

# Introduction

- ▶ The main objective is to transform an outdated master bathroom to a more spacious and aesthetic one
- ▶ Measurements were taken properly to ensure the products fit into place as planned.
- ▶ Adjustments for gaining storage space and improved lighting were prioritised to make sure that the revamped bathroom stands the test of time.

# Photos of the bathroom



# Electronic Design (Before)

Floor dimensions: 570cm x 500cm

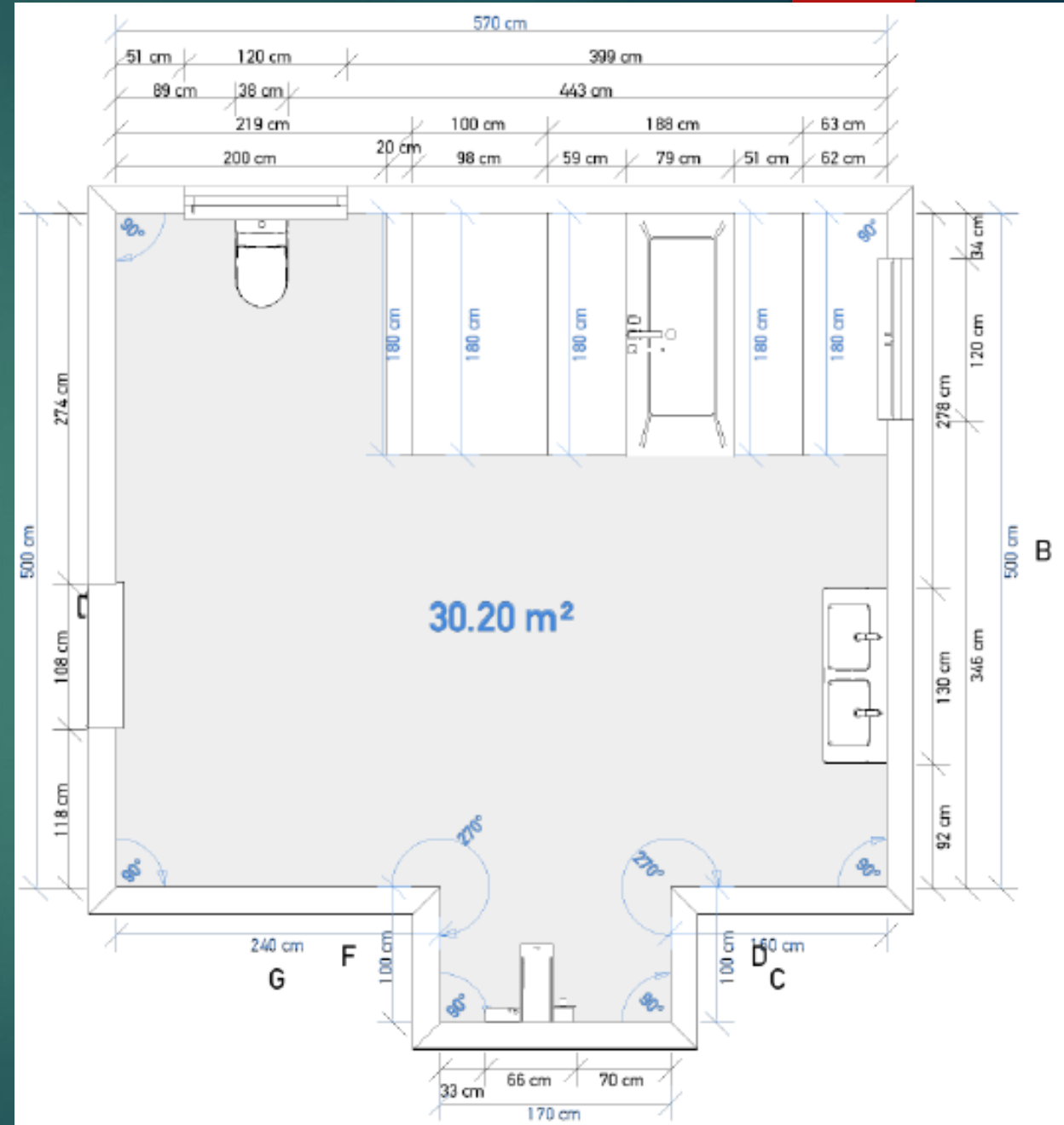
Shower area dimensions: 100cm x 170cm

Room height: 250 cm

Wall thickness: 20cm

Products selected

- Shower panel 1325 x 665 x 580 mm
- Washdown toilet 370 x 700mm
- Bath 1800 x 800mm
- Double vanity washbasin 1300 x 470 mm



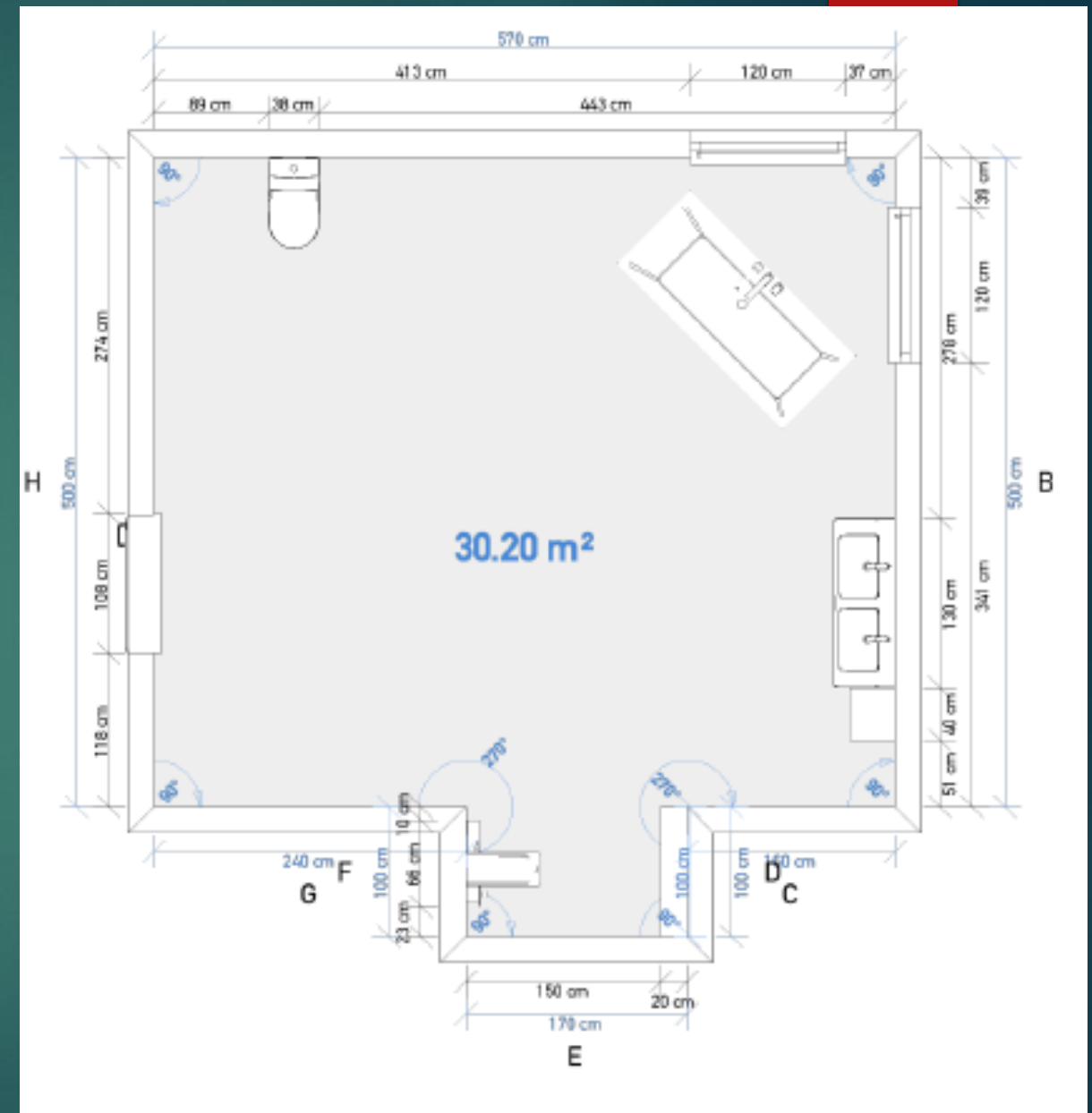
Digital model  
(Existing bathroom)



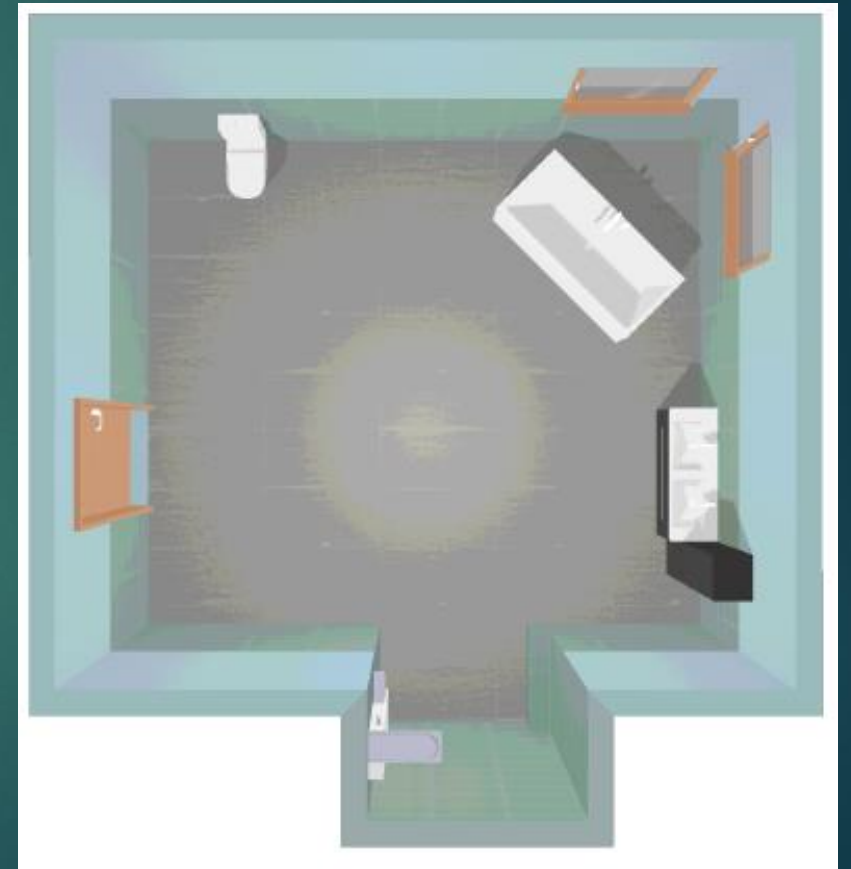
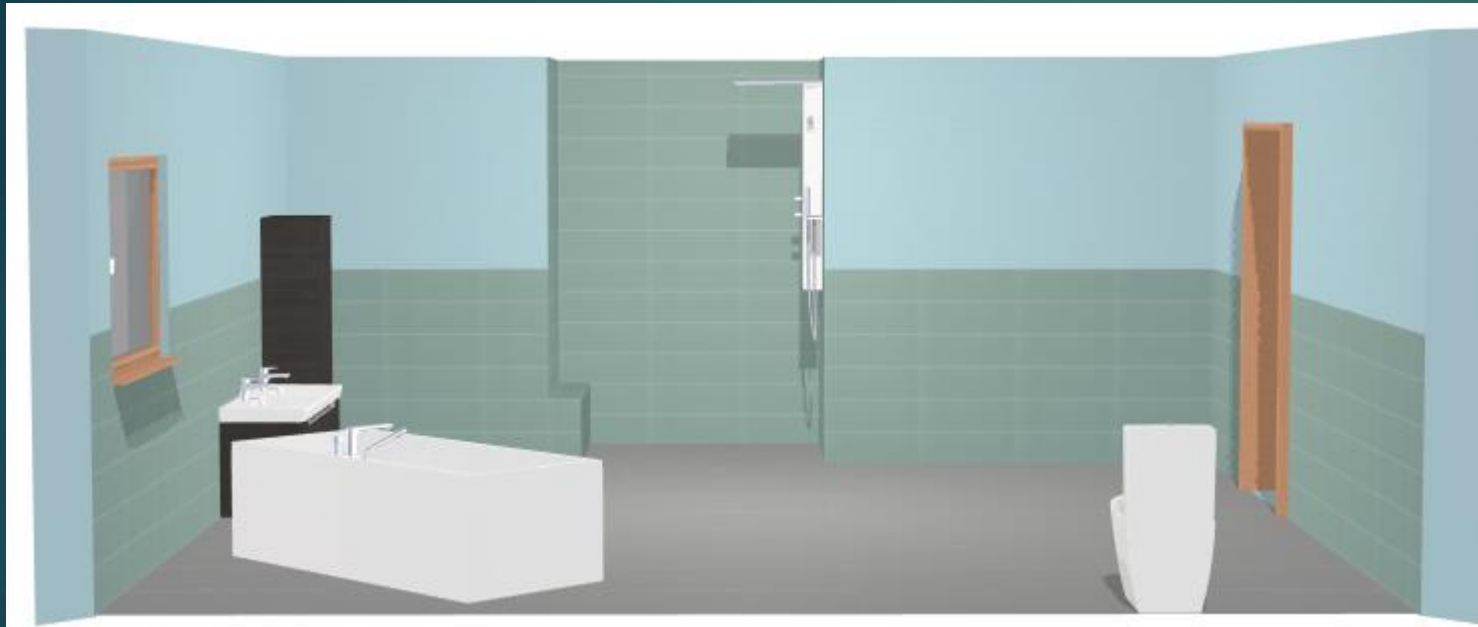


# Electronic Design (Proposed product)

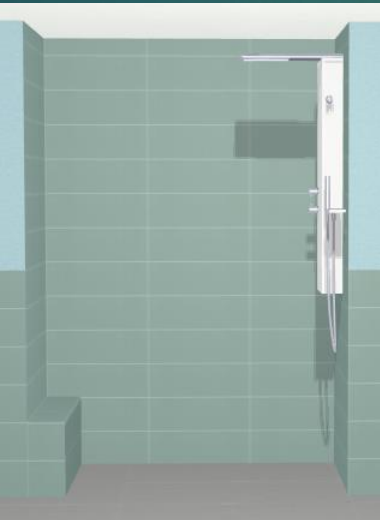
- The fixtures in this bathroom facelift were not changed.
- Bathroom backsplashes were fitted to prevent water from ruining the walls as well as giving it a new look
- Tall cabinet with dimensions 400 x 1550 x 350 mm was installed for that increased storage space
- Front wall near the toilet was removed to give the additional space.
- Bath was repositioned to make use of the available space
- Window repositioned to allow more natural light to enter the room



# Digital model (Proposed bathroom)



# Proposed model



# Calculations

- ▶ Surface area of the floor =  $(570\text{cm} \times 500\text{cm}) + (100\text{cm} \times 170\text{cm})$   
→  $302,000\text{cm}^2$   
→ Which is also expressed as  $30.2\text{m}^2$
- ▶ Window area:  $120\text{cm} \times 100\text{cm} = 12000\text{cm}^2 = 1.2\text{m}^2$
- ▶ Door area:  $108\text{cm} \times 210\text{cm} = 22680\text{cm}^2 = 22.68\text{m}^2$
- ▶ Surface area of the walls excluding shower area: Room height: 250cm. Therefore, surface area is =  $(500\text{cm} \times 250\text{cm}) + (570\text{cm} \times 250\text{cm}) + (500\text{cm} \times 250\text{cm}) + (240\text{cm} \times 250\text{cm}) + (160\text{cm} \times 250\text{cm}) = 492500\text{cm}^2 = 49.25\text{m}^2$   
→  $49.25\text{m}^2 - \text{Window area} - \text{door area}$   
→  $49.25\text{m}^2 - 1.2 - 22.68 = 20.37\text{m}^2$
- ▶ Backsplash tiles around the walls excluding shower area: Tiles fitted at a height of 120cm. Therefore, surface area of the backsplash tiles is =  $(500\text{cm} \times 120\text{cm}) + (570\text{cm} \times 120\text{cm}) + (500\text{cm} \times 120\text{cm}) + (240\text{cm} \times 120\text{cm}) + (160\text{cm} \times 120\text{cm}) = 236,400\text{cm}^2 = 23.64\text{m}^2$ . Windows are positioned at a height of 95cm from the ground. Window width 120cm. Area overlap =  $(120-95) \times (120) = 3000\text{cm}^2 = 0.3\text{m}^2$ . Since there's two windows,  $0.3 \times 2 = 0.6\text{m}^2$   
→  $23.64 - 0.6 = 23.04\text{m}^2$   
Area overlap with the door. Door height 210cm and Width 108cm.  $120\text{cm} \times 108\text{cm} = 12960\text{cm}^2 = 1.269\text{m}^2$   
→  $23.04 - 1.269 = 21.771\text{m}^2$
- ▶ Blue paint to be applied above the backsplash tiles =  $49.25\text{m}^2 - 23.64 = 25.61\text{m}^2$   
→ Door overlap:  $210 - 120 = 90\text{cm}$ .  $90\text{cm} \times 108\text{cm} = 9720\text{cm}^2 = 0.972\text{m}^2$   
→ Window overlap:  $(100-25) \times (120) \times 2 \text{ windows} = 18000\text{cm}^2 = 1.8\text{m}^2$   
→ Therefore, total paint =  $25.61 - 0.972 - 1.8 = 22.838\text{m}^2$
- ▶ Surface area of the floor =  $30.2\text{m}^2$
- ▶ Shower area floor tiles:  $170\text{cm} \times 100\text{cm} = 17,000\text{cm}^2 = 1.7\text{m}^2$
- ▶ Shower area wall tiles: Room height 250cm. Therefore, surface area =  $(100\text{cm} \times 250\text{cm}) + (100\text{cm} \times 250\text{cm}) + (170\text{cm} \times 250\text{cm}) = 92500\text{cm}^2 = 9.25\text{m}^2$

# Conclusion

- ▶ The upgraded bathroom with the backsplash tiles and the removal of unnecessary walls gave it a new look. The repositioning of the windows and bath allowed for better functionality in terms of lighting and spaciousness for storage.