



PIPELINE Program Information Technology Industry Council October 23, 2018

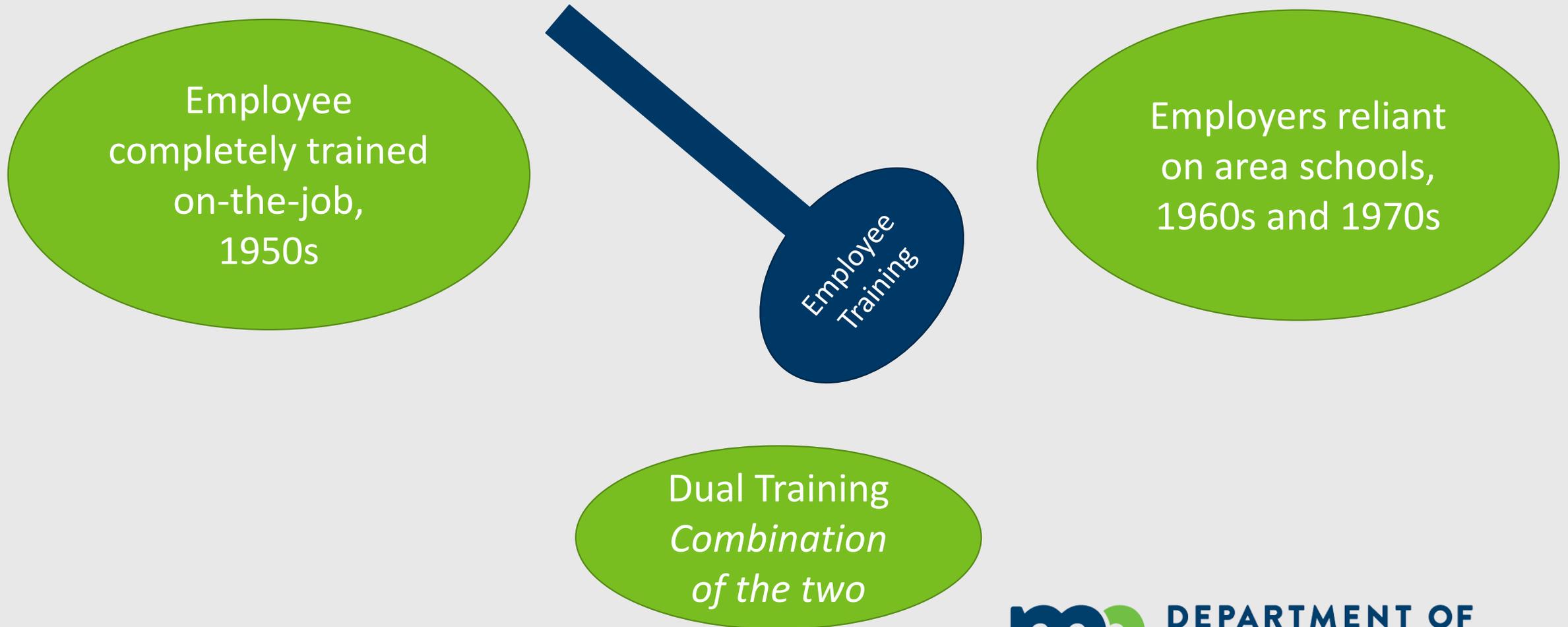
PIPELINE PROGRAM

INDUSTRY-BASED. EMPLOYER-DRIVEN. DUAL-TRAINING EXPERIENCE.

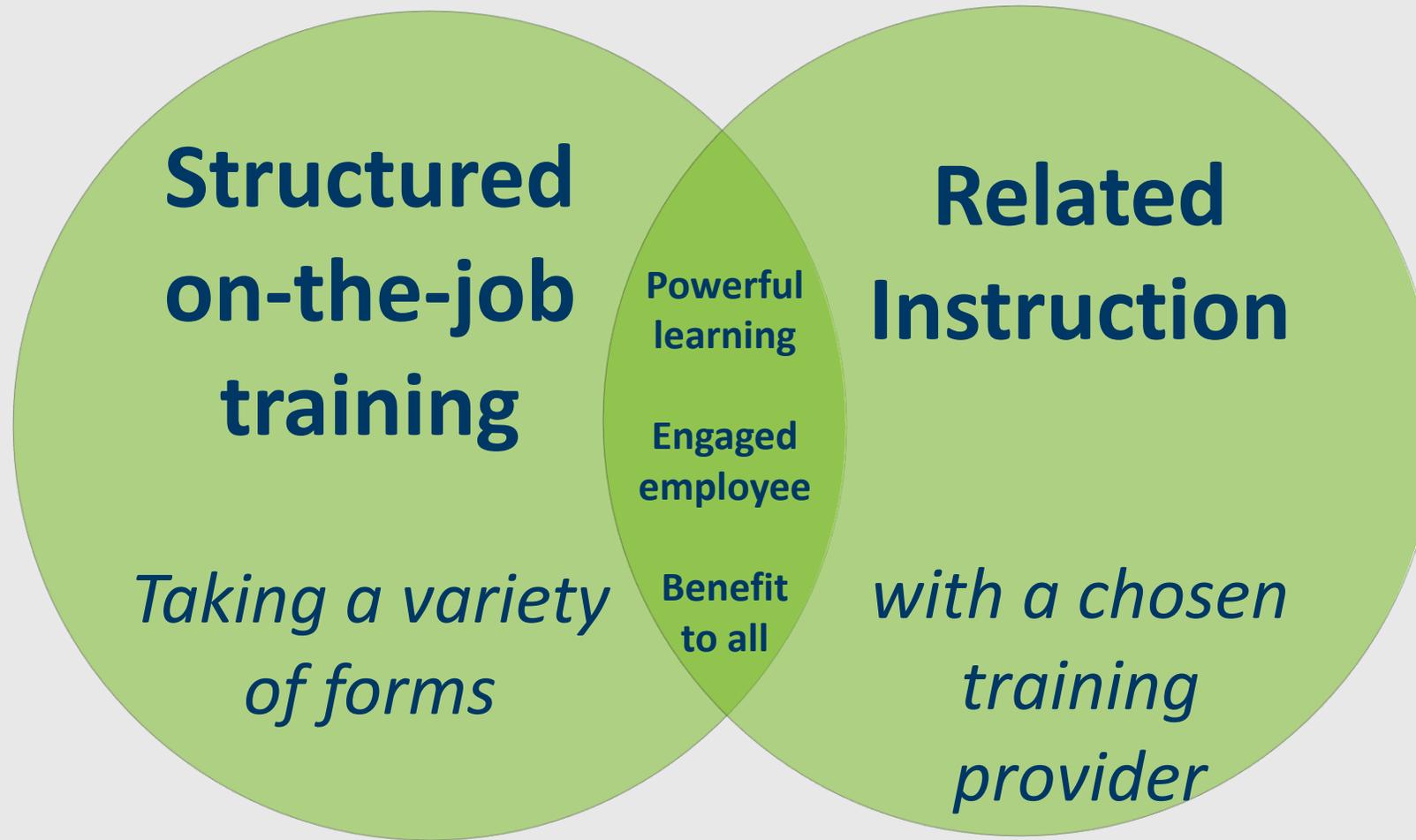
Agenda

- Welcome and Introductions
 - Name, organization, and favorite Halloween costume from your past
- PIPELINE Program Updates
- Recent Industry Trends
- Industry-wide conversation
- Dual-Training Program Development: Tools Reveal
- Competency Council Updates
- Dual-Training Grant Updates
- Next Steps

Company Leadership: Training Employees



Employment-Based Training



PIPELINE PROGRAM

INDUSTRY-BASED. EMPLOYER-DRIVEN. DUAL-TRAINING EXPERIENCE.

- Private Investment, Public Education, Labor and Industry Experience
- An innovative approach to address current and future workforce needs in key industries of Agriculture, Advanced Manufacturing, Health Care Services and Information Technology
- A mechanism to develop dual-training programs that are industry-based and employer-driven

PIPELINE Program Strategies

- **Industry Councils:** *Inform and direct* PIPELINE Program on industry trends and needs through discussion and strategic planning **aimed to expand dual training.**
- **Competency Councils:** *Define and identify* specific occupational competencies for the four key industries.
- **Dual-Training Consulting:** *Create and disseminate* dual-training resources for employers, employees and dual trainees: toolbox, grants, and expanding mentorship networks to set up dual training.

PIPELINE Program Updates

- Complete team: Four staff: Program manager, two outreach and dual training consultants, and a team specialist
- Streamlining communications
- Strategic planning and visioning
- Developing internal tracking tools for easy reporting, Salesforce
- Marketing and branding
- EXTENSIVE OUTREACH

Program Sustainability



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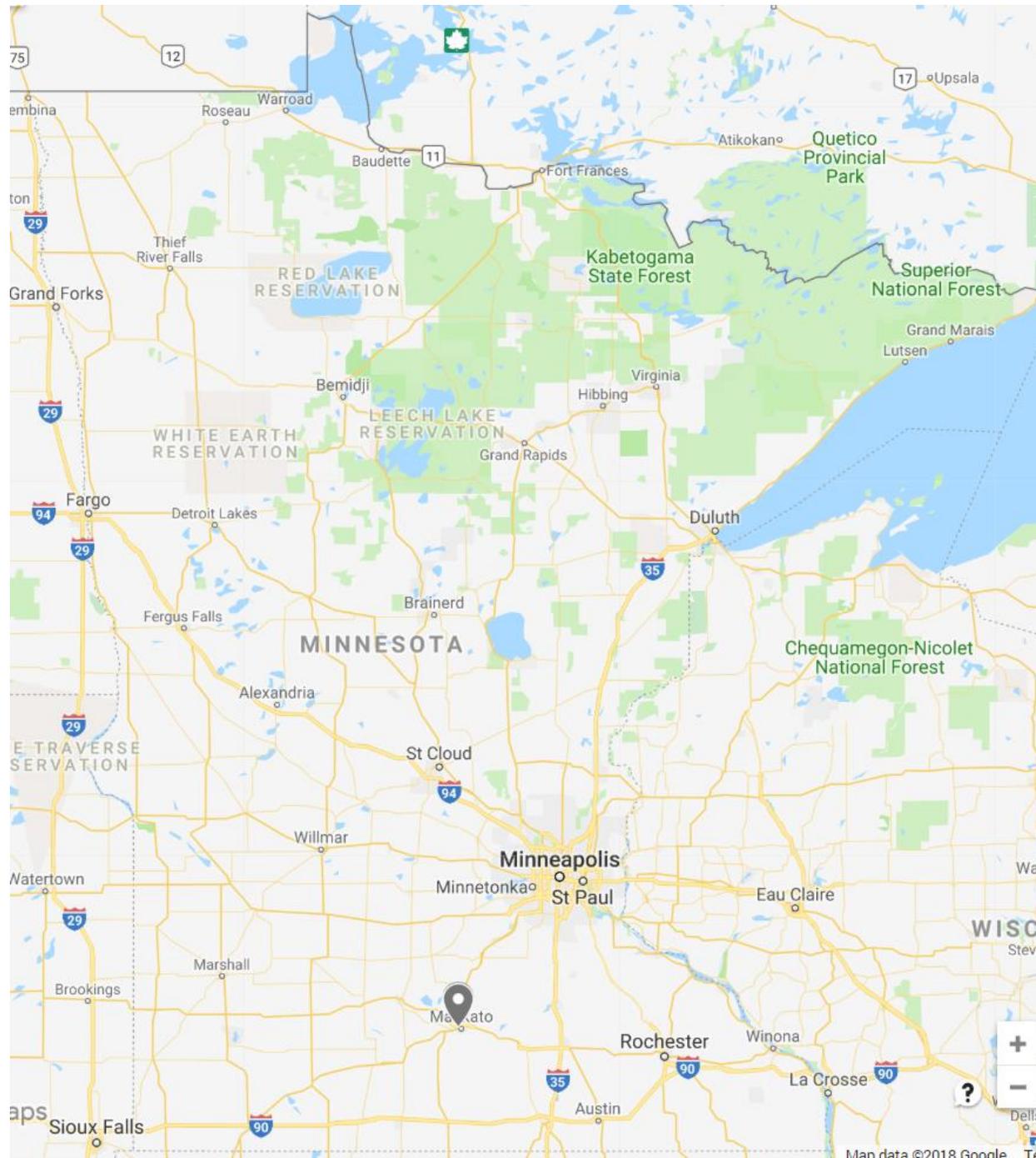
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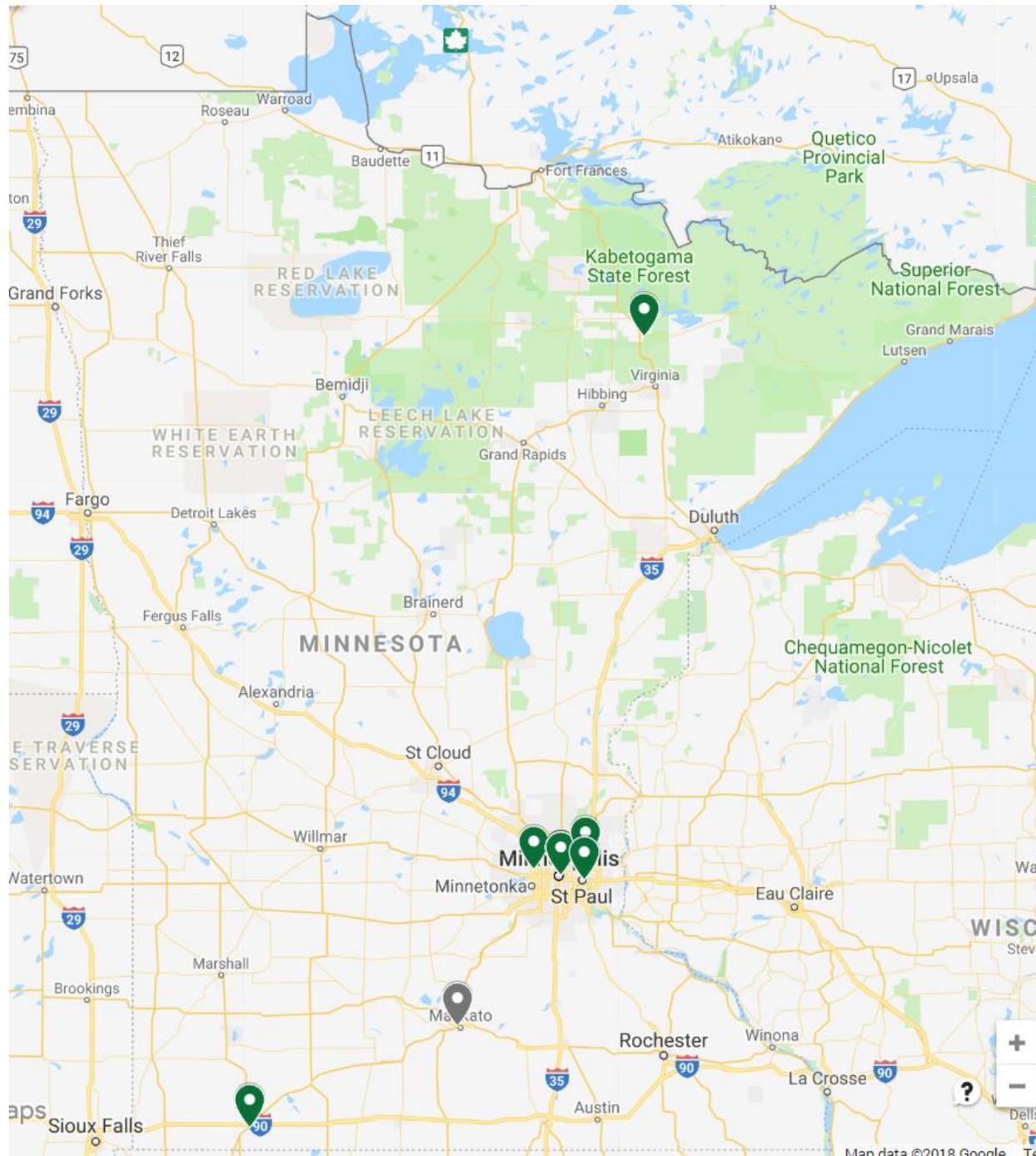
PIPELINE Program Updates

- Speaker Series – tying in to the dual-training model
 - May 24: Recruiting and Retaining across Generations
 - September 13: Leadership for Geeks, Techies, and Crackerjacks
 - December 6: Inclusion
 - March 7: TBD.
 - May 17: TBD.
- *We absolutely welcome your ideas.*
- Community Conversations offered regionally:
 - October 16: Mankato
 - October 30: St. Cloud
 - November 14: Marshall
 - November 27: Rochester
 - December 3: Alexandria
 - December 11: Bemidji
 - December 18: Duluth

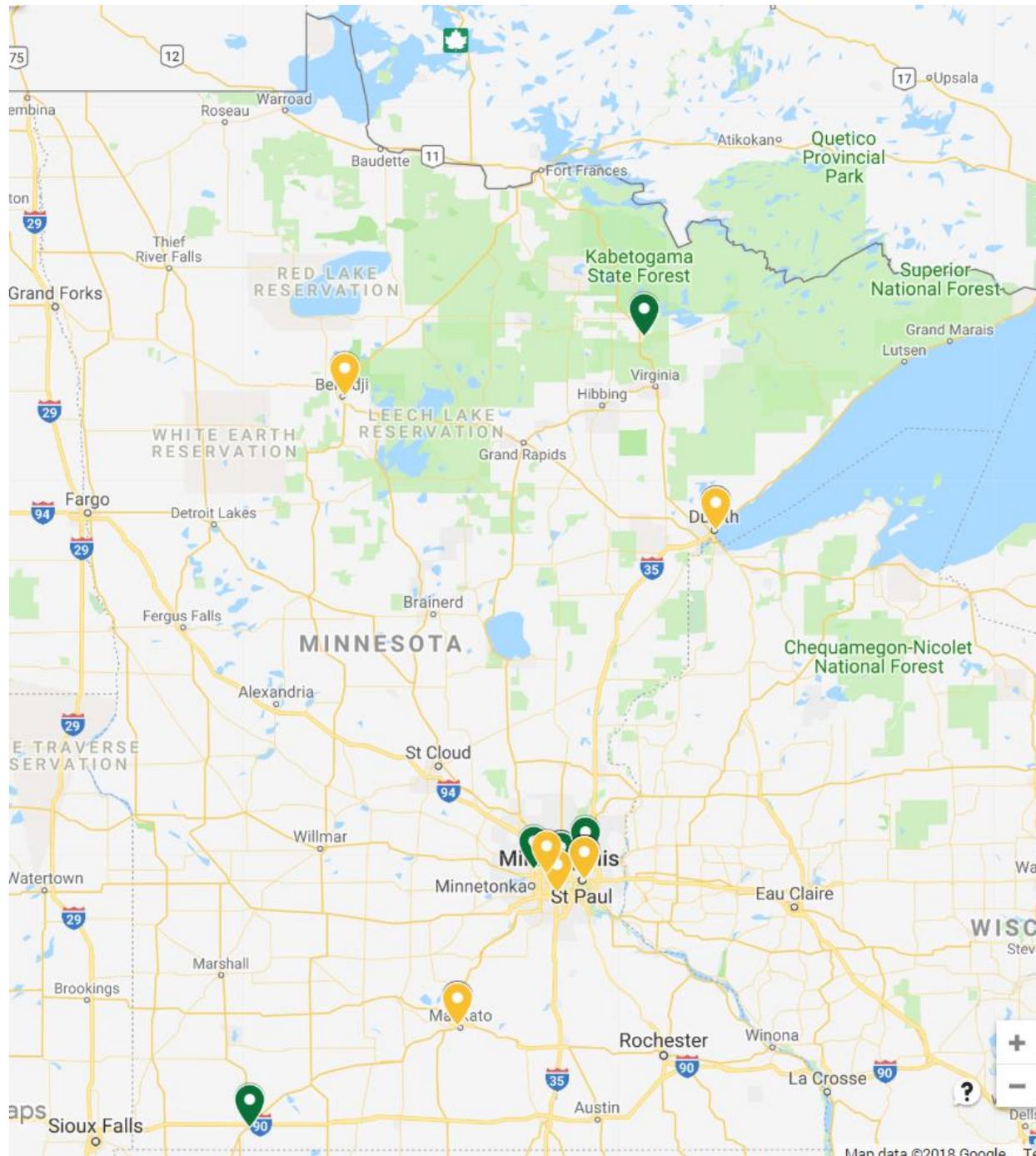
● January: 1



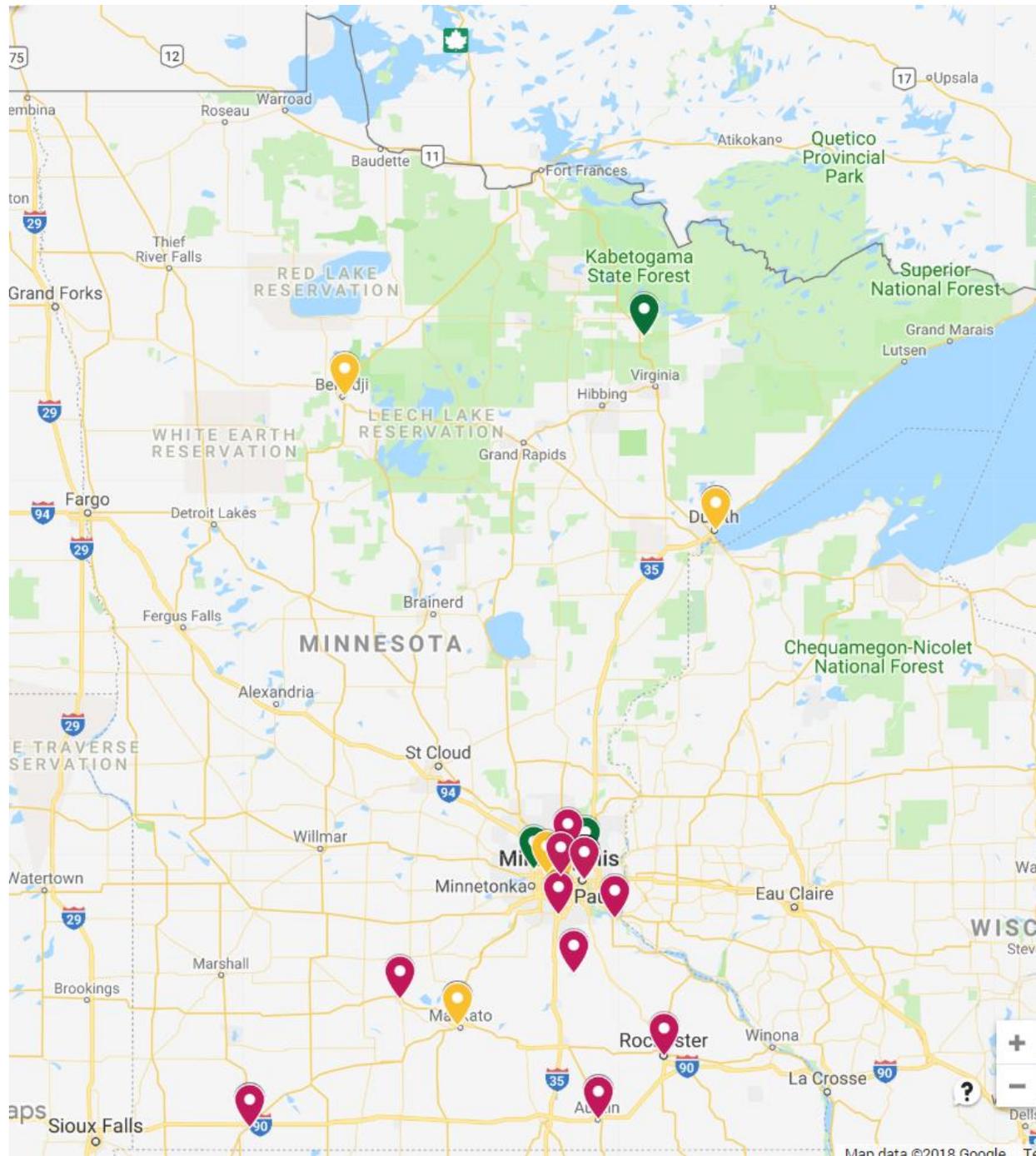
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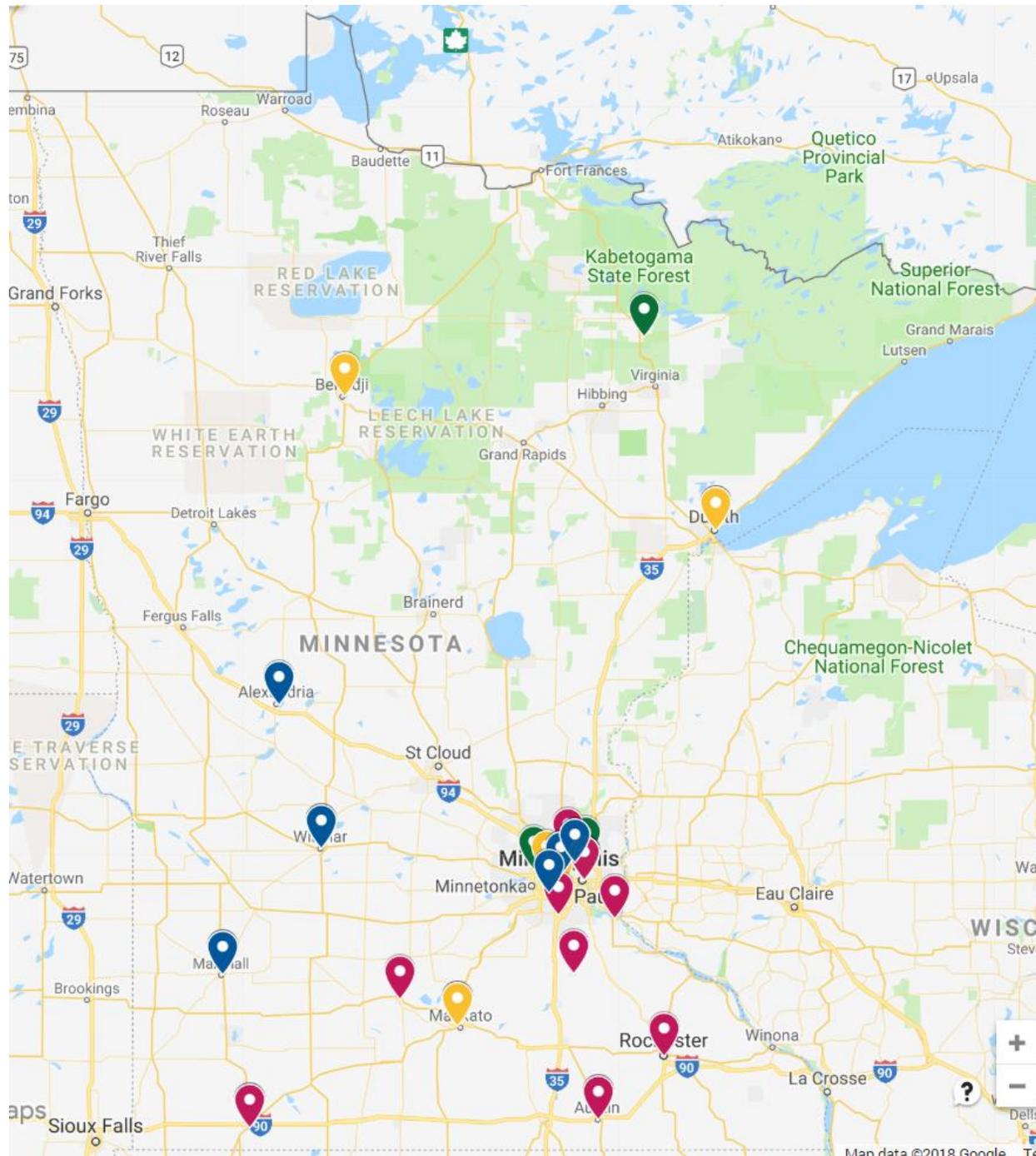
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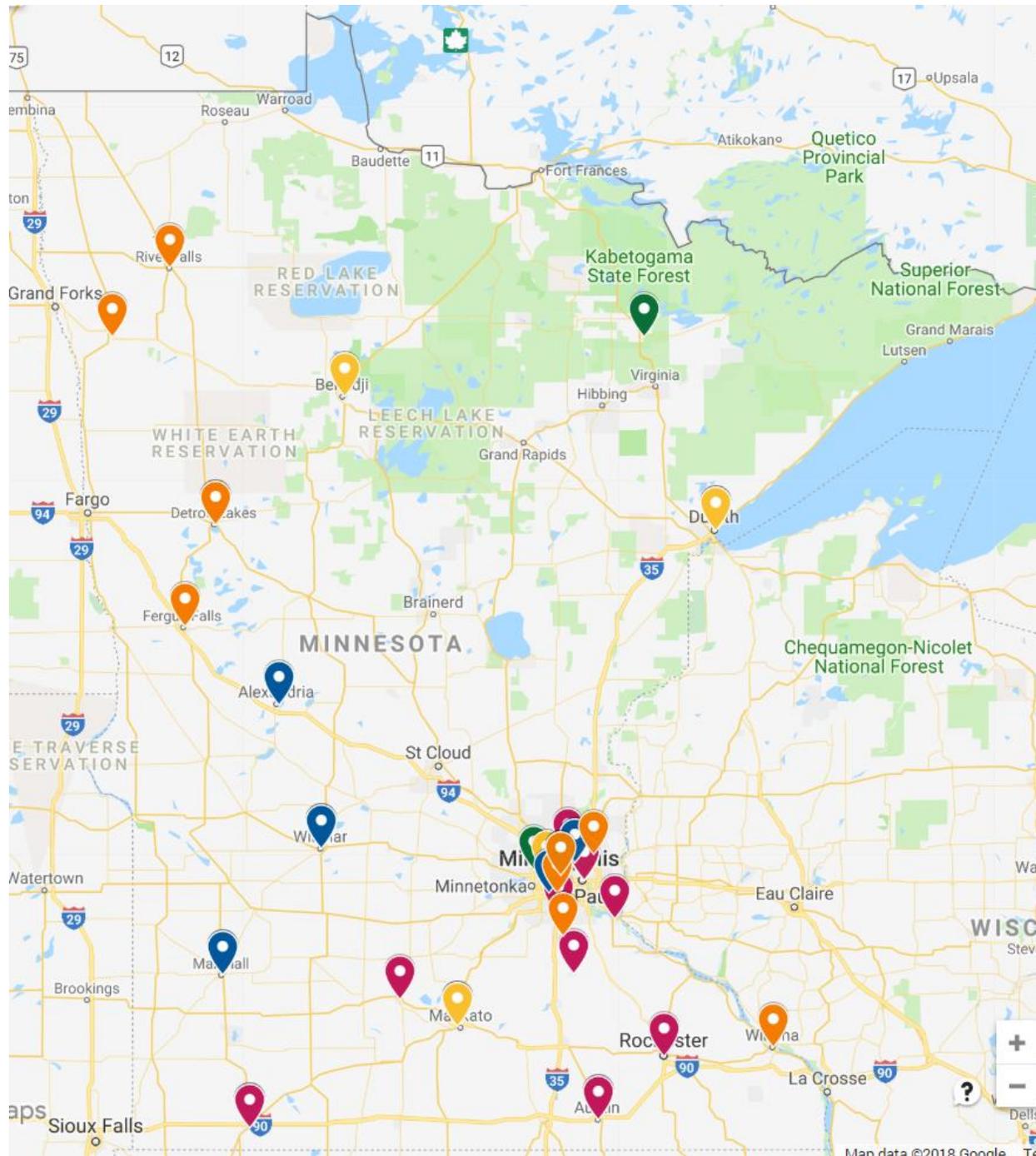
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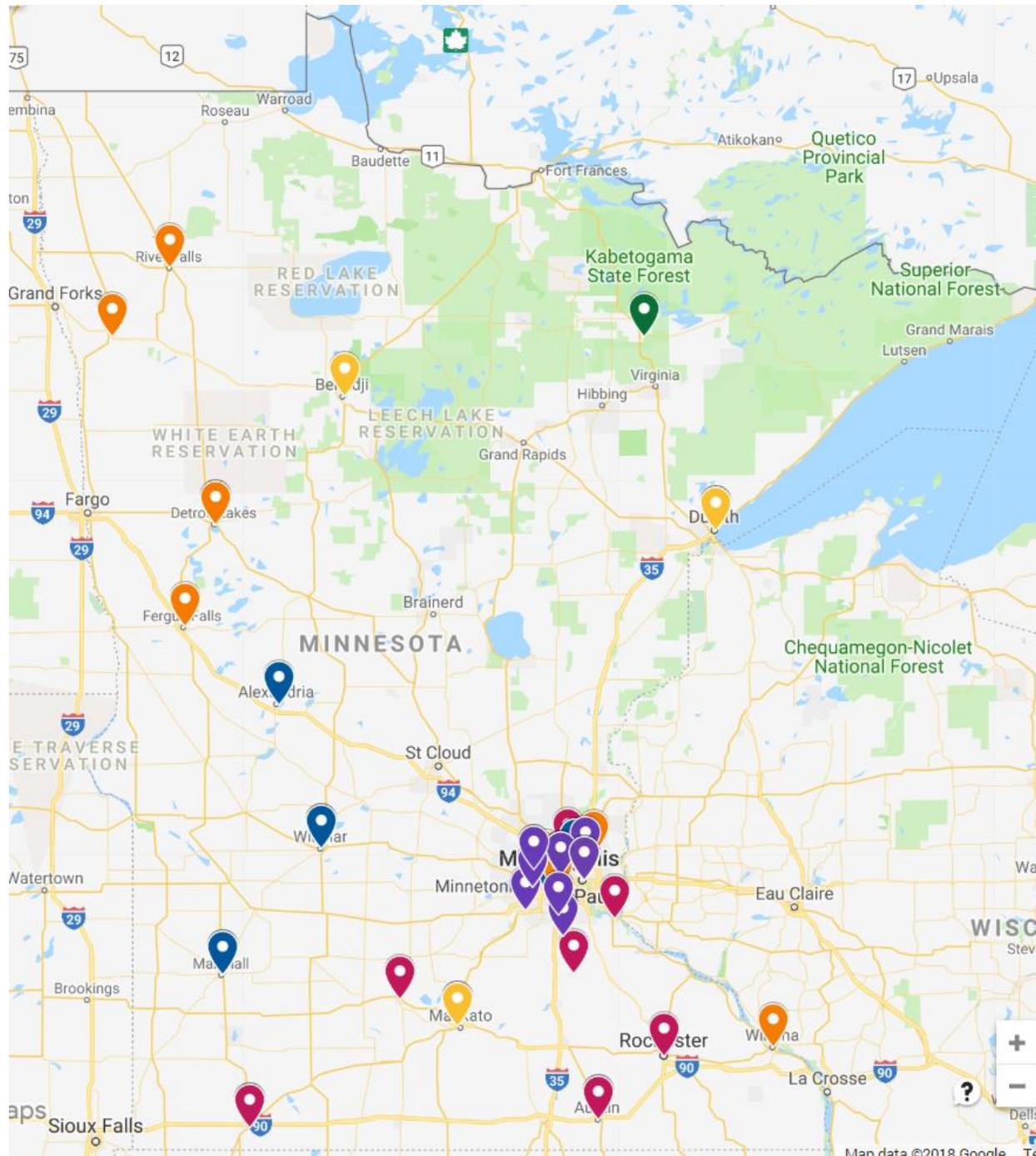
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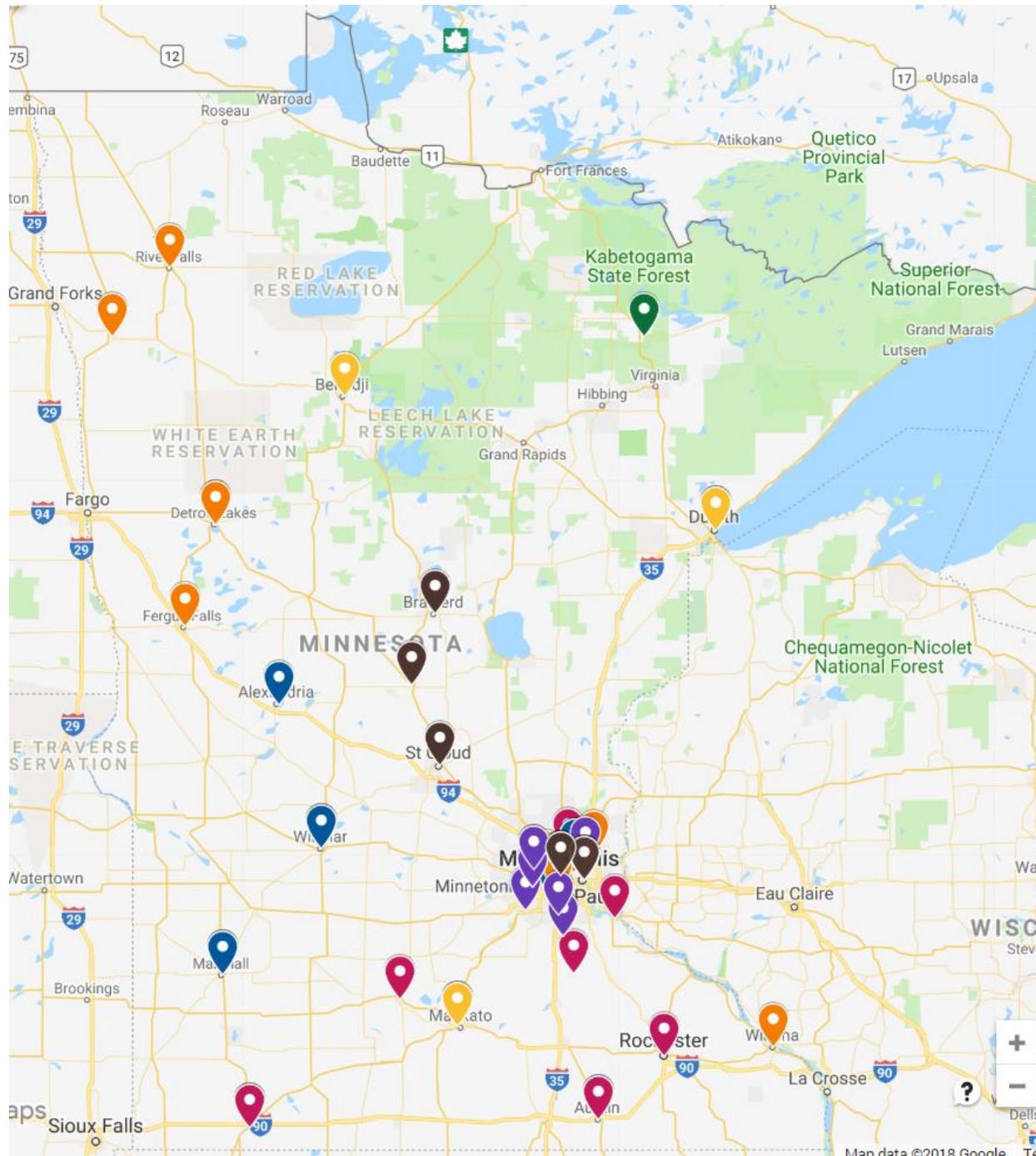
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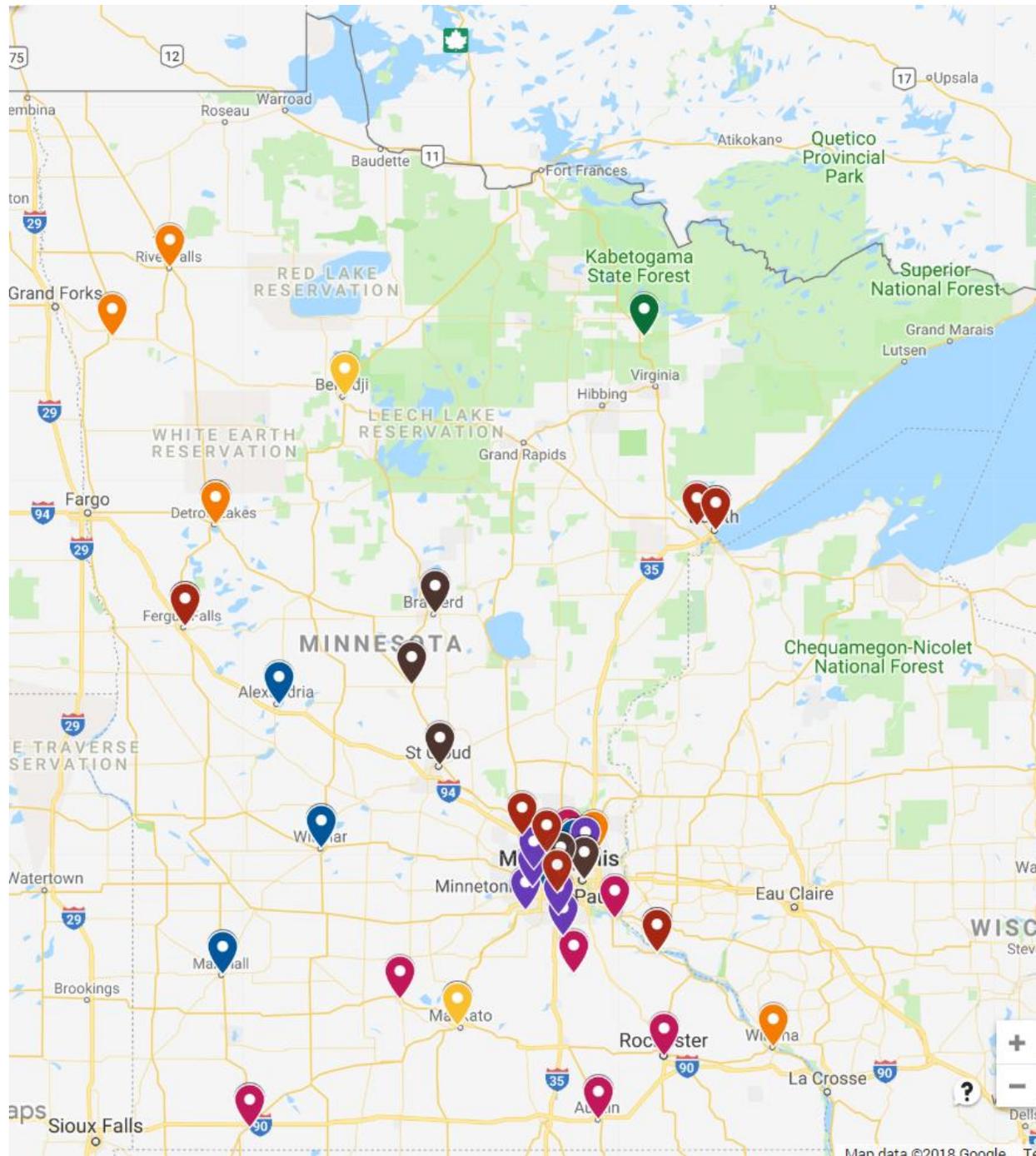
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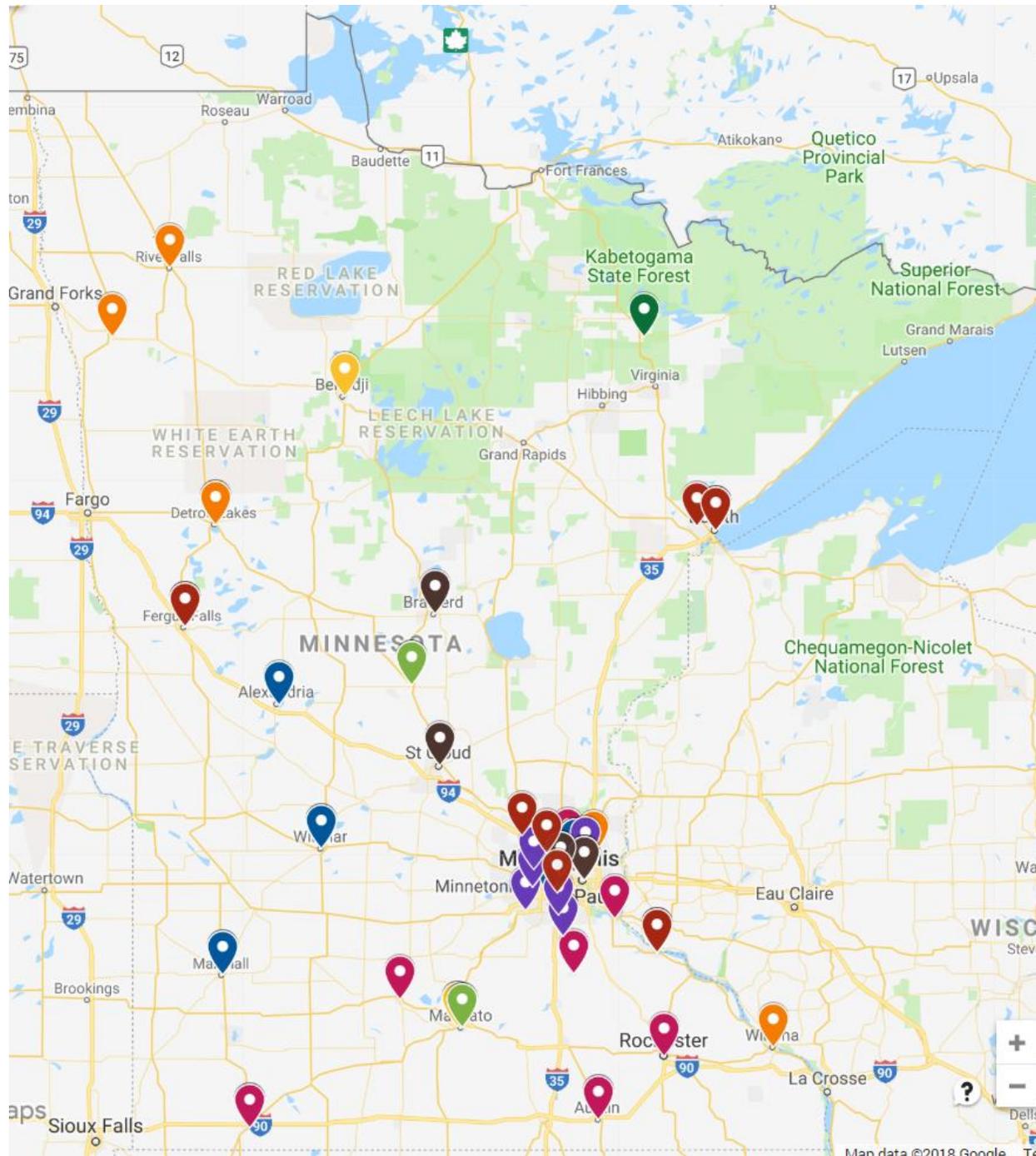
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- October: 3



- What has been happening in information technology since we last connected?
 - Media coverage on cybersecurity and data breaches.
 - Continued prevalence of IT training and boot camps.
 - *Please share your thoughts.*

Industry-wide conversation

- What is it that draws people to information technology?
- How can the dual training model draw people to information technology?

PIPELINE Dual Training Tools Reveal

Information technology

PIPELINE dual-training tools

PIPELINE events

PIPELINE partner employers

PIPELINE Program grants

PIPELINE success

Youth Skills Training Program

CODES AND LAWS

ELECTRICAL CONTRACTORS

ELEVATOR CONTRACTORS

EMPLOYMENT PRACTICES

HIGH PRESSURE PIPING
CONTRACTORS

INDEPENDENT
CONTRACTOR
REGISTRATION

LICENSE FORMS, PERMITS,
PLAN REVIEW AND LOCAL
GOVERNMENTS

MANUFACTURED
STRUCTURES

PLUMBING AND
MECHANICAL
CONTRACTORS

Below are templates and tools to help employers develop and track dual-training programs for their employees. The tools can be an effective way to ensure all of the employees participating in dual training are meeting their required trainings and mastering each required competency. If you have questions about the tools or would like us to prioritize new occupations for tool development, contact us at PIPELINE.Program@state.mn.us

Guidance for [developing effective on-the-job training](#).

Dual training program templates

Advanced manufacturing:

- Flexo technician
- Machinist CNC
- Maintenance and repair worker
- Mechatronics technician
- Welder

Agriculture

- Industrial truck mechanic

Health care services

- Medical assistant
- Senior living culinary manager

Information technology

- Information security career pathway
- Service desk front line support specialist

Questions?

Contact us at PIPELINE.Program@state.mn.us.

PIPELINE PROGRAM		m DEPARTMENT OF LABOR AND INDUSTRY					
[Company Name]							
Mechanic, Industrial Truck							
<small>On the job training is hands-on instruction completed at work to teach the core competencies necessary to succeed in the occupation. The OJT plan does not need to include all of the competencies listed below, may add additional competencies, and does not need to follow any specific order. The employer may be set free to approach OJT for their specific place of work.</small>							
<small>Possible modes of OJT may include job shadowing, meeting attendance, side-by-side work with a mentor, other mentoring, specific project evaluated by colleague or supervisor, etc.</small>							
Employee Name: [Employee Name]			Date: 10/15/2018				
Anticipated Completion Date: 7/1/2018							
On-the-job Training							
Specific Competencies	Trainer	Mode of OJT	Start Date	Completion Date	Hours Completed	Hours Required	% Complete
Industrial Truck Repair and Maintenance: Demonstrate understanding of how to maintain and repair industrial truck engines and components.	Name		(type date)	(type date)	0	1	0
Industrial Truck Engine Overhaul: Demonstrate process of overhauling an industrial engine.	Name		(type date)	(type date)	0	1	0
Engine Part Replacement: Ability to properly install replacement parts on machinery.	Name		(type date)	(type date)	0	1	0
Special Part Fabrication: Demonstrate fabricating special components/tools.	Name		(type date)	(type date)	0	1	0
Overall Progress:					0	4	0

Dual training tracking example

PIPELINE Dual Training Tools Reveal

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INDUSTRY-BASED. EMPLOYER-DRIVEN. DUAL-TRAINING EXPERIENCE.

m DEPARTMENT OF
LABOR AND INDUSTRY

Minnesota Department of Labor and Industry Information Security Career Cluster Pathway Occupations

On-The-Job Training is hands-on instruction completed at work to learn the core competencies necessary to succeed in the occupation. The OJT plan does not need to include all of the competencies listed below, may add additional competencies, and does not need to follow any specific order. The employer may lay out how best to approach OJT for their specific place of work.

Possible modes of OJT may include job shadowing, meeting attendance, side-by-side work with a mentor, other mentorship, specific project evaluated by colleague or supervisor, etc.

Employee Name:	Kathleen Gordon	Date:	10/23/2018
Anticipated Completion Date:	7/1/2018		

On-the-job Training

Specific Competencies	Trainer	Mode of OJT	Start Date	Completion Date	Hours Completed	Hours Required	% Complete
Implement Security Measures: Understand how to take proactive actions within information technology tools and resources to safeguard systems and networks from damaging actions by unintended or unauthorized persons or entities.	Annie Welch	Job Shadowing	10/18/2018	12/31/2018	20	100	20
Recognize IT Security Problems: Ability to determine mechanisms by which digital equipment, information and services are have been altered and / or damaged from unintended or unauthorized access.	Amanda Follmer	Assignment-based Project Evaluation	10/18/2018	1/31/2019	56	200	28
Monitor Security Violations/ Inefficiencies: Understand how	Name						

Competency Council Overview

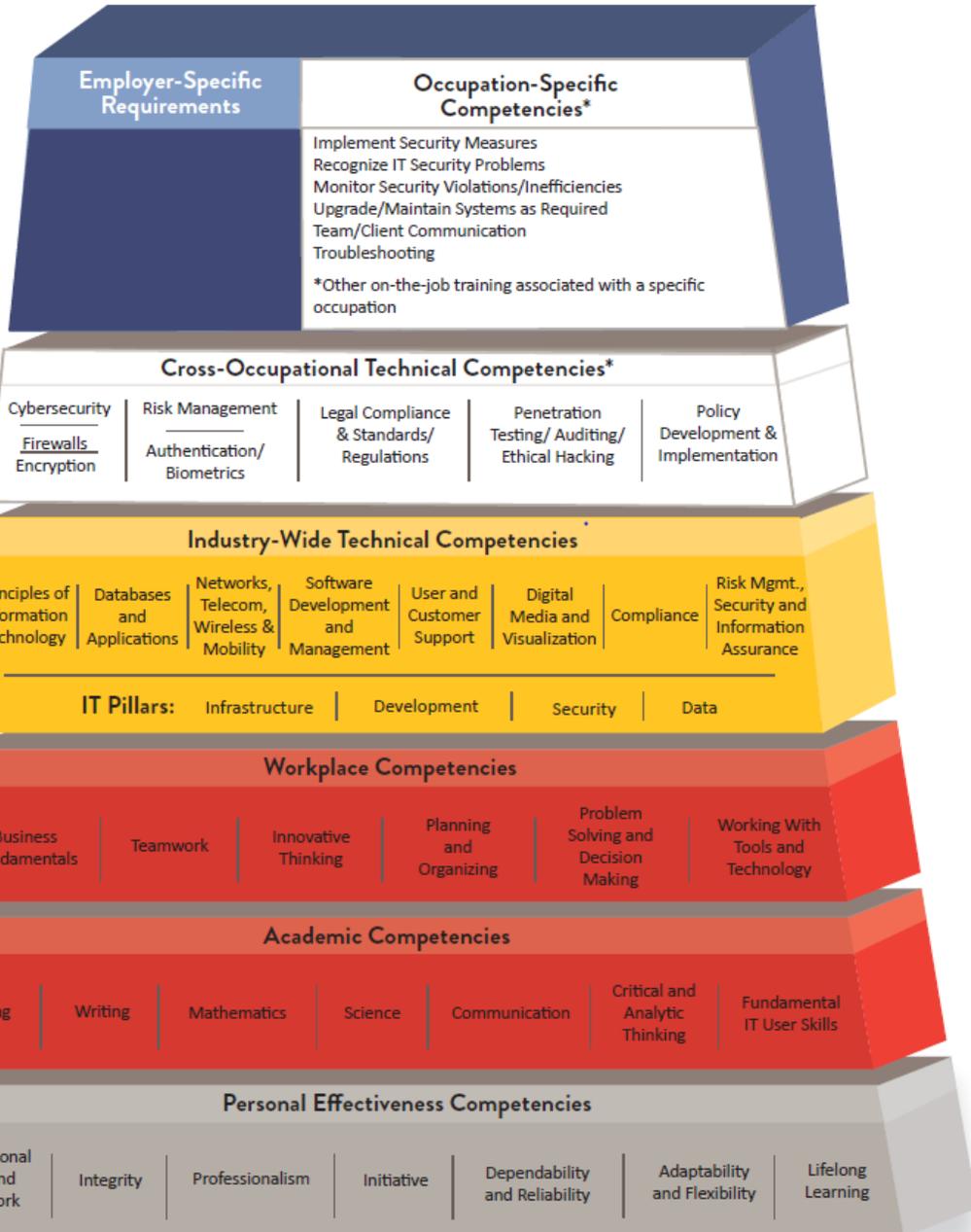
- Current occupations and pathways in IT:
 - Security Analyst
 - Service Desk/Front Line Support or Computer User Specialist
 - Software Developer
 - Web Developer – Front End
 - Web Developer – Back End
 - Programming Pathway
 - Information Security Pathway
 - Strategic Planning – Business Management Pathway
 - Software Testing Quality Assurance Pathway
 - Infrastructure Administration Pathway
 - Information Management and Analytics Pathway
 - Information Support and Services Pathway

PIPELINE Program

Competency Model for Information Technology

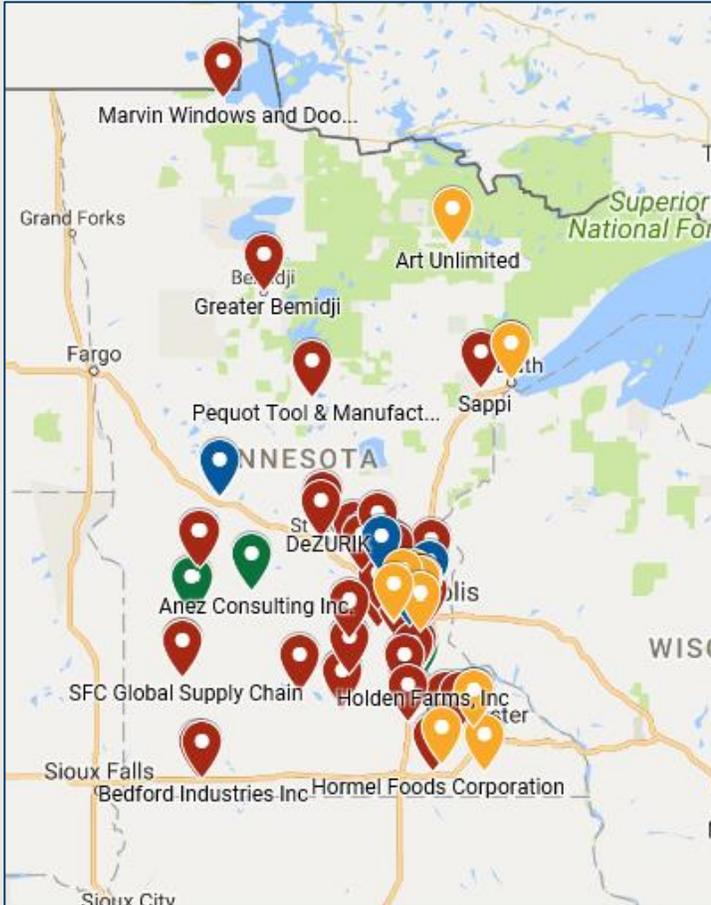
Information Security Career Cluster Pathway

Competency Council Overview



Possible Information Security Career Cluster Pathway Occupations

- Account Manager
- Android Developer
- Applications: Analyst/Architect/Developer/Engineer
- Audit: Associate/Director/Manager/Senior
- Business: Analyst/Consultant
- Business Systems: Analyst/Consultant
- Chief Information Officer
- Cisco Engineer
- Cisco Network Engineer
- Citrix Engineer
- Compliance: Analyst/Officer
- Computer Systems Analyst
- Computer Technician
- Customer Service Representative
- Cyber Threat Analyst
- Cybersecurity: Analyst/Engineer/Specialist
- Cyber Security Penetration Tester
- Data: Analyst/Architect/Security Analyst
- Data Systems Security Administrator
- Database: Administrator/Analyst/Developer/Engineer
- Desktop Support: Analyst/Specialist/Technician
- Devops Engineer
- Director of: Engineering/Information Technology/Technology
- Engineering: Manager/Technician
- Enterprise Architect
- Field Service Technician
- Firewall Engineer
- Help Desk: Analyst/Specialist/Support/Technician
- Information Assurance: Analyst/Engineer
- Information Security: Analyst/Architect/Consultant/Director/Engineer/Manager/Officer/Specialist
- Information Systems: Analyst/Auditor/Security Analyst/Security Engineer/Security Officer
- Information Technology: Administrator/Analyst/Architect/Audit Manager/Auditor/Consultant/Manager/Project Manager/Security Analyst/Specialist/Support Specialist/Support Technician/Systems Administrator/Technician
- Infrastructure: Architect/Project Manager
- Intelligence Analyst
- Internal Auditor
- Internal IT Auditor
- Java Software: Developer/Engineer/Linux: Administrator/Engineer/Systems Administrator/Systems Engineer
- Management Analyst
- Network: Administrator/Analyst/Architect/Engineer/Manager/Security Administrator/Security Analyst/Security Engineer/Specialist/Technician
- Operations: Analyst/Engineer/Specialist/Technician
- Oracle Database Administrator
- Penetration Tester
- Policy Analyst
- Program: Analyst/Manager
- Programmer/Analyst
- Project Manager
- Quality Assurance: Analyst/Engineer
- Recovery Specialist
- Risk: Analyst/Management Analyst/Manager
- Sales: Associate/Engineer
- Security: Administrator/Analyst/Architect/Associate/Compliance Analyst/Consultant/Engineer/Manager/Officer/Operations Analyst/Sales Consultant/Specialist
- Security System Technician
- Server: Administrator/Engineer
- Sharepoint: Administrator/Developer
- Sharepoint Developer
- Software: Architect/Developer/Development Engineer
- Solutions Architect
- SQL Database Administrator
- Systems: Administrator/Analyst/Architect/Engineer/Integrator/Programmer
- Technical: Advisor/Analyst/Architect/Consultant/Project Manager/Support Analyst/Support Engineer/Support Specialist
- Technical Writer
- Technology: Consultant/Manager
- Telecommunications Engineer
- Web Developer
- Windows: Systems Administrator/Administrator/Engineer/Systems Engineer
- *This list is intended to be a guide of potential occupations available within the Information Support & Services Pathway. Other position titles may be used based on an employer's organizational structure.*



- Since its inception in 2015, OHE has administered 124 grants to 67 unique employers;
- 1,033 employees have benefited from the PIPELINE Dual Training Grant Program;
- PIPELINE Program Consultants and the OHE Grant Administrator continue outreach to new employer partners, averaging about one new employer each day.

KEY DATES:

- Grant Round #8: Opens April 1, 2019 and closes on May 17, 2019
- Workshop for related instruction providers: Wednesday, March 6, 1:00 – 4:00
- Workshop for employer grantees: Thursday, March 7, 1:00 – 4:00

Next Steps

- Competency council work: On-going
- Speaker Series: December 6
- Community Conversations: Stay tuned
- Next Industry Council Meetings:
 - Thursday, February 20, 2019, 2:00 – 4:00
 - Thursday, June 13, 2019, 2:00 – 4:00

Thank you.



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