

# L.A. COUNTY + IDEO

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*Deliverable 5.2*  
*BMD Appearance Model*

# VOTING PRINCIPLES

## *Relevant for Prototype 5.2*

1. *The voting system must provide for **transparency**.*
2. *The voting system must be **scalable**.*
3. *The voting system must be **flexible**.*
4. *The voting system must instill **public trust** by having the ability to produce a physical and tangible record of a voter's ballot to verify the ballot was marked as intended before it is cast and to ensure audibility of the system.*
5. *The voting system must have **integrity** and be accountable to voters and follow existing regulations.*
6. *The voting system must offer a **variety of options** to cast a vote to ensure that a single/fixed method of voting does not prove to be a barrier and source of disenfranchisement for any group of voters.*
7. *The voting system must guarantee a **private and independent** voting experience for all voters, including voters with a full range of types of disabilities and voters with limited English proficiency.*
8. *The voting system must be **easy** for all voters to use, in particular, for voters with a full range of types of disabilities and voters with limited English proficiency.*
9. *The voting system should be easy and reliable for election workers to **use, set-up, breakdown, and explain**.*
10. *The voting system must be **portable**.*
11. *The voting system must include features for **safe and secure storage**.*
12. *The voting system must have minimal and/or flexible **power and connectivity** requirements.*
13. *The voting system must have minimal requirements for **system boot/programming** at polling sites and/or vote centers.*
14. *The voting system must be **cost-effective**.*

# GOALS

## *Goals for Prototype 5.2*

- Supply an early product reference, available months earlier than a looks-like and works-like model could be.
- Be a concrete, consensus-building vision of a product's industrial design: an expression of the product's desired form, materials, color, finish, and graphics.
- Provide an ongoing reference point as future design decisions are made.
- Encapsulate what we have learned from our research and principles.
- PROTOTYPE a design hypothesis and learn.
- Communicate concisely: this is what the design will look and feel like, physically.



## 5.2 BMD APPEARANCE MODEL

## Features Overview



- 1 15.6" hinged display mockup
- 2 Keypad controller
- 3 Headphones
- 4 Ballot insertion slot with lightpipe
- 5 Privacy Screen
- 6 Audio jacks
- 7 Secure USB jack
- 8 A/B switch input

- 9 Power switch
- 10 Power cable
- 11 Legs
- 12 Brace
- 13 Integrated ballot box
- 14 Tamper evident seal on latches
- 15 ISB/Poll Pass scanner
- 16 ISB/Poll Pass indicator



Prototype	May Research Model	BMD Appearance Model, 5.2
ISB/Poll Pass Scan Geometry	QR code is in focus when held about 2 inches away from the bottom surface of the casework, under the unit.	QR scanner is tipped slightly forward and focuses on a range: from flush with the window to about 1 inch away.
ISB/Poll Pass Indicator Design	Rectangle on front face of casework illuminates to indicate that the scanner is active through the window on the bottom.	Downward facing arrow with left/right guiding bar indicates that scanner is active through window below.
Monitor Form	Blocky rectangular shape with substantial plastic margin overlapping the front of the display.	Countered, lighter-feeling back shape with a thin rim of plastic surrounding the touchscreen glass on the front.
Paper Path Form	Two separate design elements: printer cover and ballot box with a form break between them.	Integrated “waterfall” form that wraps around the back of the BMD, visually connecting input slot, printer, and ballot box.
Internal Components Packaged	Hybrid of commercial off the shelf and readily fabricated custom parts that achieve desired user experience in bulky.	None (non-functional model), but the volume reserved reflects the space required for anticipated production.
Privacy Shroud Materials	Felt cladding foamcore sheet, screwed to the side of the casework.	Canvas (selected to resemble nylon) cladding scored plastic sheet, clipped to the side of the casework with magnetic
Keypad Controller	Center button is a square with rounded corners. Controller sits in a close-fitting nest on the casework. Unit is boxy.	Center button is a circle. Controller sits on a slight pedestal with space around it. Sides of the controller are contoured.
Legs	Smaller diameter tubes with short elastomeric feet at the tips.	Larger diameter tubes with a color break about 1/3 of the way up from the foot.

## OVER VIEW OF CHANGES FROM MAY RESEARCH MODEL

# POLL PASS SCANNER GEOMETRY



**May Research Model**



**5.2 BMD Appearance Model**

*Indicator looks like a scanner*

*Camera faces down and focuses far away*



**May Research Model**

*Indicator points to the scanner*

*Camera tipped forward and focuses up close*



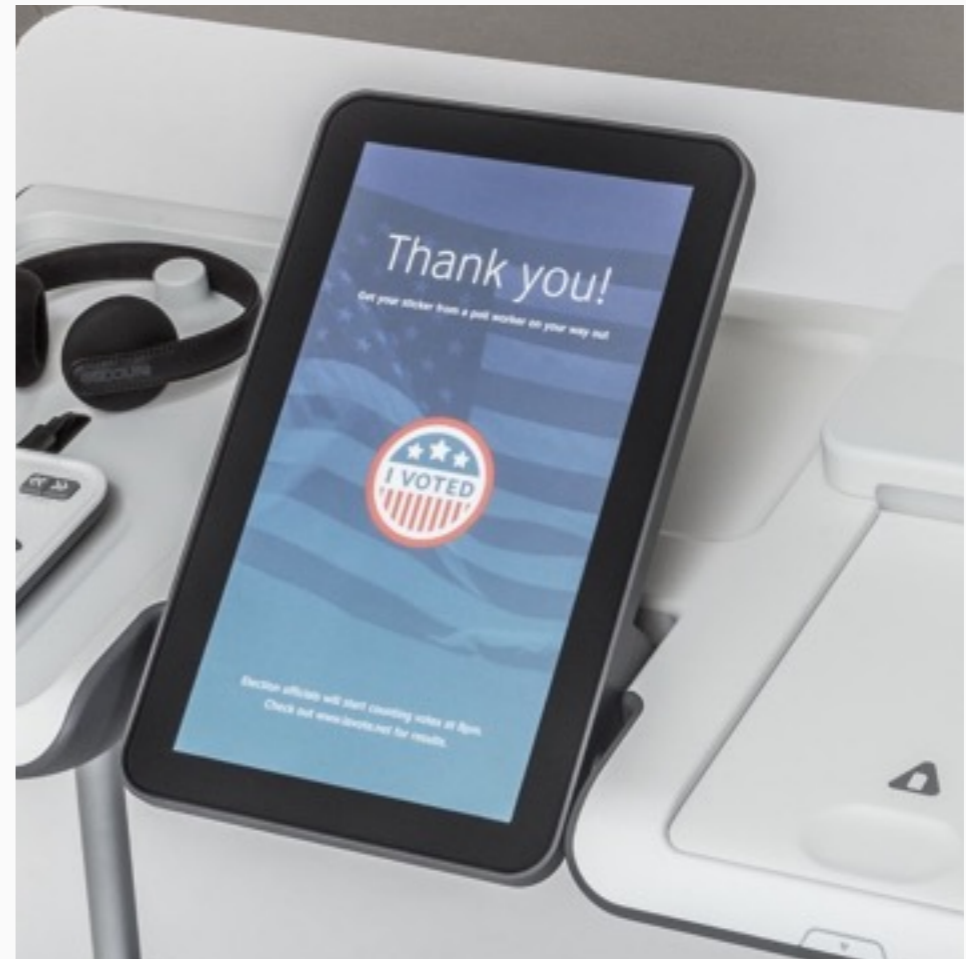
**5.2 BMD Appearance Model**



# DISPLAY HOUSING APPEARANCE



**May Research Model**



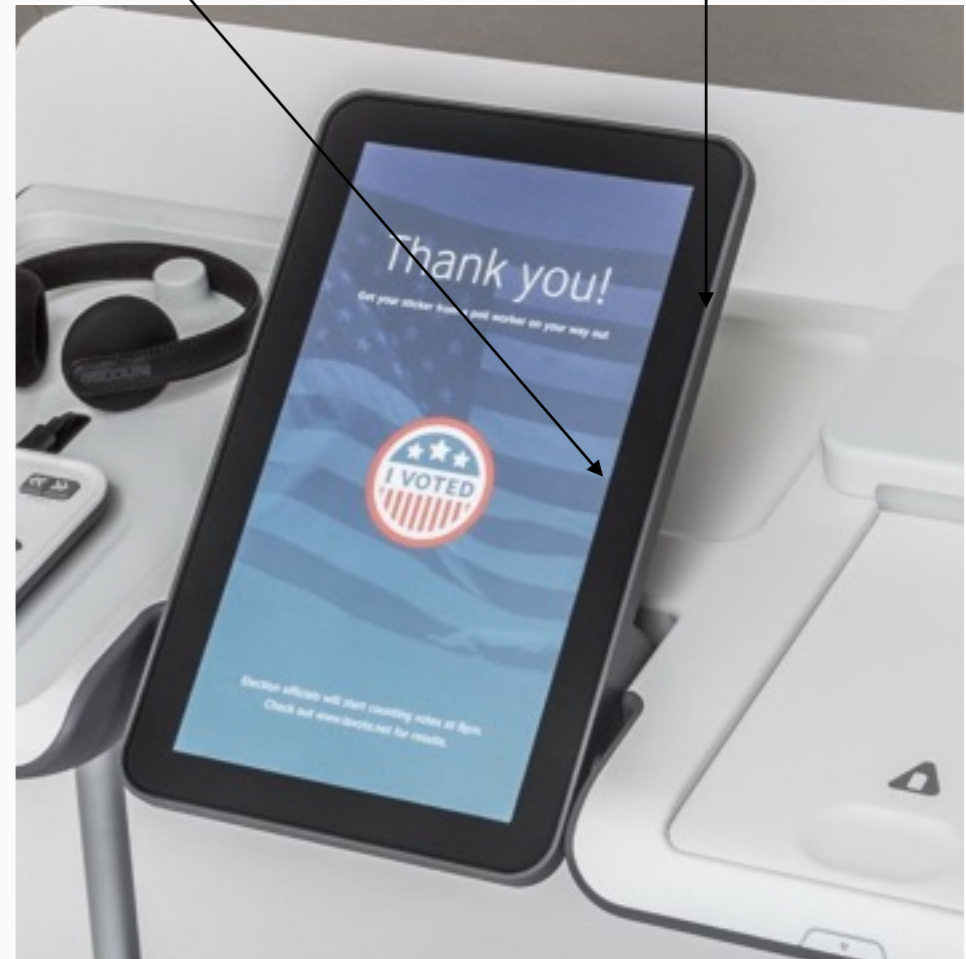
**5.2 BMD Appearance Model**

*Broader surface of (back-painted) glass looks more contemporary*



**May Research Model**

*Countered back edge makes monitor look lighter and more adjustable*



**5.2 BMD Appearance Model**

# KEYPAD DESIGN AND PERCH



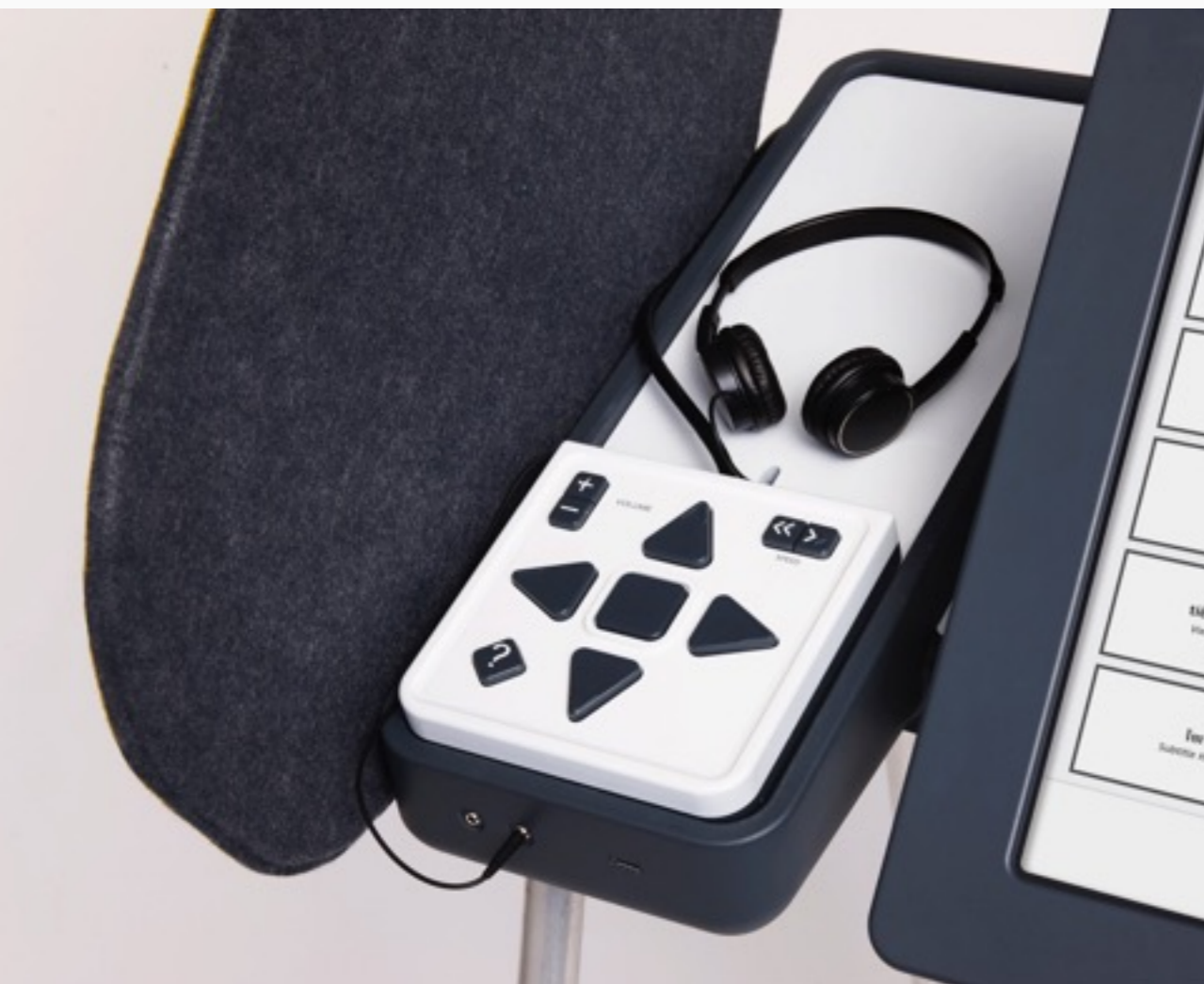
**May Research Model**



**5.2 BMD Appearance Model**

*Moat, contoured edge, and surrounding space: keypad feels appropriate to lift out of BMD.*

*Circular center button is easy to describe verbally and distinguish with touch.*



**May Research Model**



**5.2 BMD Appearance Model**

# PAPER PATH EXTERIOR FORM



**May Research Model**

**5.2 BMD Appearance Model**

*Printer form wraps  
into ballot box,  
visually  
reinforcing the  
way a ballot will be  
cast*

*Scooped surface on  
paper deck provides  
finger access to  
grasp printed ballot*

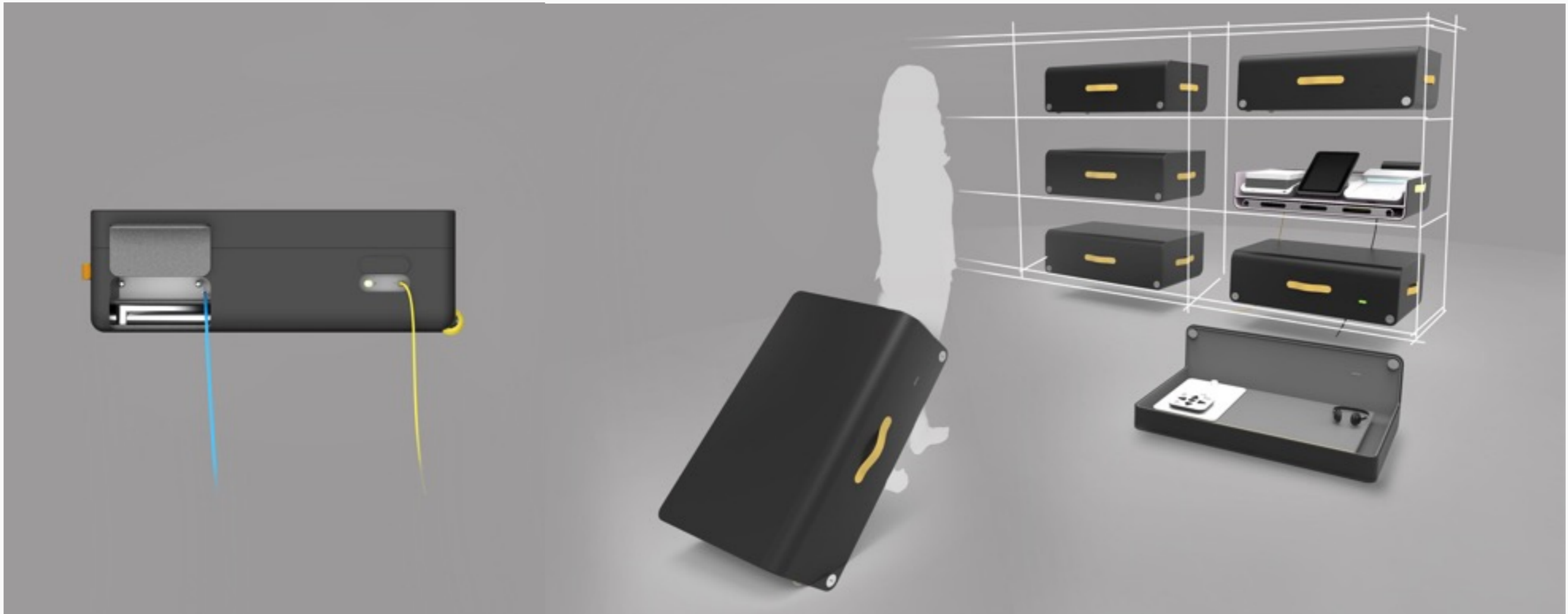


**May Research Model**



**5.2 BMD Appearance Model**

# REFERENCE RENDERINGS: CARRYING, STORAGE, & MAINTENANCE



# REFERENCE RENDERINGS: SETUP & STORAGE

