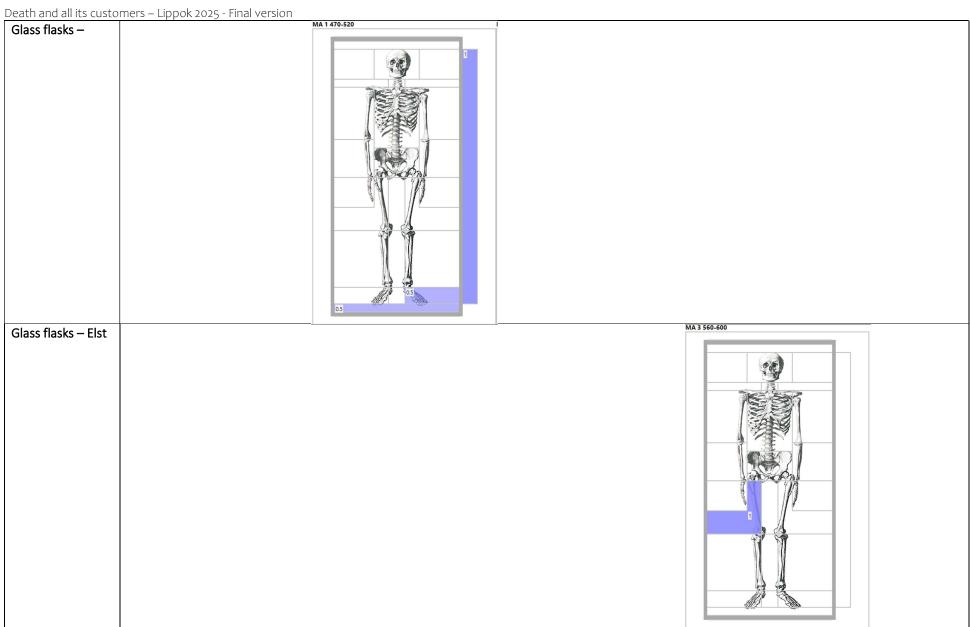


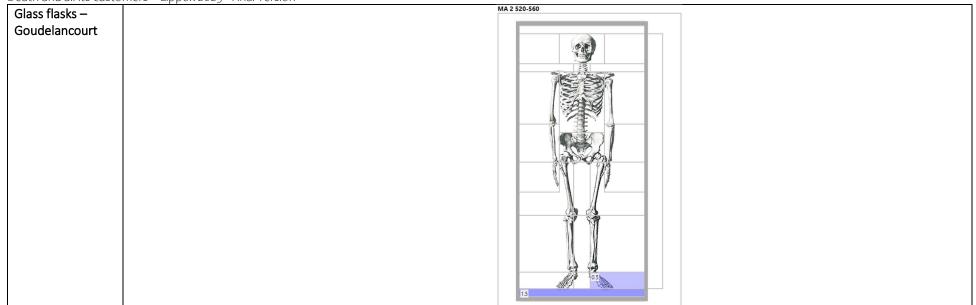
Appendix 14

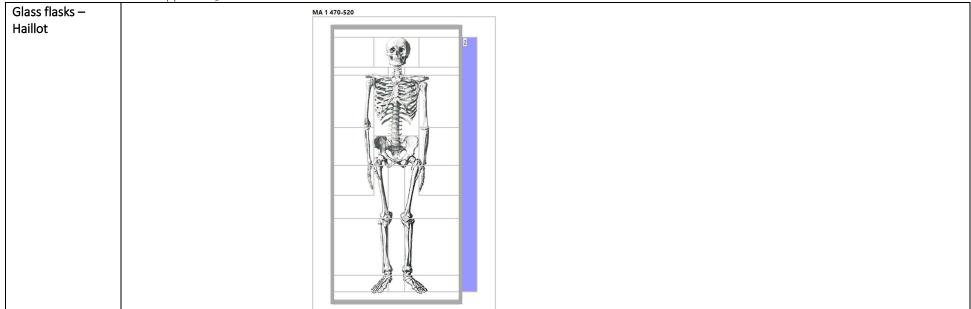
Glass – Flasks



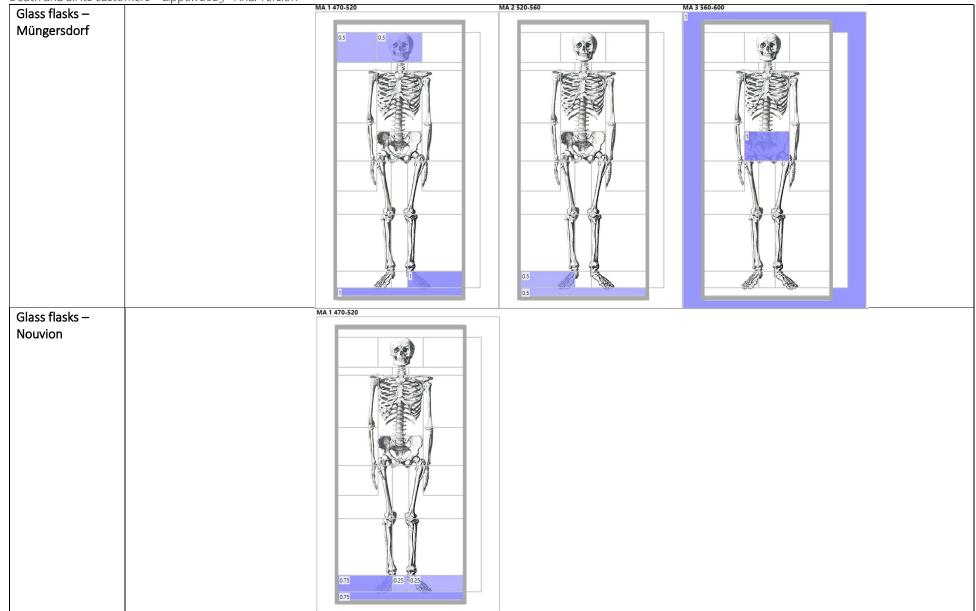


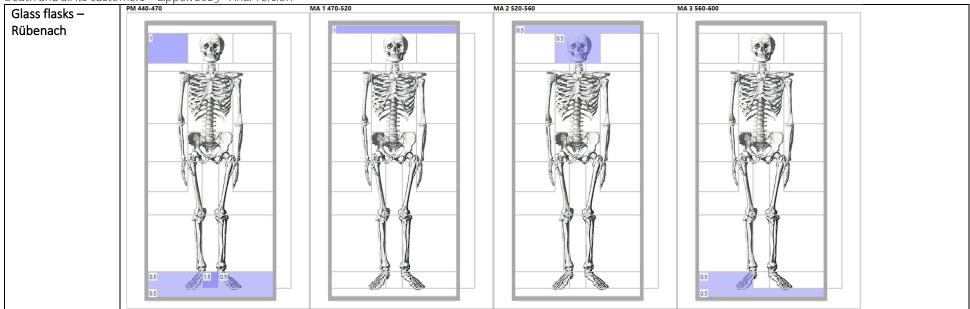




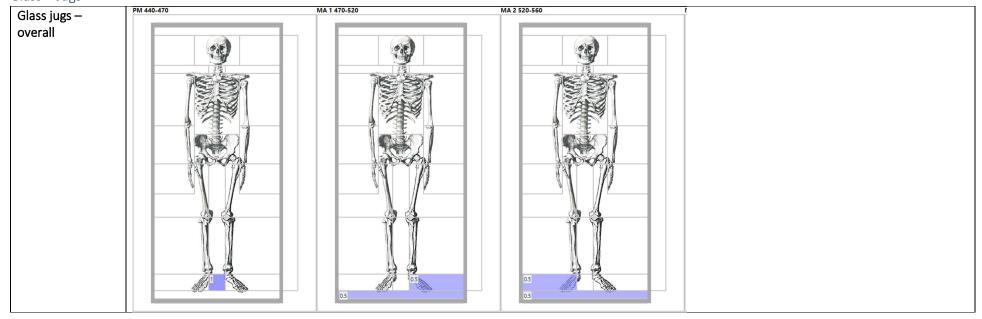


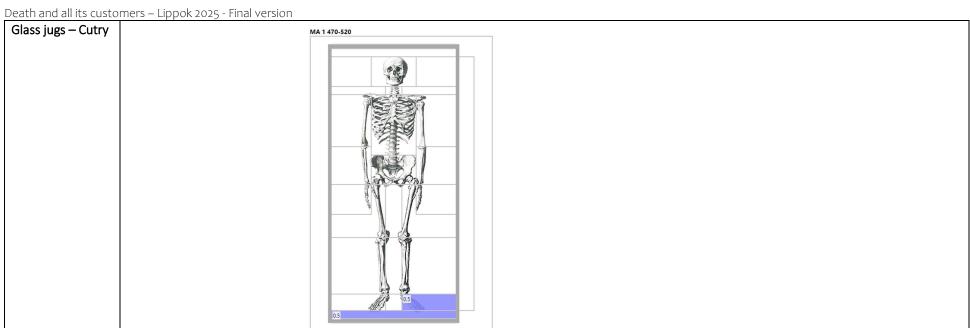
MA 1 470-520 MA 2 520-560 Glass flasks – Junkersdorf PM 440-470 Glass flasks – Krefeld-Gellep 0.25

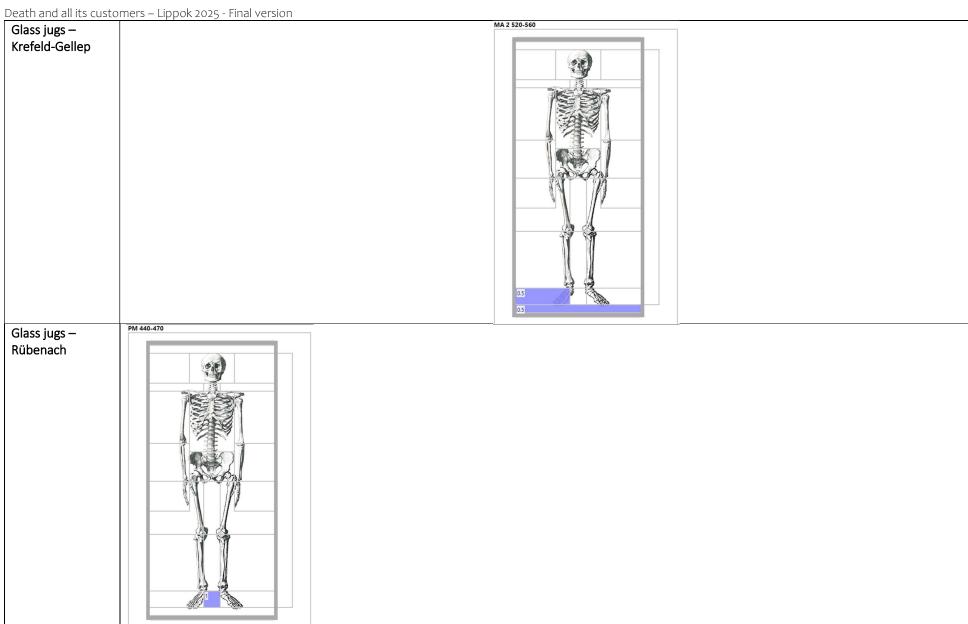




Glass – Jugs

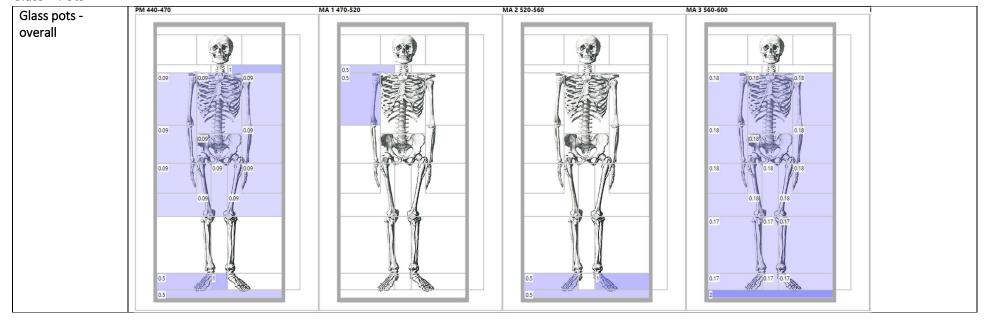


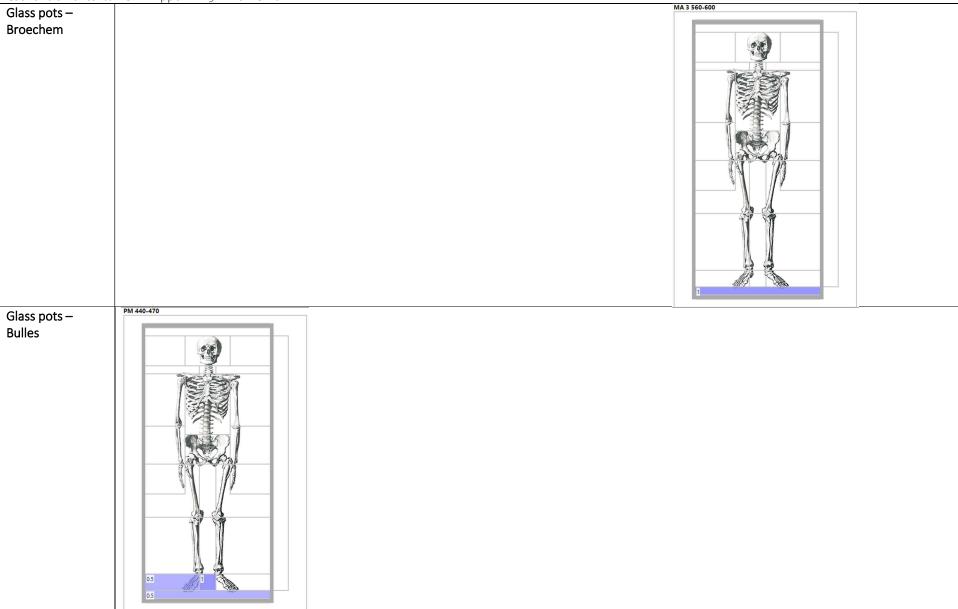


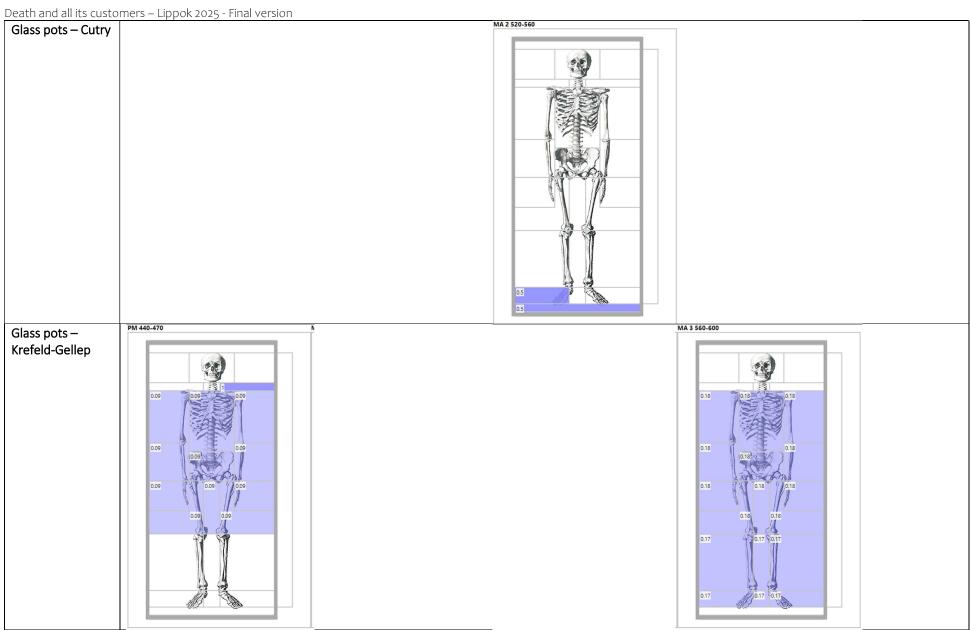


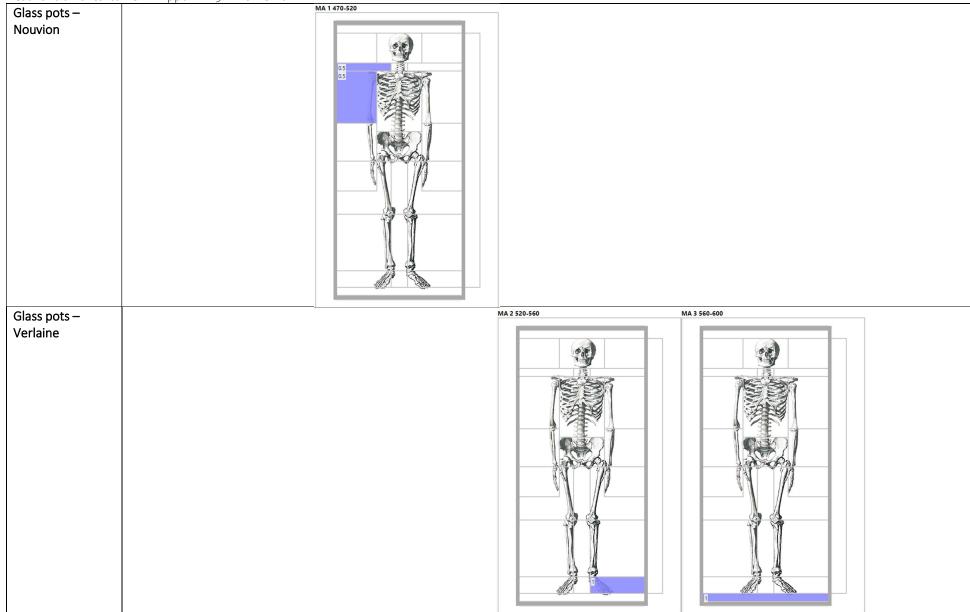
Appendix 14

Glass – Pots

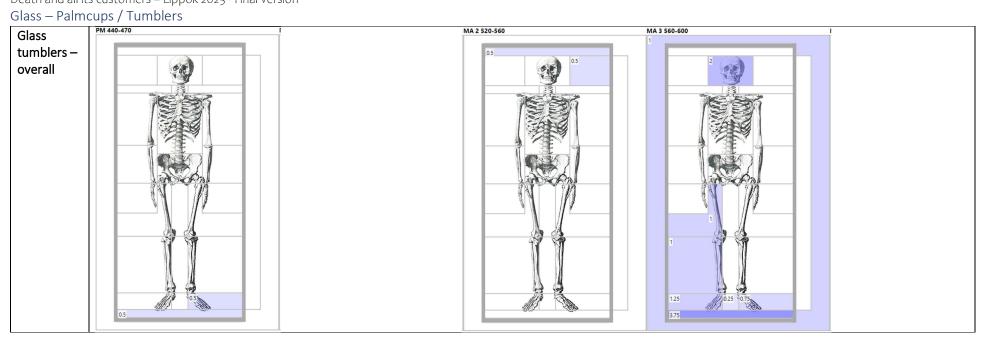


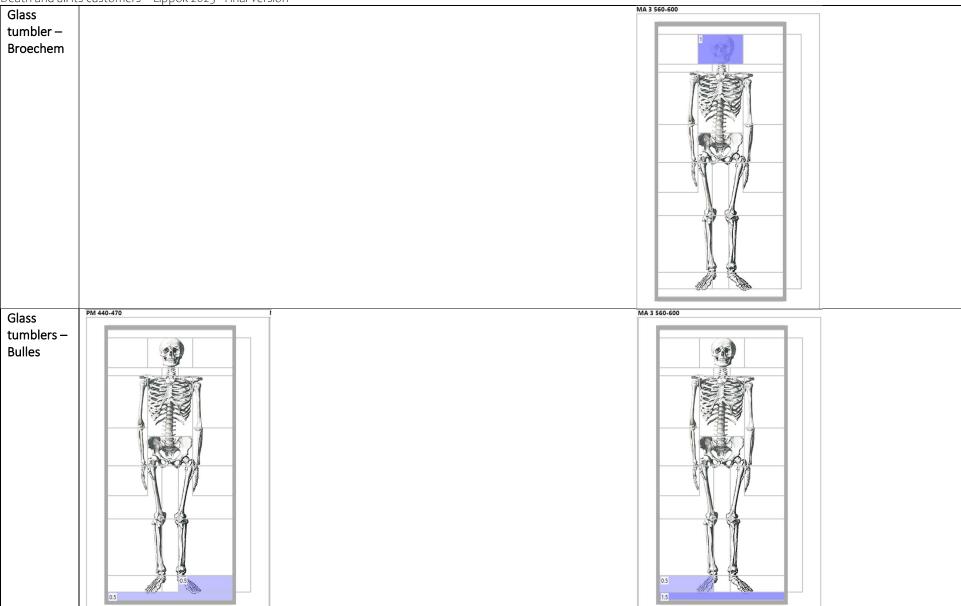


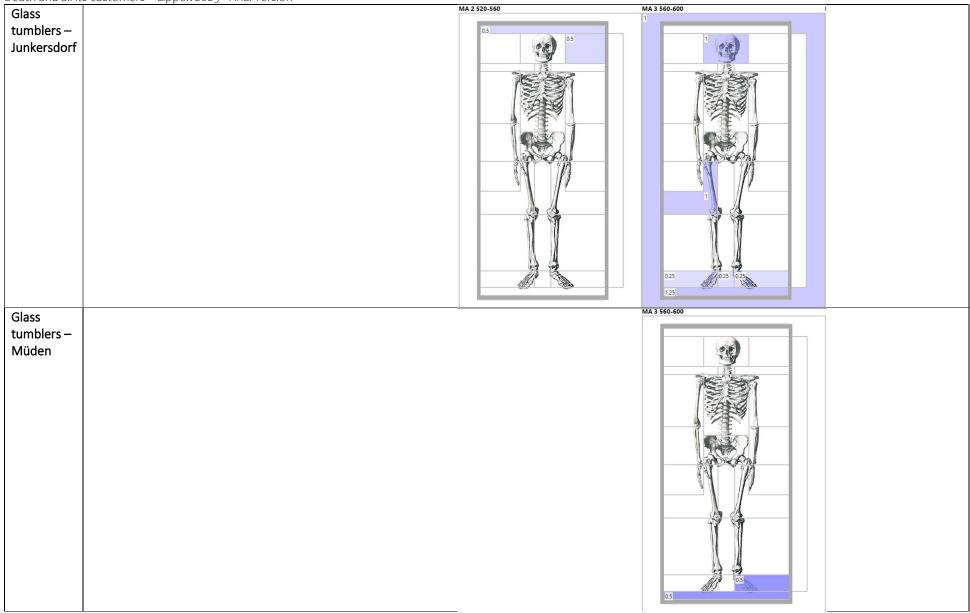


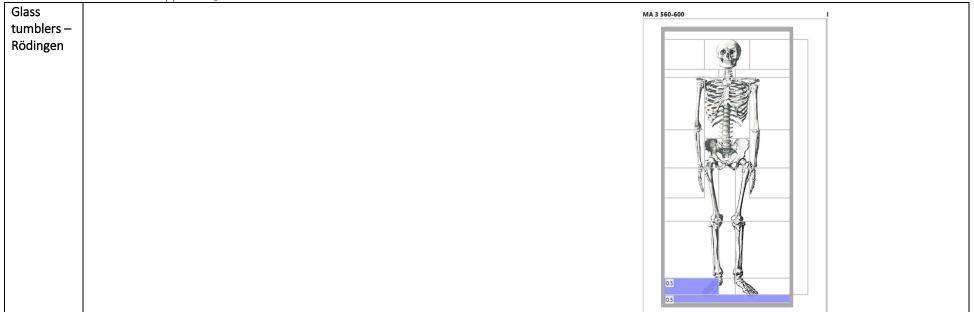


Appendix 14











Appendix 14 439