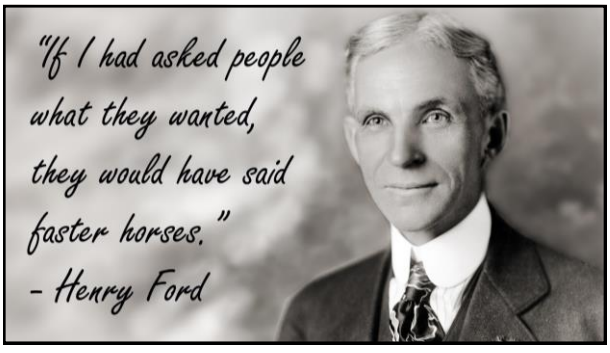
BLDD ARCHITECTS

# "HACK" YOUR SCHOOL

*An innovator's guide to future-focused facilities*

think BIG




## WHO WE ARE

**Damien Schlitt, AIA, LEED AP**
Associate
BLDD Architects



**Shannon Cheek**
Superintendent
CUSD #305

BLDD ARCHITECTS

## Agenda

- A different approach
- Real results
- How to "HACK"

# DIFFERENT APPROACH

think BIG

## traditional planning **fails**

- **Visits to new schools**
  - Shopping for cars
  - Bigger better versions of old models
- **Interviews**
  - Limited value of input
  - Lost in translation
- **Charrettes**
  - Limited time to develop expectations
  - Chasm between what users **THINK** they want, and **LEARNING** what they want through experience
- **Admin led**
  - Top down → no "buy in"
  - Lost opportunities

think BIG
BUILD INNOVATE GROW

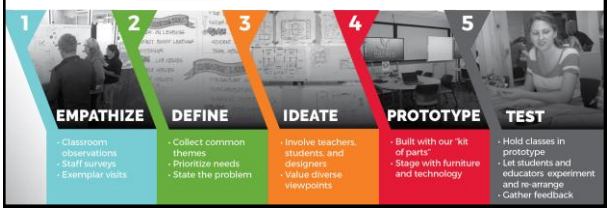
EDUCATORS as designers

VISIONING

PROTOTYPING

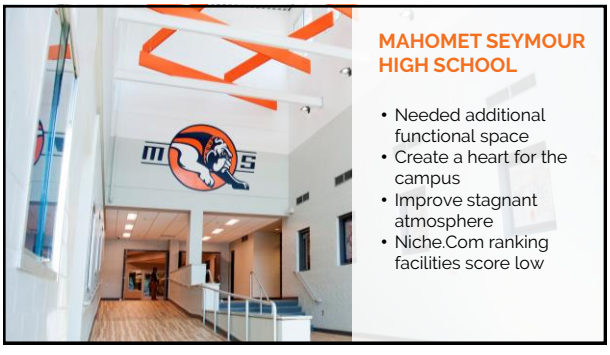
SO, WHAT EXACTLY IS THINK BIG?

We work with stakeholders to harness the **power of design thinking to uncover BIG ideas** and new approaches for modern learning, with a focus on authentic user-participation. Together, we quickly explore possibilities and take them for a test drive, before construction.




Bringing new ideas to life is an essential part of what we do. The first versions are usually rough. They're early proofs of concepts, ways of helping us explore, learn, and think. Usually, they're far from pretty, and they may never work. They're prototypes — not finished products.

– IDEO

## MAHOMET SEYMOUR HIGH SCHOOL

- Needed additional functional space
- Create a heart for the campus
- Improve stagnant atmosphere
- Niche.Com ranking facilities score low

MAHOMET SEYMOUR HIGH SCHOOL


Initial Solution
(top-down)


1
EMPATHIZE
Understand the users' perspectives, challenges and aspirations


hidden, dark, uninspired space
We only come here to print.


Interrogation rooms
Crowded cord jungle


1
EMPATHIZE
• Classroom observations
• Staff and student discussions
• Exemplar tours and discussions with other teachers


GRAFFITI MAP
COMMONS
9440SF
LIBRARY
3300SF
1: empathize


HOW CAN WE
DESIGN SPACE
IMAGINE THE
THINK BIG
WHO
WHAT
WHY
2
DEFINE
Describe the critical aspects of a successful solution
CO-WORKING SPACE
INCUBATOR SPACE
VIDEO CONFERENCING
BUILD COMMUNITY
THE COLLEGE EXPERIENCE
STUDY SPACES, ATHLETICS
CAFE
STUDENT UNION
TEAM SPACES
LAB SPACES

## DEFINE

- Collect common themes
- Prioritize needs
- State the problem

Varied sized spaces for varied activities

A flow of acoustics/privacy

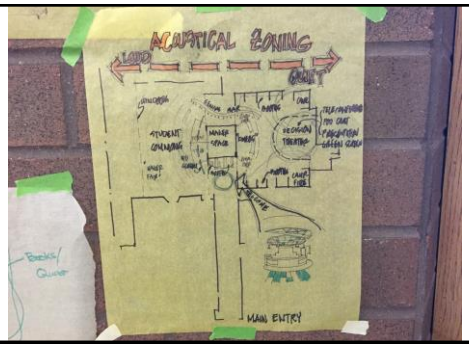
Destination space with MSHS identity

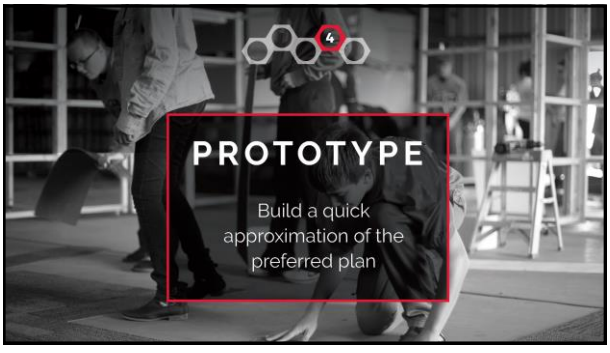
Technology driven

A resource space


## IDEATE

- Involve teachers, students and designers
- Value diverse viewpoints

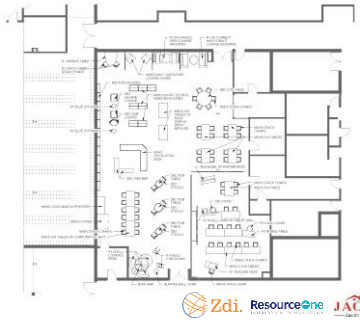


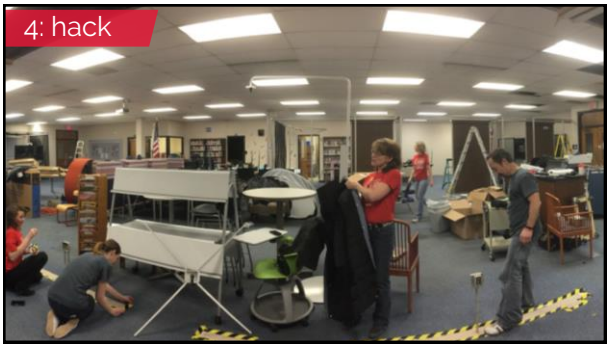




4

## THE HACK

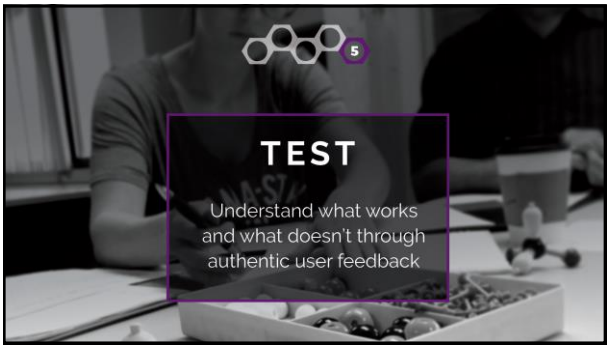
- Built with "kit of parts"
- Try various layounts, furniture and technology

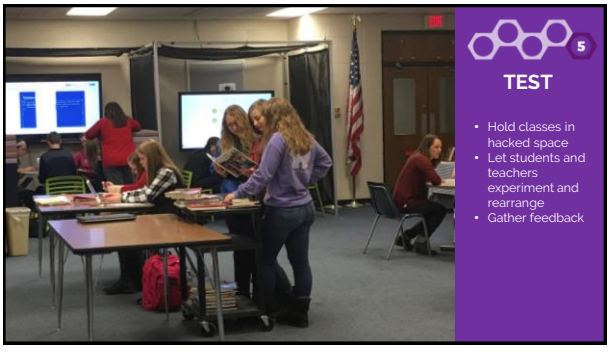



4: hack


HACKED
4: hack
MAHOMET SEYMOUR
HIGH SCHOOL


4: hack


5
TEST
Understand what works and what doesn't through authentic user feedback

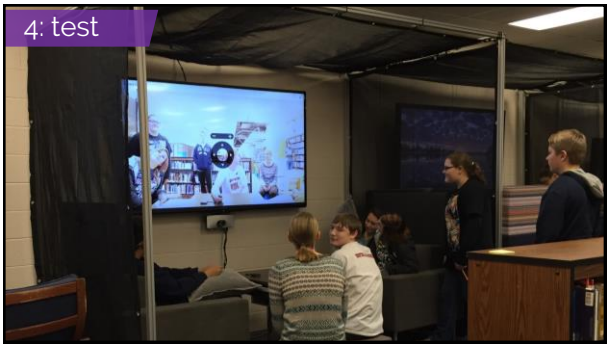

5
TEST
• Hold classes in hacked space
• Let students and teachers experiment and rearrange
• Gather feedback

## 4: test

## 4: test

## 4: test

## 4: test



## 4: test



## What we learned from the **"HACK"**

- Students are surprisingly practical!
- Students are as thoughtful as adults
- The process transformed both students' and teachers' existing perceptions of the purpose of the space
- Experiencing the prototype allowed for a rapid adoption of a more creative solution.
- Choice and flexibility were key components/assets to a successful design

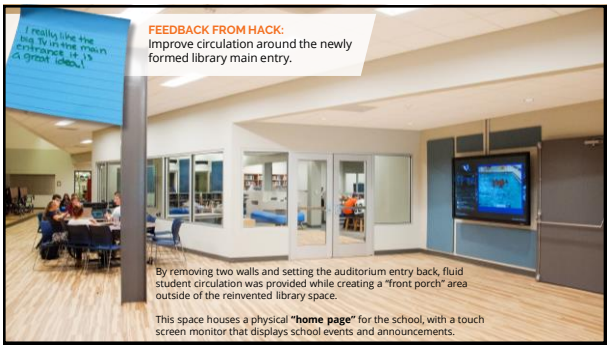
## real RESULTS

think BIG

previously proposed library floor plan

our prototype "hack" library floor plan

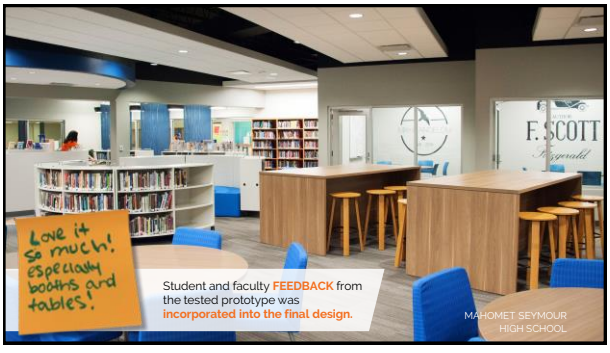
after: final library floor plan


**FEEDBACK FROM HACK:**
Improve circulation around the newly formed library main entry.

By removing two walls and setting the auditorium entry back, fluid student circulation was provided while creating a "front porch" area outside of the reinvented library space.

This space houses a physical **"home page"** for the school, with a touch screen monitor that displays school events and announcements.

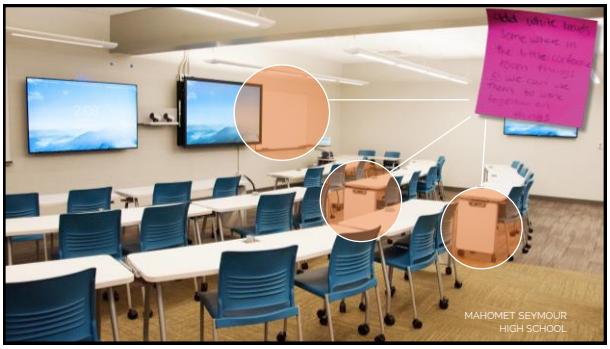



Student and faculty **FEEDBACK** from the tested prototype was **incorporated into the final design.**

MAHOMET SEYMOUR HIGH SCHOOL


J.K. ROWLING
Fixed book stacks which limited the use of the space were replaced with MOVABLE and RECONFIGURABLE bookcases.
MAHOMET SEYMOUR HIGH SCHOOL


Ensuring that power was dispersed throughout the space allowed students to utilize the entire space, CREATING A HUB
MAHOMET SEYMOUR HIGH SCHOOL


MAHOMET SEYMOUR HIGH SCHOOL


I like the study booths and how open the space is. The women's space is awesome there should be a quiet place to go to study more
Variety of furniture and seating allows for FLEXIBILITY for individual and group work.
MAHOMET SEYMOUR HIGH SCHOOL

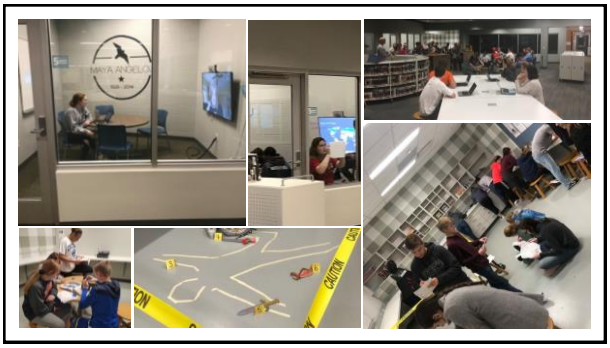

MAHOMET SEYMOUR HIGH SCHOOL


MAHOMET SEYMOUR HIGH SCHOOL


MAHOMET SEYMOUR
HIGH SCHOOL


J.K.
MAHOMET SEYMOUR
HIGH SCHOOL


MAHOMET SEYMOUR
HIGH SCHOOL



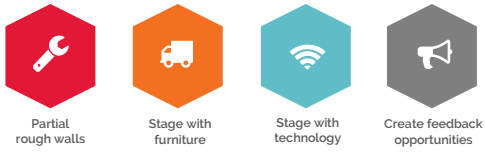

project
## observations

- Dramatically increased utilization of the space.
- Created a social hub/destination. A new "heart" for the campus.
- Non-traditional furnishings may be the most appealing to students.
- By insuring that power is dispersed throughout the space, allowed students to utilize the entire space.
- Use of space by curricular instructors has increased.
- Students WANT to be in the space.

## how to "HACK"

think BIG

# How to **"HACK"**



Partial rough walls

Stage with furniture

Stage with technology

Create feedback opportunities

## prototyping PLAN

think BIG

**DETERMINE LENGTH OF TIME FOR PROTOTYPING**
2-3 days
3-4 weeks
months
semester
school year

**EXPLORE ALTERNATIVE PROTOTYPING STRATEGIES**
Virtual Reality Models
"Hacking" existing space for use as a prototype
Offsite warehouse as prototype location

**ESTABLISH STUDENT EDUCATION COMPONENTS**
Education
Engagement
Ownership

**DETERMINE SYNERGY WITH CURRICULUM**
Identify programs that will use prototype spaces and customize as desired
Assist administration with communication to staff

**DETERMINE PROTOTYPING CONSTRUCTION CONVENTION**
Determine level of "finish"
- "Crude or rough" to "finished construction"

Determine major structural elements and prototyping conventions
Determine staging required

**DETERMINE WORKFORCE NEEDED**
Contractors (if any)
Architect as installer
District staff

**OBTAIN VENDOR COMMITMENT**
Furnishings Vendors
Technology Providers
Finish Vendors and materials

**ESTABLISH PROTOTYPE BUDGET, SCHEDULE, AND REGULATORY REQUIREMENTS**
Prototype materials: architect furnished vs. purchased
Furnishings: staging provided vs. purchased
Technology: vendor provided vs. purchased
Determine code requirements and submittals
Create logistics plan: pre-prototype work, contractor modification of existing construction, prototype installation, testing duration, tear down and new prototype installation

**ESTABLISH EVIDENCE BASED DESIGN PROTOCOL**
Define evidence based design goals and objectives
Find sources of relevant evidence
Critically interpret relevant evidence from:
- stakeholder interviews
- learning activity observations
- exemplar tours

Create and innovate (evidence based design concepts)
Develop a hypothesis
Collect baseline performance measures
Monitor implementation
Measure post occupancy performance results

## prototyping KIT OF PARTS

think BIG

**WALLS - FRAMING**
80/20 extruded aluminum framing
2x4 wood framing
Wood storage shelf framing

**WALLS - SURFACE**
Black mesh tarps
Plastic sheeting
Melamine panel boards
Fabric

**LIGHTING**
Clip on shop lights
Mini spotlights
Sample lighting from vendor partners

**FURNITURE**
Vendor partner provided
Architect provided
- Wobble stools
- Portable tables
- Stacking chairs

Pilot program purchases
Owner provided existing
Boxes and temporary improvised pieces

**FLOORING**
Carpet tile
Broadloom carpet with professional installation
Paints or coatings

**EQUIPMENT**
Mobile Markerboards
Melamine panel boards
Portable shelving
Portable work tables
Portable storage units
Laminate countertop with support brackets

**TECHNOLOGY**
Vendor partner provided
Owner provided

**LABOR**
Architect
Students
Local volunteers
District staff
Contractors

**FEEDBACK**
Markerboards
posters
Butcher paper
Post it notes
QR code / Google Survey
Website
Survey monkey

**INFRASTRUCTURE**
Power
- Extension cords
- Contractor
- District staff

Data
- Contractor
- District staff

**OTHER**
Bungee cords
Duct tape
Zip ties
Power tools
Hand tools
Painters tape
Paint / Marker Board paint


BLDD
ARCHITECTS
HACK
YOUR SCHOOL
An innovator's guide to future-focused facilities
thank you!
think BIG