CURVE: Collaborative University Research & Visualization Environment

Focus Groups – September 9-13, 2013

CURVE is a unique project/plan to create a technology-rich discovery space in Georgia State University Library. When completed in summer of 2014, CURVE will bring together students and expert researchers from all disciplines in a shared, hands-on, interactive research environment. CURVE will feature the latest visualization software and hardware, immersive large-scale displays, and specialty software packages for quantitative, qualitative, spatial, and statistical data analysis.

Six focus groups were conducted with 38 Georgia state faculty, staff, and graduate students during the week of September 9, 2013. The following departments, units, and colleges were represented, including Second Century Initiative (2CI) clusters as noted:

- Anthropology
- Biology
- Chemistry
- College of Education, Educational Technology
- College of Law (2CI: Future of Cities)
- Computer Science
- Economics
- English
- Geosciences
- Graphic Design
- Instructional Technology
- International Business
- Physics and Astronomy (2CI: Stellar Astrophysics & Astroinformatics)
- Psychology (2CI: Neurogenomics & Molecular Basis of Behavior)
- Public Health
- Public Management and Policy (2CI: Future of Cities)
- IS&T
- University Library

The questions asked during the focus groups evolved as the groups were held. Comments and suggestions from all the meetings have been combined into the following categories:

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Collaboration and Group Work in Research, Teaching, and Coursework

Multiple Mentions
- Many group/collaborative projects in courses
- Students collaborating with faculty researchers
- Collaborations with Georgia State colleagues
- Collaborations across disciplines, within Georgia State and elsewhere
- Collaborations with other universities
- International collaborations
- Need to allow external (non-Georgia State) collaborators into CURVE—in person, virtually, and/or remote access to data sets
- Numerous collaborative research projects within graduate programs

Other Comments Related to Collaboration and Group Work
- Local collaborations within the Atlanta metro area—including institutions, businesses, residents
- Collaboration takes place online using Blackboard Collaborate (vClass) and Desire2Learn
- In the natural sciences, lab work is collaborative—4-5 people in a group
- Faculty researchers seem to have the group/collaborative space they need. Additional space would be nice but not necessary.
- “Collaborative research is the name of the game” when it comes to funding.
- The library’s group study rooms are busy.
  - Groups of students studying and working on group projects
  - Faculty use them to meet with students
- The library’s presentation practice rooms are busy—students working on/displaying group projects

A few cross-discipline collaborations mentioned:
- Psychology, Public Health, Neuroscience, Communication, and Biology
- Biology, Chemistry, and Neuroscience
- Geosciences and History
- Geosciences and English
- Biology, Math, and Computer Science
- Film, Graphic Design, and Interior Design
- Graphic Design and Nursing/Health Professions
- 2CI Clusters (e.g., Future of Cities, Neurogenomics)
- Interdisciplinary Grants (e.g., NSF Research Experiences for Undergraduates)

Follow-up Question: How willing are you to share your research?
- Biology: I hold onto my research until it is published. This tends to be the case in Biology and Chemistry due to drug development, patents, etc.
- Psychology: I share my research freely before it is published or presented.
- Archeology: In my field, researchers in the past were more protective of their work. Some recent hires share more freely. It’s easy to share, and it’s good PR.
Software Needed for Research and Coursework

Multiple Mentions
- Adobe Creative Cloud
- ArcGIS
- AutoCAD (Autodesk)
- Final Cut Pro
- Google Earth
- MATLAB
- Maya (Autodesk)
- Microsoft Office, particularly Excel and Word
- NVivo
- Operating systems
  - Linux/Unix
  - Mac
  - Windows
- R
- SAS
- SPSS
- Videoconferencing software – no specific programs

All Others
- Agisoft
- Amos (SPSS Amos)
- ArcPad
- ATLAS.ti
- Bloomberg
- CmapTools (IHMC)
- Dedoose
- ERDAS IMAGINE
- GAUSSView
- Gephi
- GRASS GIS
- Imaris
- Java
- LaTeX
- Livescribe
- Maple
- Mathematica
- MAXQDA
- Mplus
- NodeXL
- OrganicPad
- Partiview
- PerM (meta-analysis software?)
- Prezi
- Qualtrics
- **Revit** (Autodesk)
- **Rhino**
- **Sketchup**
- **Spartan**
- **Stata**
- **Tableau** (visualization software; Georgia State has a campus license)
- **Uniview** (SCISS)
- **Visual Molecular Dynamics** (VMD)

- Art/music software
- Biology built its own genome visualization software?
- Cloud storage
- Java-based visualization tools
- Linguistic software
- Scientific libraries (for programming)
  - LAPACK
  - BLAS
  - PETSc
- Software that can record voiceovers with content
- Transcription software

**Additional Software-Related Comments**
- Some kind of application-share software – ability to push content from the large display to personal devices and individual workstations, and vice versa (multiple mentions)
- Hybrid OS environment: Mac, Windows, Unix/Linux (multiple mentions)
- Virtual/remote access to CURVE software (multiple mentions)
- Same software as the colleges, so users can work on college machines and CURVE (multiple mentions)
- Allow external (non-GSU) collaborators easy access to data and network while maintaining security (multiple mentions)
- Must be flexible. Should be able to install whatever software we need
- Need visualization controller software that is very easy to use
- Easy access to public data files, datasets, and libraries
- Consider a virtual box to deliver multiple operating systems/platforms
- The presence of Deep Freeze on computers in the space will eliminate the possibility of processing large data sets that require more than 24 hours
Hardware Needed for Research and Coursework

Multiple Mentions

- Audio recording equipment
  - in-house use
  - researchers would take out of CURVE and use in the field
- Clusters
- Connectors/cables — all kinds of “dongles” for connecting devices
- GPS units — researchers would take out of CURVE and use in the field (e.g. “Point Cloud” extraction, mobile GIS, ArcPad)
- Laptops, netbooks and tablets
  - In-house use
  - researchers would take out of CURVE and use in the field
- Large monitors
- Multiple monitors per workstation
- Linux
- Mac
- PC
- Photography equipment — researchers would take out of CURVE and use in the field
- Processing power
- Servers
- Data storage
  - Shared space across servers
  - Shared space for collaborators from multiple institutions
  - Secure
  - Long-term
- Printers
  - Standard black and white
  - Color
  - Photo
  - 3D
  - Large format for posters; plotter
- Scanners
  - Large format
  - 3D — researchers would take out of CURVE and use in the field
- Video recording equipment
  - in-house use
  - researchers would take out of CURVE and use in the field
  - high definition

All Other Hardware Mentioned

- Calculators
- Document camera
- Google Glass
- Graphics cards
- Graphics processing units (GPUs)
- Hardware specific to transcription (e.g., Livescribe Recording Pen)
- Headphones
• Power outlets (multiple)
• Wireless connectivity (reliable)
• Whatever is needed for fast refresh for loading images and zooming in/out on large images

Other Hardware- and Technology-Related Comments

Multiple Mentions
• Should be able to connect our own devices very easily. A device agnostic space that supports “bring your own device”
• “There’s display only, and then there’s computation and display of the output.” Carefully consider processing needs.
• Mix of Macs, PCs, Linux machines
• Would rely on CURVE hardware in the cases of
  o Processing power for large data sets
  o Data visualization
  o Unique hardware
  o Expensive hardware
  o Group work when a large display is needed

All Other Comments
• Allow access to data on a mainframe
• High-speed connections between the data center and CURVE
• Allow those with privileges to access to secure data
• CURVE as an expansion of the Digital Aquarium. Users need to check out equipment longer than the Digital Aquarium allows.
• Need an infrastructure that can support manipulation of big, scientific data sets
• Students will expect CURVE to have whatever hardware and software they need
  o Particularly expensive software
• Temperature controls in a technology-heavy space
• Users shouldn’t have to think/plan ahead to use CURVE
• Easy, seamless access
• Would bring own device when working with sensitive research data
• Wired tables where I can connect my device
• Should be robust and functional. Shouldn’t have to apologize to a group or class for tech malfunction.
Space Expectations – The Kind(s) of Space(s) CURVE Should Be

Multiple Mentions

- Classroom/instruction space for 12-50 people
  - Workstation for each user/student
- Glass wall that’s soundproof
- Light contamination could be an issue. Some disciplines need special lighting. Incorporate lighting controls.
- No hourly charge for using the space
- Regarding sensitive data, partition some areas to make them visually secure. Window shades on the glass wall for privacy. Should be a way to restrict visual access.
- Small group spaces in addition to the large space
  - Moveable walls to create/partition spaces for individual work
  - 6 clusters of 4 people around a large monitor
- Space for content development and creation
- Space for presentations
  - Thesis/dissertation defense
  - Remote thesis/dissertation defense
  - TED-style talks. Record and link these from the website.
  - Space for graduate students to talk through their research
  - Space for users to practice research presentations—brown-bag format
  - Students give presentation and make changes in real time based on suggestions/critiques from faculty in the space
- A digital sign/display outside of CURVE
  - Walk-by traffic can find out what’s going on in CURVE. It would be a touch-screen, so that people can interact with the content.
  - Employee would update weekly with details of happenings
  - Employee would update in real time as users enter CURVE and explain what they’re working on.
  - Multiple displays outside to market the research taking place in the space
  - As you enter CURVE, tell staff what you’re working on. Staff will update the external display in real time.

All Other Space Comments

- Coffee machine
- Controlled access – PantherCard swipe
- Needs to be in a prominent location
- Needs to be inviting and student friendly—a place people would want to hang out
- Open/space design to foster collaboration won’t work
- Open space/design should work, because we’ll learn from each other as we share the space
  - The potential for “cross-pollination” will be there but might be hard to cultivate
- Performance space (specifically music)
- Stadium-style seating on Library South 3 that would overlook CURVE
- Sound/acoustical controls
- Temperature controls
- Wired tables where users can connect devices
- Whiteboards
Support, Instructional, and Staffing Expectations in CURVE

Multiple Mentions
- Best practices support - someone who can make recommendations on how best to visualize a dataset and capitalize on a large-scale display
- Discipline-specific support - someone familiar with the software and research in a subject area and the software and hardware used in the discipline. GRAs? Encouraging Use of CURVE
- Software support – someone to ask specific questions about a software, like SAS syntax
- “Depends on how the space turns out” – might need a lot of support if the technology isn’t intuitive and user-friendly. Enough support so that the technology is not intimidating.
- Permanent staff, since GRAs, student assistants, and fellows are temporary
- Someone to help with whatever I want to do at that time
- Support for different levels of users
- The more specialized the hardware and software, the greater the need for support

All Other Support, Instructional, and Staffing Comments
- 3 employees in CURVE at all times
- Bring in a class of 5-10 students, and someone would teach them all the software relevant to the discipline that are available in CURVE
- Can employees really meet all of these expectations?
- Considering Student Tech Fees are involved, there should be some student workers
- Employees should help keep the equipment secure
- Ensure users can use the right technology/technologies to create a product they can use to successfully communicate their research
- Help provided in putting together a research presentation
- Make sure that training, instruction, and staff for CURVE are in the budget.
- Might need its own social media person
- Opportunities to collaborate with The Exchange
- Perhaps a subject librarian in the space
- Place for students to receive supplemental instruction to get them out of the classroom
- Training from vendors
- Someone always there who can get you started, and a specialist(s) there during scheduled and advertised times
- There will be an expectation of support for the simple fact that the tools and resources are being provided.
Large Displays and Visualization in Research, Teaching, and Coursework

Multiple Mentions

- There’s display only, and then there’s computation and display of the output. There are passive (playback, display only) and active (creation of and interaction with content) considerations – video wall should not just be a “glitzed-out overhead projector” – should be more participatory.

- Ability to display complex, high-resolution, and/or 3D images. Examples:
  - Visualizing statistics
  - Molecular behavior in real time – large molecules with millions of atoms
  - Microbiology – very different scale than some other disciplines
  - 3D images of neighborhoods and environments
  - Maps and other geospatial data
  - Tumor growth
  - Eye scans (Computer Science student working with Biology/Neuroscience)
  - Brain scans
  - Imaging genetics - 3D images of brain scans
  - Historical images
  - “Reading a city” – visualizing a city as you drive through it
  - Satellite images
  - Large surveys and multidimensional images of the sky. Virtually travel to places and planets and rotate and interact with the data
  - Comparing artists’ brush strokes
  - Critiquing art projects – real time manipulation of images on student laptops with the ability to immediately “re-project” revised image

- Network graphs and nodes
  - Social media research
  - Visualizing networks/relationships
  - Bibliometrics

- Touch technology
  - “absolutely necessary” for interacting with data
  - Would be nice for mapping. Easier to interact with data
  - Would be helpful for play/pause of video for analysis (examples: gait analysis, breathing simulations)
  - Would be nice for molecular manipulation – 3D image of a molecule that could be rotated by touch, attach other molecules by touch
  - Would be nice for interacting with planet and place data
  - Is more interactive and engaging
  - Multi-touch (ability for multiple users to use touch at the same time) is important
  - Rather than touching the large display, consider using the iPad as the touchscreen controller
  - Touch is not critical. Have the monitor be just a monitor and use a laptop/tablet to control the display.

- Virtual conferences/videoconferences and seminars
- Virtual exhibits/digital gallery space
- Coordinate multiple visual displays simultaneously, multiple inputs on a large wall OR display one single image
- Improve on the Viz Wall (visualization wall in Petit Science Center) concept
  - No bezels/seams
- No need for multiple keyboards/mice
- No hourly charge for use

- Projectors vs. multiple monitors
  - Projector casts a shadow – not ideal
  - Multiple projectors for a split display
  - Back-lit projector to eliminate shadows
  - Monitors (rather than projector) make the space more intimate, because there are no shadow issues.

**All Other Uses of and Comments Related to Large-Scale Visualization**

- Showing content for teaching/lecturing
- Preparation and practice for thesis/dissertation defense
- Remote thesis or dissertation defense from students abroad
- Gesture-based computing
- Collaborative projects among 5-10 people
- Client presentations
- Need to be able to properly scale images
- The size of the Viz Wall is good.
- Standing together at a visualization wall is “very powerful”
Encouraging Use of CURVE

- Supporting different levels of researchers—undergraduates, grads, and faculty—so that CURVE is useful to each group
  - Important not to alienate undergraduates, particularly since undergraduate research is growing
- Cultivate a community of early adopters.
  - Put people in the space who can use the resources to solve problems and then talk about how they used the space.
  - CURVE Fellows
  - Small grants as “encouragement to use new stuff” in CURVE
  - Sharing sessions to promote buy-in and showcase best practices
- Outreach, marketing, promotion.
  - Communicate compelling stories
  - Explain what CURVE is and can do. Be ready to change attitudes of people who think CURVE is another Viz Wall.
  - Promote interdisciplinary use
  - Identify what makes CURVE unique. Market this.
  - Host TED-style talks. Record and link these from the website.
- Host a lecture each year by a visiting scholar
- Needs to be in a prominent location
- Anticipate and counteract underutilization

Policies

- Access
  - Who can enter the space?
  - How access will be controlled?
  - How the space will be secured?
  - Asked in one graduate student focus group: How do you feel about authorizing access—users must have a reason to be in the space?
    - Yes, you should restrict access to those with a need (unanimous)
- Usage—who can use the space and equipment
- Scheduling
  - Open, unscheduled blocks
  - Some reserved blocks
  - Need a scheduling system
- Requests—procedures for users to request software and hardware
- Equipment security
  - Devices themselves
  - Sensitive data on the devices
- Data security
- Data storage
  - Long-term access
  - Open access
General Comments

- Need for ongoing, regular maintenance
- Need for ongoing funding to replace technologies
- Assessment of the space
  - Impact of CURVE
  - Ease-of-use
  - Quality of output
  - Record use and demonstrate need. The campus might need additional CURVE-like spaces.
- Seek out corporate sponsors
- Ask other institutions what they’re doing with large-scale data visualization and space configuration
- Opportunity to promote GSU’s research computing infrastructure within CURVE
  - Research computing systems already available
  - Services provided
  - Computer power elsewhere on campus
- Provide progress reports during construction.
- Attempting to do too much with one space vs. using the space for as much as possible. Discouraging/being selective about user populations might mean that CURVE will not be truly multidisciplinary. Consider keeping it as open as possible initially to find out who uses it the most.
- CURVE has to make what we do easier and better.
- Need for temporary data storage to solve the problem of how researchers get large data sets from their office to Curve
- Possible connection/promotion of the institutional repository to facilitate open access publishing later

Photo Feedback

Participants in three of the six CURVE focus groups were shown photos of 10 different technology/research/study/collaboration spaces and asked to record their reactions to and comments about each space. Feedback was collected from graduate students in Biology, Community Psychology, Anthropology, and Instructional Technology; faculty in Public Management & Policy; staff in Economics and the College of Education; library faculty and staff; and IS&T staff.

Photos and comments appear on the next 10 pages. Identical and similar comments have been grouped and appear at the top of each list.
- Difficult to collaborate/little chance for interaction/geared towards independent research rather than group projects/encourages individual work/not suitable for collaboration (multiple mentions)
- Same old same old/old fashioned/traditional/not modern (multiple mentions)
- Segregated/isolating/decentralized (multiple mentions)
- Computer lab (multiple mentions)
- Natural lighting/windows/bright (multiple mentions)
- Quiet space for reading/I bet you have to be quiet... (multiple mentions)
- Spaces too static/rigid (multiple mentions)
- Boring/dull (multiple mentions)
- A lot of windows can be good or bad depending on the glare factor
- Study space
- Crowded study area
- Tight
- Call center
- PCs only
- Tiny monitors
- Cold
- Not so impressive
- Would not make a trip to the library to use this space
- Not inviting
- Too much wood
- Dividers between computers discourage group work
- Dividers between computers encourage privacy
- Similar to library stations
- [CURVE] should be better looking (it’s NEW)
- Can be useful for remote workshops with audio/video
• Promotes interaction/collaborative/team/allows collaboration and group work/encourages collaborations among groups (student group projects, professor with his/her graduate students) (multiple mentions)
• Good for small groups/group work space/very limited capacity (number of concurrent users) (multiple mentions)
• iPads connected to TV/I like that everyone can connect to one screen—this is neat! (multiple mentions)
• Noisy/not sure if room is divided, but if not could get noisy (multiple mentions)
• Not highly flexible—equipment/tables in one place
• Marginally collaborative
• YAY data visualization
• iPads and other devices all compatible = good.
• iPad hookup good, but could it be wireless
• Would be nice if visualization could swivel
• Bring your own device
• This setup makes more sense for collaborative work—maybe 2 screens side by side so 2 people (or more) can work with 2 data sets at once
• Nice table—allows for collaboration
• Crowded
• Busy
• No privacy
• Larger screen
• Steelcase?
• More interesting [than #1] but not very interactive.
• More than 1 [workstation] in a room would be better
• Study room
• Engaging
• Too many cords in the way of table space
• Screen is not equidistant for all users with curved table
• Would be beneficial provided display can handle high resolution images and it can process dynamic images fast
• Tech savvy space
• Little chance for collaboration, interaction/not ideal for working together/ too little shared, collaborative technology space/ not much collaborative technology (multiple mentions)
• Very separated/still segregated (multiple mentions)
• Space not being used wisely/not being used efficiently/ doesn’t seem to make best use of objects in it (multiple mentions)
• Kind of like divider for privacy/offers privacy for group work (multiple mentions)
• Flexible/ space looks easily re-arrangeable (multiple mentions)
• Team and single work/mixture (multiple mentions)
• Noisy/Too noisy this way? (multiple mentions)
• Interesting space
• Strange arrangement
• The layout looks better than #1
• It looks a little messy and not very “open” to people looking in from the outside
• Wall separators not best use of space
• Divider seems to discourage group work
• I like the divisions, but can the divisions themselves be more useful?
• 2 computer screens – increases productivity
• Ugly
• Probably wouldn’t use
• Not inviting
• Seems immobile
• Carpet and dividers are dull
• Open study/computer lab
• Ok for groups vs individual—somewhat isolating
• Not much useful—may be useful for undergrads but not for research
• Very spacious
• Ok design
• Conference space
• Temporary
Nice to see 2 screens/ Aha! This is more what I was talking about in #2 [2 screens side by side to 2 people can work with 2 data sets]/dual screens very useful/separate displays may be needed/ One more monitor would be better (multiple mentions)
• Bright/too bright/lots of light (multiple mentions)
• Nice – good group layout/teamwork-ok for a small group/not very useful for larger groups, though/ high resolution study/collaborative learning area for small group/more collaborative (multiple mentions)
• Table design allows each person to use their laptop/collaboration table a plus and there is enough working room/better space on table for cord plugs (multiple mentions)
• Monitors/displays are too far from the seats (multiple mentions)
• Nice open space/open (multiple mentions)
• Great work space compared to #2/better than #2 (multiple mentions)
• Same as #2 with distance from screen
• Nice to see use of personal electronics
• I think #4’s setup is much more sophisticated.
• Ideal image of a CURVE station
• Cool!
• Flexible
• Less flexible
• Steelcase again?
• Interesting
• Spacious
• Would use this space
• Can multiple laptops connect at once?
• Appealing
• Engaging
• Distracting background
• Black lines between monitors are not good. Cannot use full spaces across the two monitors
• Connected
• Smaller bezel would be nice
• Cramped/crowded/limited elbow room/tight/not enough table space/too cramped for users’ individual devices: laptops, notebooks, etc./"They seem absorbed but dang that’s too cramped." (multiple mentions)
• Confining (multiple mentions)
• Small monitors; need larger displays (multiple mentions)
• Only useable for 2-3 people/group of no more than 3/sufficient for a small study group, not for research collaboration (multiple mentions)
• Maybe more useful for a classroom setting
• Dual monitors are always good
• Again not great for larger groups
• I think this works a little better—it’s more intimate to work with than #4—but the round table in #4 is nice (just a smaller one).
• Ergonomic issues
• Traditional user workspace
• One computer station
• One person tends to dominate presentation/discussion
• More traditional “collaborating”—group working together, not each bringing their own work as much – i.e., useful for final presentation work
• Generic
• After seeing #4 I am ho-hum about this one.
• Useful
• Uncomfortable
• Similar to the library work station with an extra monitor
• [CURVE] needs to look different—better
• Not for research, maybe for undergraduates
• Monitors too small for n > 4 collaboration
• Needs table space/not a lot of surface space for working in groups/some desk space for the two other users would be helpful (multiple mentions)
• 3D testing? Not sure about the use of this/Is there a reason they all have on sun shades./Sunglasses or 3D?/The future's so bright they gotta wear shades. (multiple mentions)
• Lots of light/may have glare from the window (multiple mentions)
• Lecture not collaborative/demo space/instructional (multiple mentions)
• Claustrophobic/somewhat limiting feeling (multiple mentions)
• Large screen is great – would be cool to use for visualization
• Very small group
• Seems a little messy
• Would be nicer with maybe an arced table surrounding the screen [drawing of a semi-circular table with a monitor in the center]
• Interesting
• Looks like music studio
• Study room
• ADA learning station
• I do like the large projected screen.
• Visualization options are limited
• 3D? if so, that’s cool.
• Probably wouldn’t ever use 3D in my research
• Low ceiling
• Promotes one “driver” of the hardware, but leaves space for users and their stuff
• Informal presentations
• Kind of like that there are no tables but might not be most conducive to working
• Opportunity for group work
• Open space is ok
• Too small for specialized system
• Good for individual department, but not for university level
• Display is movable, but no table
• Might be distracting with the screen at each end/monitor on two sides seems counter-productive/opposed screens imply opposition I think/2 displays on both ends make the working area feel tight/enclosed/the screens aren’t side by side so it’s a little hard to share the info (multiple mentions)
• Too much distance between people and displays (multiple mentions)
• I like the size of the tables/size of table is nice and allows for working room/nice use of table space (multiple mentions)
• Prefer #4/#4 is better/I like #4 better (multiple mentions)
• Interesting variation on #4/this seems like another expansion of the concept in #4 and #2 (multiple mentions)
• Ideal CURVE station/I like this setup a lot/best one so far (multiple mentions)
• Don’t like/I don’t like this one/No – This is awkward looking. (multiple mentions)
• Large group study table with multiple display/larger group (multiple mentions)
• I like the multiple screens.
• Displays too small for the size of the table
• I’d rather have a more traditional single presentation screen.
• Chairs look comfy
• Collaborative
• Informal
• Egalitarian
• Table too wide
• Unusual table
• Would allow for great group work to be done
• Odd layout (it could work but it looks odd)
• Good for departmental level but not for university level
• Connected
• Two separate displays do not allow for spanning across displays or simultaneous viewing
- Nice space!
- Not a collaborative space/too much like “sage on the stage” – maybe CURVE needs some of this though. Hmmm/like #6 it promotes a single driver/this looks like a teaching-presentation space more than a collaborative space to me (multiple mentions)
- Great for small-medium groups/good room for a small group session, interaction/I like that layout as it allows for the display to be used for presentation purposes for small groups (multiple mentions)
- Classroom (multiple mentions)
- Great screen size - would be perfect to show off projects and data
- It also looks “nice” to walker-bys
- a modern “loungy” contemporary feel
- Formal presentation practice room
- Casual presentation space
- Cool presentation space.
- Demonstration area
- Allows multiple people open space to participate in AND walk up to screen
- I think this is a nice setup for discussion and brainstorming.
- Needs a coffee machine
- Unique setup.
- Can you combine with #4? Like, have the couch/bar replace chairs in #4?
- Setup a little like the starship enterprise with a pit and tables surrounding/behind it
- Sitting area is ok, but no large working space
- Not sure what I think of restaurant-like setup.
- This design is viable except for the seating arrangements
- I like the furniture.
- Comfortable (re: mix of seating arrangements)
- Bezels in between screens are small but I still kind of don’t like them
- Can be useful if powerful processing power exists to perform real time visualization
- Good addition to CURVE
- Best option yet. Flexible for variety of uses.
• Visualization for a large group/it shows more like an observing wall than something you can present manipulated information to see (multiple mentions)
• Hard to tell the aspects of the space/ rest of the space is not visible (multiple mentions)
• Crowded/wall “space” can get crowded and there can be too many separate discussions going on at the same time (multiple mentions)
• Good for larger presentations/useful for large scale work (multiple mentions)
• I like this – simulates poster presentations at conferences (folks can wander around)
• Display tour
• I like it for [presentation purposes?]
• Like this if resolution supports detail that close
• Bright. Makes details on data easy to see.
• Meh. Not helpful to me right now.
• Think it would be better if the display were curved and if there was seating
• Large display is nice/bigger display = better/big visualization units are ok (multiple mentions)
• Dark
• Good to let people get close to big data
• Like that can walk right up to screen-- definitely want it to be touch screen
• Nice to have no bezels
• Bezels on screens barely visible. This is going to make users assume touch capability.
• Powerful backend is a must. If processing power is not enough then this can perform very bad than the single monitor
• Large display is positive, but may not be as flexible as Photo 8.
• Super cool!/cool/it’s nice/nice space (multiple mentions)
• Maybe more seating around it/there needs to be some modular seating arrangements/needs more seats (multiple mentions)
• The display would look better if there were not dividers/panels between each monitor. It creates more visual noise./ I don’t really like bezels between separate screens (multiple mentions)
• Plenty of space for large data vis./nice size video wall/appealing (re: size of wall)/nice screens, good narrow bezels/it is easily visible/clean images (multiple mentions)
• This looks like a large lecture room/does give the impression of a teaching/lecturing space (multiple mentions)
• Large space for collaboration, multiple screens, and moving from individual space to screen
• Presentation practice room
• Appealing (re: possibility of multiple presenters)
• Can be used for classes and for collaboration
• Would be perfect if room could seat 20-15 people
• Would also be nice to have some individual workstations
• Make sure it’s easy for standees to manipulate data/images
• More helpful than #9 (the table helps)
• Would be cool if people seated were controlling wirelessly, but I don’t think they are
• Seats closer to the display. Move the desk in a little closer.
• It looks like multiple devices are sharing screens.
• High resolution data visualization
• Visualization units ok
• 3D I guess?
• Touch?
• Big
• High end
• Great, but where is the control center for the wall?
• Same as #9 [powerful backend is a must]. Good but need to have right technology. Display size is not the only component that matters.
• Wish you could see the layout of the room
• Please God not 3D glasses.