Mcubed Information Session

Mcubed 3.0 (2018-2020)
Mcubed Executive Committee

- Mark Burns (Mcubed Executive Director, Engineering)
- Valerie Johnson (Mcubed Managing Director)
- June Howard (LSA)
- Lisa Lattuca (Education)
- Gary Luker (Medicine)
- Charlotte Mistretta (Dentistry)
- Ann Verhey-Henke (Engineering)
- Nick Tobier (Art and Design)
• Mcubed 3.0 Timeline
• Overview of Mcubed 3.0
• Mcubed 3.0 Program Requirements and Details
• New Mcubed Website: How to Form/Request a Cube
• Diamond Program, Students Program
• Discussion, Questions, Feedback
October:

- Mcubed hosts campus-wide info sessions (AA, Dearborn, Flint)
- Website opened for project creation on Wednesday, October 10
- Faculty members can now:
  - Update profiles
  - Create projects, invite collaborators, and request cube funding
Mid-November:

- Deadline #1 for requesting cubes: **November 14**
- First cubing event:
  - Will distribute at least 100 cubes

Early Winter 2019:

- Website opens again for project creation
- Second cubing event
  - Amount of cubes TBD
Rapid distribution of **seed funding** to **self-organized, multi-unit** faculty/student teams to initiate innovative projects

*No traditional peer review!*
Cube = trio of faculty members from at least two units

Unit = typically a school or college
(Exceptions: UMOR, ISR, LSI, LSA divisions)
• Dearborn and Flint schools/colleges—mapped on to Mcubed units

No traditional peer review = purer form of peer review through token-based system
- Review in traditional funding mechanisms biased against novel, interdisciplinary research
- Need to keep pace with rapid flow of information in today’s research and scholarship environment
- Challenge of locating collaborators in decentralized university environment, especially when complex problems require expertise from multiple fields
Self-reported – Mcubed 1.0 & Mcubed 2.0

- Over $120M in externally-funded grants
- Over 320 publications
- 50+ scholarly/artistic products
- 20+ invention disclosure reports/patents
- Hundreds of presentations
### Mcubed Decisions

<table>
<thead>
<tr>
<th>What Mcubed Decides</th>
<th>What Unit Leadership Decides</th>
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<tbody>
<tr>
<td><strong>General Program Requirements</strong></td>
<td><strong>Specific Campus/Unit Requirements</strong></td>
</tr>
<tr>
<td><strong>Rules for cube formation:</strong></td>
<td><strong>Definition of eligible token holders by group or category</strong></td>
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<tr>
<td>• At least two units per cube</td>
<td>• Example: all tenure/tenure-track faculty with at least a 50% appointment</td>
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<tr>
<td>• Must be new research/scholarship</td>
<td></td>
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<tr>
<td>• No formal peer review</td>
<td></td>
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<tr>
<td><strong>Schedule of cubing distribution:</strong></td>
<td><strong>Maximum support by campus and unit</strong></td>
</tr>
<tr>
<td>• Semi-random cubing</td>
<td>• Maximum financial commitment for cubing</td>
</tr>
<tr>
<td>• First-come, first-served cubing</td>
<td></td>
</tr>
<tr>
<td><strong>Rules for spending:</strong></td>
<td><strong>Funding model per token</strong></td>
</tr>
<tr>
<td>• 50% on undergrads, grads, post-docs</td>
<td>• Classic and Mini-Cubes</td>
</tr>
</tbody>
</table>
• Cube = 3 faculty from at least two different units
• Must be new research/scholarship and new team, not on same externally-funded grant
• Cubes hire personnel with 50% of funding: undergrads, grads, postdocs
• Other 50% of funding is flexible: research-related travel, equipment, subject incentives, etc. (no faculty salaries)
• Symposium participation = only required deliverable
Each eligible faculty member gets one virtual token for Mcubed 3.0
Number of funded tokens determined by unit leadership
Token is worth:

- $20K in a classic cube ($60K)
- $5K in a mini-cube ($15K)

3 tokens = a cube:

Classic Cube: $20K + $20K + $20K = $60K
Mini-Cube: $5K + $5K + $5K = $15K
Collaborator profiles w/ token status

Cube cards w/ project status

Token-Based System in Website
Classic ($20K token, $60K cube)

Who pays for the token?

$A \text{ (Unit/Dean)} + \$B \text{ (Faculty Member)} = \$13,333
Who pays for the token?

Mini ($5K token, $15K cube)

$A (Unit/Dean)
+ $B (Faculty Member)

= $3,333
How much do I have to pay?

- Mcubed website financials page

or Your Dashboard:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Faculty Contribution (Classic)</th>
<th>Unit Contribution (Mini)</th>
<th>Faculty Contribution (Mini)</th>
<th>Unit Contribution (Mini)</th>
<th>Max Classic Tokens</th>
<th>Eligible Token Holder</th>
<th>Limit 1 Token per Cube</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td>$6,633</td>
<td>$6,700</td>
<td>$1,663</td>
<td>$1,670</td>
<td>3</td>
<td>Tenure track faculty with a 50% or greater appointment</td>
<td>No</td>
</tr>
<tr>
<td>and Urban Planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art &amp; Design</td>
<td>$0</td>
<td>$13,333</td>
<td>$0</td>
<td>$3,333</td>
<td>6</td>
<td>Tenured and Tenure Track Faculty</td>
<td>Yes</td>
</tr>
<tr>
<td>Business</td>
<td>$5,000</td>
<td>$8,333</td>
<td>$1,833</td>
<td>$1,500</td>
<td>14</td>
<td>Tenure, tenure-track, clinical-track and research track faculty with current active sponsored research or recently submitted sponsored research grants within the last 12 months exceeding $50K</td>
<td>No</td>
</tr>
<tr>
<td>Dentistry</td>
<td>$8,333</td>
<td>$5,000</td>
<td>$2,083</td>
<td>$1,250</td>
<td>30</td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

Faculty contribution for participation in classic OR mini-cube
How many tokens are available?

Status of All Tokens Table

<table>
<thead>
<tr>
<th>Unit (faculty in system)</th>
<th>Available</th>
<th>In Requested Cubes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture &amp; Urban Planning (57)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Art &amp; Design (58)</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Business (110)</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Dentistry (64)</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Education (42)</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Engineering (468)</td>
<td>150</td>
<td>0</td>
</tr>
<tr>
<td>Information (58)</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Institute for Social Research (149)</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Kinesiology (31)</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Law (83)</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Libraries (170)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Life Sciences Institute (24)</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>LSA: Humanities (323)</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>LSA: Natural Sciences (365)</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>LSA: Social Sciences (251)</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Medicine (3, 460)</td>
<td>200</td>
<td>0</td>
</tr>
<tr>
<td>Music, Theatre &amp; Dance (153)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Nursing (28)</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>
• Teams can form on same campus or across campuses

• U-M Dearborn and Flint units mapped to Ann Arbor (Mcubed) units

• Cubes must be interdisciplinary (*same program requirements*)
  ○ Education (AA), Education (D), Education (F) = CAN’T CUBE
  ○ Education (AA), Education (D), Public Health (F) = CUBE
<table>
<thead>
<tr>
<th>Step 1:</th>
<th>Eligible faculty create or search for projects on Mcubed website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2:</td>
<td>Faculty member who posts project (owner) commits token -------Must decide which project is worth <em>one and only token</em></td>
</tr>
<tr>
<td>Step 3:</td>
<td>Project owner invites 2 faculty (from at least 2 units) to join; collaborators commit tokens</td>
</tr>
<tr>
<td>Step 4:</td>
<td>Project owner requests cube <em>by November 14</em></td>
</tr>
<tr>
<td>Step 5:</td>
<td>Semi-random lottery to award cubes ------Selected teams get $60K (classic) or $15K (mini) to execute research</td>
</tr>
</tbody>
</table>
Mcubed Website: Sign In

Sign in Mcubed website:

Uniqname & kerberos password
**New Feature: Dashboard with Notifications**

- **Find cubes & collaborators**
- **Token status**
- **Select: “Create a Project”**
- **Edit profile**
- **Your financial contribution**
- **Tokens available in your unit—real time!**
Step 1: Create or **Search** for a Project

Click “Find Cubes & Collaborators”

Click “All Cubes”
Step 1: Create or **Search** for a Project

Select cycle: Mcubed 3.0

Search by keyword or title

Click “I’m Interested” to leave a comment
What do I need to create a project?

- Cube title
- Overarching thematic category (select from list)
- Descriptive keywords
- Short description of project (1 or 2 paragraphs)
- Choice of classic ($60K) or mini-cube ($15K)
- Upload image (*be sure you have the rights to the photo*)
Step 1: **Create** or Search for a Project

**Basic Info**

Please use this form to provide some basic information about your project. Content will be showcased on your project's card on the M-Cubed website.

**Project Title**

Enter your project's title.

**Project Category**

- Select a value -

Please select a category from the options listed in the dropdown menu which most closely aligns with your project's topic. The selected category will help users on the M-Cubed website search for projects related to overarching themes.

If you feel none of the category options align with your project, please select "Other" and send us your suggestion for a new category. Suggestions for new categories will be reviewed by the M-Cubed Leadership Team.

**Keywords**

Start typing to select from dropdown list. Use comma between words.  

If a keyword does not appear in the dropdown list, type your new keyword and press enter. Be sure to use commas between each keyword you select or add.

Save and Continue

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**Description**

Please type a short description about your project. This description should be similar to an abstract and provide basic details about the proposed project concept.

**Full Description**

Choose a description.

- Classic Cube ($60K)
- Mini Cube ($15K)

Terms & Conditions

I certify that I agree to the Responsible Conduct of Research and Scholarship at University of Michigan.
Step 2: Commit Your Token

You've successfully posted your project. To proceed with forming this cube, you must first commit your token.
Step 2: Commit Your Token

1. User Shortcode
2. Overdraft Shortcode
3. SAPOC Uniqname (person who manages your research accounts)

Once you commit your token to this project you can add collaborators.

You must click here to complete the user shortcode, overdraft shortcode, and SAPOC on your profile before you can commit your token.
Step 3: Invite Collaborators

Search by name/uniqname/keyword

Filter by unit or token status

Click on profile to invite collaborator
Step 3: Invite Collaborators

 Invite Collaborator

Andréj Lenert
Academic Title: Assistant Professor
Unit: Engineering
Campus: Ann Arbor
Department: Chemical Engineering

Ph.D., MIT, 2014
S.M., MIT, 2010
B.S.Eng., University of Iowa, 2008

Email
734-647-4107

Token Status: Token Available
University: University of Michigan

RESEARCH SUMMARY

We study transport at the nanoscale and apply this knowledge to develop tailored materials for system-level improvements in power generation, energy storage, thermal management and desalination. Here are several avenues of our ongoing research efforts:

- We focus on solar energy systems that utilize the full spectrum of sunlight and are compatible with inexpensive storage such as thermal and chemical.
- We study and develop nanoporous composites with tailored transport properties and control over the spectral content of energy flow for applications in building thermal management.
- We probe fundamental transport at the nanoscale by integrating optical and micro-fabricated platforms with environmental and thermal control.

RECENT PUBLICATIONS

MY PROJECTS

Nanoporous infrared windows for radiative sky cooling
Status: Cubed
Step 4: Request Cube

Owner Clicks Request Cube
Step 4: Request Cube

Confirm cube size, title, description, SAPOC

Complete regulatory log

Request cube
Step 5: Cube Awarded by Mcubed

- Status: Cubed
- Add cube accomplishments
- Add additional faculty
- Add personnel
- Form a block of cubes
**Mcubed Scholars Program**
- Summer internships for undergrads (2019 and 2020, TBD)
- Partnership with UROP and UMOR

**Mcubed Diamond Program**
- Cubes fully funded by donors/sponsors who issue the challenge
- Faculty pitch ideas; project owner forms cube as usual
IP-X Research Stimulus

- Up to 4 fully funded $60K cubes: Effects of interprofessional health care on patient outcomes, population health, health care costs and clinical care
- Up to 4 fully funded $15K cubes: Effects of interprofessional education on student knowledge, attitudes, skills and behaviors
- Sponsor: U-M Health Sciences Council & Center for Interprofessional Education
- Mixer Event: Thursday, Nov 1, 1:30-4:00 p.m.
  - Palmer Commons, Great Lakes South
Biomedical Brainstorming Sessions

- Thursday, November 1st, 9-10:30 a.m.
  NCRC Building 10, Research Auditorium
- Thursday, November 8th, 3-4:30 p.m.
  BSRB, Kahn Auditorium

Hosted by Fast Forward Medical Innovation (FFMI)
Questions, Discussion, Feedback?

mcubedinfo@umich.edu

mcubed.umich.edu