GREATER SALT LAKE MUNICIPAL SERVICES DISTRICT

2020-2021

Enterprise GIS

Roadmap

Salt Lake Valley, Utah

Creating a service oriented culture in government by utilizing data and information to proactively make informed decisions.

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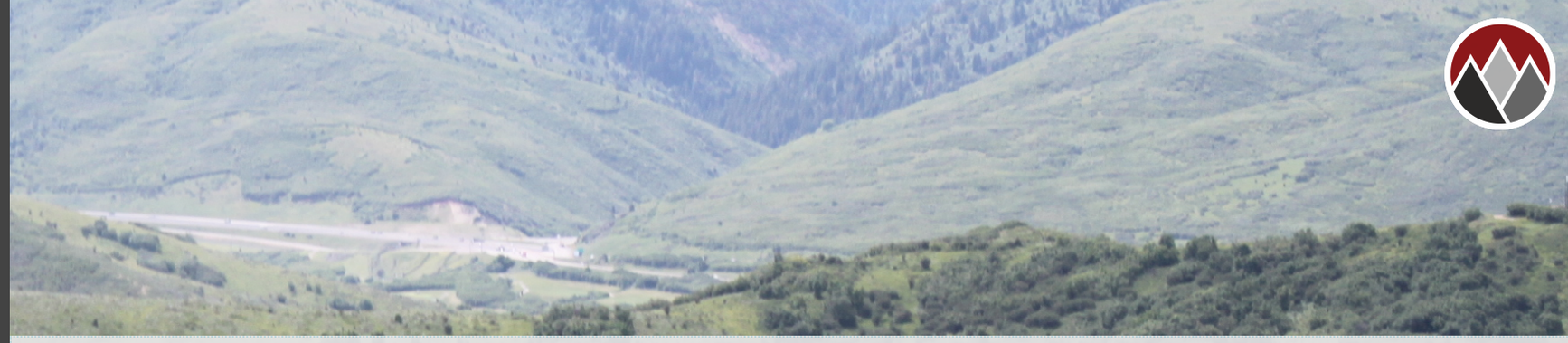
GREATER SALT LAKE MUNICIPAL SERVICES DISTRICT

2020-2021 Enterprise GIS Roadmap



Guiding policy

The guiding policy tackles the challenges identified during the assessment and strategic roadmap development. It is designed to leverage our strengths to continually improve our program's overall enterprise capability and maturity. This policy will be used to focus the GIS team on activities that align projects to our objectives and key results while multiplying the effectiveness of our efforts.

Communicate

Communicate the value of GIS across departments by providing access to quality spatial and business data via a self-service platform.

Collaborate

Collaboration and innovation among internal users and with external partners by providing GIS solutions developed by knowledgeable workforce.

Govern

Establish strong GIS governance that allows uniformity, accuracy, stewardship, consistency and accountability of the enterprise GIS data.

Emigration Canyon, Utah
Photo by MSD

Icons by icons8.com

How the strategy was developed

A data-driven approach

A model of enterprise success was used to assess organizational health. It reduces complexity by setting focus on the most crucial aspects of the geospatial program. The model and framework provided the data necessary to gauge performance, identify challenges, design improvement initiatives and set objectives and key results. This data-driven strategic roadmap provides a mechanism for transparent measurable continual improvement.

51 Enterprise Success **Factors**

06 Top-down **Categories**

03 Program **Challenges**

04 Strategic **Tenets**

05 Improvement **Initiatives**

08 **Objectives**

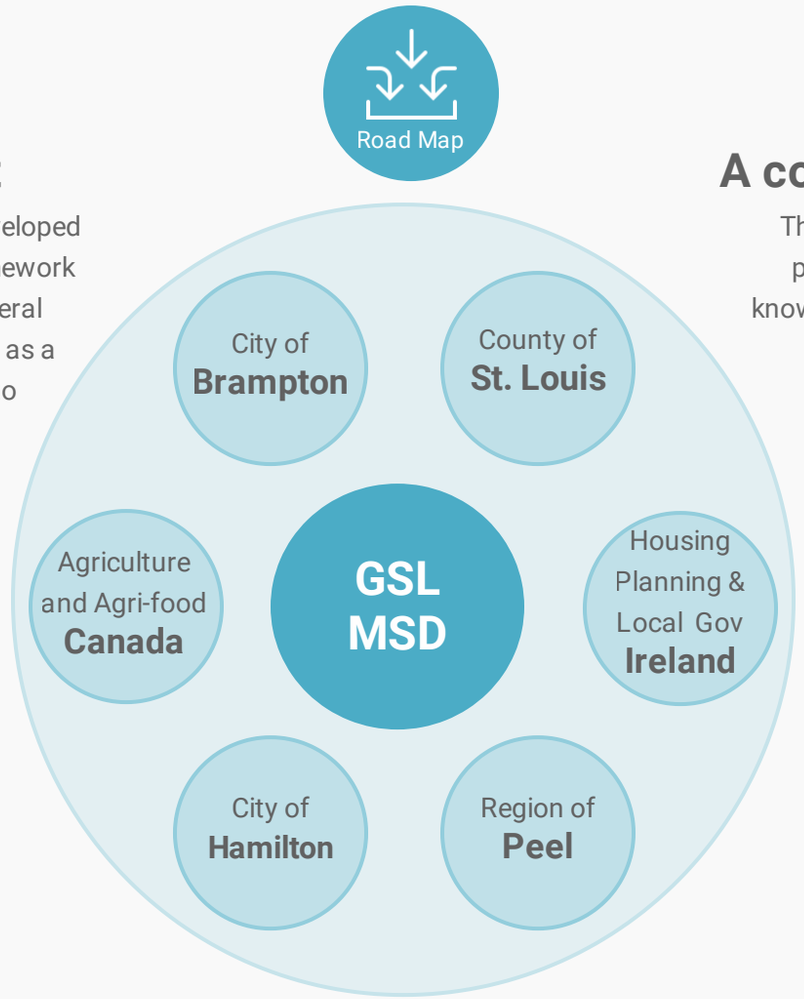
19 **Key Results**

01 **Guiding Policy**

A collective effort

The strategic roadmap was developed using the same model and framework as several local, county and federal government agencies. Working as a collective allows each member to benefit from the work being performed across all agencies.

"A good strategy defines a critical challenge. What is more, it builds a bridge between that challenge and action, between desire and immediate objectives that lie within grasp."
Richard P. Rumelt, Good Strategy Bad Strategy



A common framework

The common model and approach provides a framework for sharing knowledge and strategies. This 2021 Enterprise GIS Roadmap was developed in parallel with the organizations presented in the diagram.

"Then come the four OKR "superpowers": focus, align, track, and stretch."
John E. Doerr, Measure What Matters

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What is the current state

Strengths and challenges

The analysis of our current state shows the District has developed and continues to manage quality data and systems while providing and supporting MSD-wide access to our tools. Rapid change in technology require a deeper understanding of the opportunities that exist in core platform technologies which the MSD is invested in. Increased awareness that **GIS supports data driven decisions and plays important role** in data analytics, integration and visualization will lead to the increase in MSD-wide adoption and accelerate digital and business transformation. The current state analysis identified:

Strengths and drivers

Environment of the organization fosters **innovation**

Have GIS **vision**, comprehensive use & innovation

GIS manager or coordinator **role exists**

Technical **Infrastructure** sufficient to meet GIS need

Enterprise GIS led by appropriate and sufficient **staff**

Employees at all levels **encouraged** to use GIS

Challenges

Formal GIS Governance
Create a system of accountability that defines and enforces the life-cycle of .GIS data

interdepartmental Collaboration
Collaborative teams bring new insights with which comes innovation

Corporate-wide spatial competency
Active participation from business units as required to align processes that manage data across silos.

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Driving change with location data

Common purpose

The enterprise GIS purpose is common to all Local, State and Federal organizations:

It is to provide a modern, agile, centralized and shared Enterprise GIS service that supports innovation and the efficient management of our organizations.

Location based services

There is a growing need for location based services and insights that help organizations make data-informed decisions, create operational efficiencies and provide situational awareness. These functions are being driven by **location as a system of record, system of insight and system of engagement**. The industry is experiencing a rapid convergence of traditional silos (location intelligence and business intelligence) into the "modern intelligent enterprise", a term coined by Matt Zenus of SAP[1]. The roadmap is designed to help the MSD adapt to this new model, endeavoring to transform our operations by creating a clear understanding of the capabilities required to operate in this new model. We will unite traditional lines of business around location data and continue to lay the groundwork required to support a digital shifting of tasks to the business units through engagement and empowerment.

A new way of thinking

The transformation to a digital modern intelligent enterprise requires a focus on data management and the integration of business data with location data to support insight and to drive innovation. More importantly, **these changes require new ways of thinking, learning and working** that are supported by a culture of collaboration and innovation. This requires a shift from more traditional siloed approaches to a customer-centric model focused on business outcomes and solving problems in ways that will take full advantage of the location data and platforms.

Support planning & analysis that data-drives decisions

Transform data into actionable information with advanced analytics & data science

Manage assets & instantly mobilize field workers

Collect, organize & exchange information rapidly to inform decisions when & where needed

Provide awareness, insights & advanced intelligence solutions

Disseminate maps & advanced visualization dashboards for situational & operational awareness

Deploy low code/no-code solutions for almost anything

Deploy modern forms, apps, solutions & data stories rapidly on an integrative open platform

Drive deep & broad digital & business transformations

Drive digitalization by modernizing existing processes with the location advantage

Engage internal & external stakeholders with rich experiences

Share comprehensive & full featured engagement sites & initiatives using leading edge portal tech

[1] https://www.esri.com/about/newsroom/podcast/creating-the-insightful-enterprise-how-location-intelligence-strengthens-bi/

Icons by icons8.com

Five improvement initiatives

Four strategic tenets

strategic **clarity**

coherence: set and communicate our purpose and where we need to go

strategic **alignment**

congruence: foster alignment and coordinated action

strategic **capability**

workforce: build and modernize core capabilities required to move forward

data practice: establish a strong data management and integration practice

transformation **mindset**

adaptation: change mindsets to take advantage of location technologies and integrations as a major driver of business and digital transformation

Initiative 1: Awareness and engagement

Bring attention to how enterprise GIS serves as the MSD's comprehensive platform for innovation, analytics, business and location intelligence and insights. By communicating regularly and effectively MSD can increase awareness for management and the public, changing the common misconception that GIS is just maps.

Initiative 2: Collaboration

Leverage internal and external partnerships to increase capacity and geospatial capabilities. By engaging participation with inter-departmental business units MSD can provide additional solutions and value to the organization.

Initiative 3: Workforce & literacy

Improve long term competencies and adoption of modern practices will shift focus away from ad-hoc mapping to centralize and quality-controlled data ready for integration. End users will learn not just how to use existing GIS solutions but also about the opportunities the platform has to offer. Engaging in new initiatives will raise awareness and spatial literacy throughout the MSD.

Initiative 4: Data Management

Data management improvements will be supported by quality control procedures that are centralized and shared across siloes. Data quality will help increase adoption of the GIS solutions and decrease data and applications redundancy.

Initiative 5: Optimization

Continue to move towards the optimized state of GIS is ongoing priority for MSD. This approach will ensure the systems are operational and data is accessible to all GIS users 24/7/365. To support optimization stage, it is important that MSD continues to provide environment that fosters innovation, collaboration and long term budget commitment to ensure the MSD's core technologies are up to date.

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Roadmap objectives and key results (OKR)

Initiative 1: Awareness and engagement

Architect GIS infrastructure in the Cloud

Become outstanding communicators

Data available for use and integration with other business solutions

1% 7 key results

Initiative 2: Collaboration

Cross-unit cooperation to create, collect, maintain and share high-quality geospatial data

No single point of failure

0% 6 key results

Initiative 3: Workforce & literacy

Align workforce development plans with PDS-wide strategy

0% 2 key results

Initiative 4: Data Management

Develop an effective QA/QC process

0% 2 key results

Initiative 5: Optimization

Continue to move GIS towards an optimized state

0% 2 key results

progress made on the roadmap so far

+0%

with the goal to deliver 90% of our key results by next assessment

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

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We're focused on improvement

Current state & progress to date

Transforming our organization with location data & technology

Welcome to the MSD Geospatial Information Office (GIO) Roadmap for 2021. GIO staff are focused on driving change and improving workflows by providing timely and meaningful data analysis and visualization to decision makers and citizens. In 2021, we will work to improve the geospatial maturity at MSD and increase the utilization of GIS across the teams.

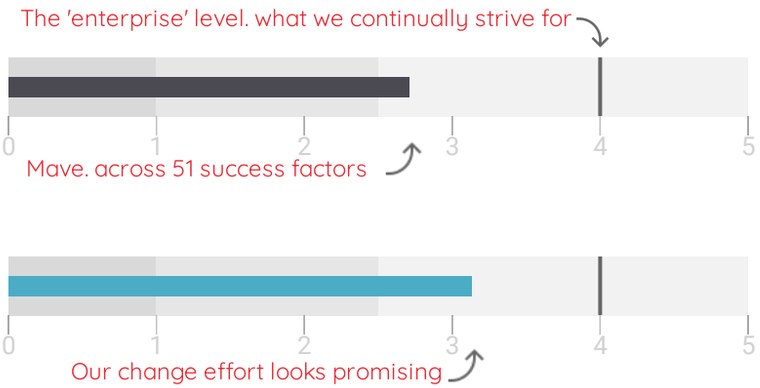
What does our 2020 enterprise GIS maturity look like at-a-glance?

2.7 our current enterprise gis maturity

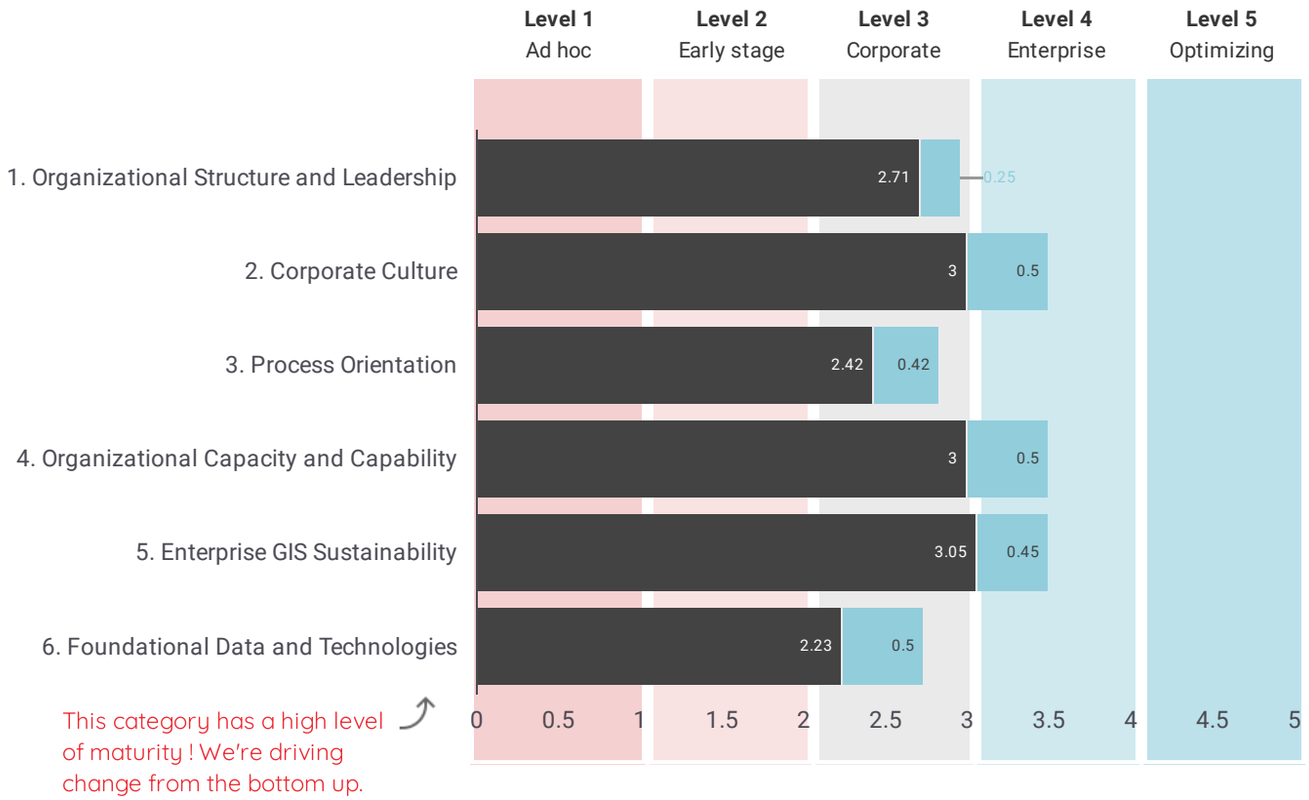
1.6 maturity in 2020

3.1 our estimated likelihood to improve

2.5 likelihood in 2020



How do we measure up when looking top down through the organization?



We're happy to tell you that things are improving

The Geospatial Information Office is a strong core of GIS professionals who develop and implement business solutions and provide data analysis and visualization services to internal and external users. We also maintain over 10 geospatial datasets available both internally and externally through ArcGIS Online or OpenData portal.

What are some of our top performing success factors?

	2021
EGIS led by appropriate and sufficient staff	5
Adaptable hiring practices ensure modern skills	4
GIS manager or coordinator role exists	4
Have GIS vision, comprehensive use & innovation	4
Technical Infrastructure sufficient to meet GIS need	3
Corp commitment to spatial competency & capacity	3

What examples of factors were we able to improve last year?

	2020	2021
EGIS led by appropriate and sufficient staff	1	5
Environment of the organization fosters innovation	3	4
Adaptable hiring practices ensure modern skills	3	4
GIS manager or coordinator role exists	2	4
Have GIS vision, comprehensive use & innovation	2	4

Highlights (and other things we're excited to tell you about!)

14 factors are **strong & driving** things forward

16 **opportunities** were identified

In 2020, MSD invested in GIS software and technical infrastructure to meet GIS needs of our organization. With a strong team of GIS professionals and clear vision we are able to support innovations at MSD. GIS continues to be mission-critical that support transparency and openness around data and existing processes.

Icons by icons8.com

Transformation challenges

What we're addressing with this & future roadmaps

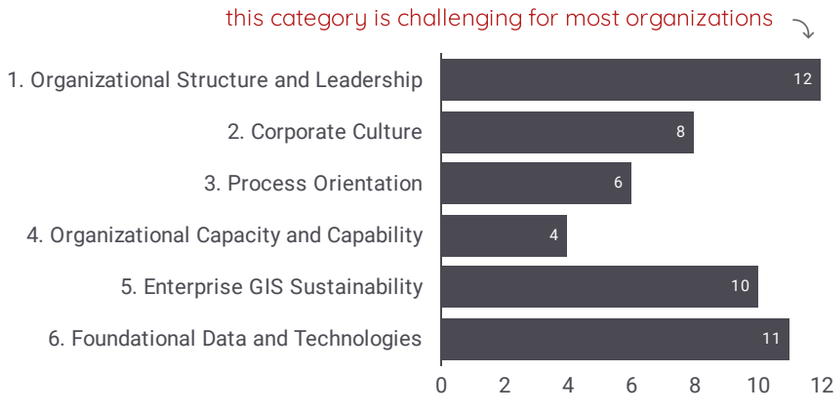
Transformation isn't without it's challenges & GIS is no different

While there have been many successes in the past year, we also recognize there are many challenges to improving geospatial maturity at MSD. Leadership's commitment to spatial competency & capacity continues to provide opportunities for education and increased awareness of business solutions that can be provided with GIS. Teams are working together to create centralized data repository, adopt open data policies, attend GIS-related trainings to improve spatial competency.

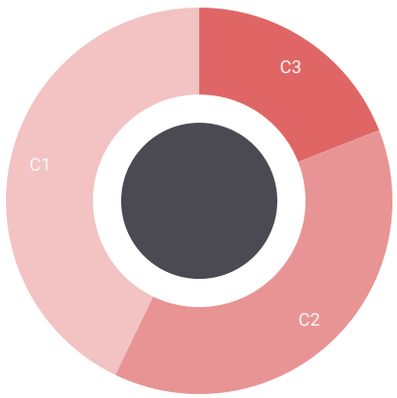
How many factors are posing challenges in each assessment category?

21

factors currently challenge our enterprise improvement efforts



What challenge categories do these factors fall under ?



	Factors	2020	2021
C1 Governance	9	1.3	1.9
C2 Process	8	1.4	2.1
C3 Data practices	4	1.5	1.9

"Ignoring change is one of the worst mistakes you can make in a technology-centric industry like GIS. You have to **embrace it, plan for it, and take advantage of it.**"

Esri Insider – "Managing GIS is about Managing Change"

What are some challenges that were identified?

Geospatial services and technologies have a significant role in understanding our communities and leveraging spatial data to derive insight to support decision making and solutions. Inter-department collaboration, data policies and governance and formal data quality processes are necessary to maintain a strong foundation of geospatial services and technologies.

What are some factors we identified as enterprise threats?

	2020	2021
Formal GIS governance established	1.0	1.0
Metadata	1.0	1.0
Inter-department cooperation emphasized	0.5	2.0
Process documentation standardized & central	1.0	2.0
Formal QA/QC process	1.0	2.0
GIS related communication is frequent & guided by plans	1.0	2.0
EGIS process & goals shared across silos	1.0	2.0
Data maintenance embedded in business workflow	1.0	2.0
GIS data interoperatibility exists	1.0	2.0
Data common & available for integration	1.0	2.0

Other concerns & things you should be aware of:

MSD continues to drive towards cross-team cooperation & information sharing to support organization-wide spatial competency. MSD also recognizes the need for long term competency & training plans to internal MSD staff to ensure staff recognize EGIS as a reliable data source.

14 **weak factors** warrant significant attention

7 factors identified as **threatening** our enterprise maturity.

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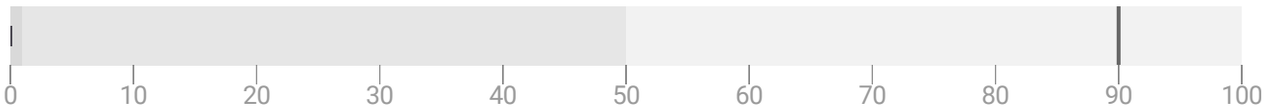
This roadmap drives change

About this data-driven strategic effort

How are we progressing with the '20 roadmap (at a high level) ?

+0% progress made on the roadmap so far *

with the goal to deliver 90% of our key results by end of 2021



Roadmap start: Dec 2020

learn more about this roadmap on GIS Day

End: Dec 2021

* updated monthly

What's the current progress of our roadmap objectives per initiative ?

1. Awareness & engagement

3 objectives with 7 key results

	Progress
Architect GIS infrastructure in the Cloud	0%
Become outstanding communicators	2%
Data available for use and integration with other business solutions	0%

2. Collaboration

2 objectives with 6 key results

	Progress
Cross-unit cooperation to create, collect, maintain and share high-quality geospatial ...	0%
No single point of failure	0%

3. Workforce & geospatial literacy

1 objective with 2 key results

	Progress
Align workforce development plans with PDS-wide strategy	0%

4. Data Management

1 objectives with 2 key results

	Progress
Develop an effective QA/QC process	0%

5. Optimization

1 objective with 2 key results

	Progress
Continue to move GIS towards an optimized state	0%

What's data-driven strategy & how does it work?

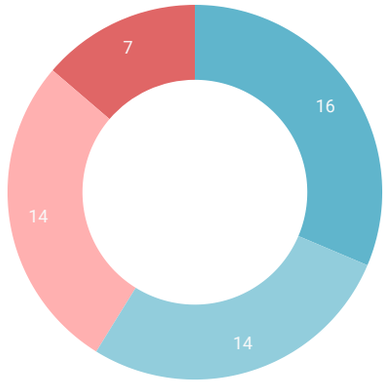
A model enterprise was adopted consisting of 51 success factors in 6 categories. The simplified model measures organizational health top-down reducing complexity by setting focus on the most crucial aspects of the geospatial program. The roadmap represents a way forward that concentrates MSD attention on areas most likely to improve while balancing efforts on developing strategic clarity, alignment, capability and mindsets through a series of enterprise initiatives.

The data from the underlying enterprise model, performance, challenges, initiatives, objectives and key results are used to data-drive this strategic document and provides a mechanism for transparent measurable continual improvement at this and other federal, county, regional and local governments agencies.

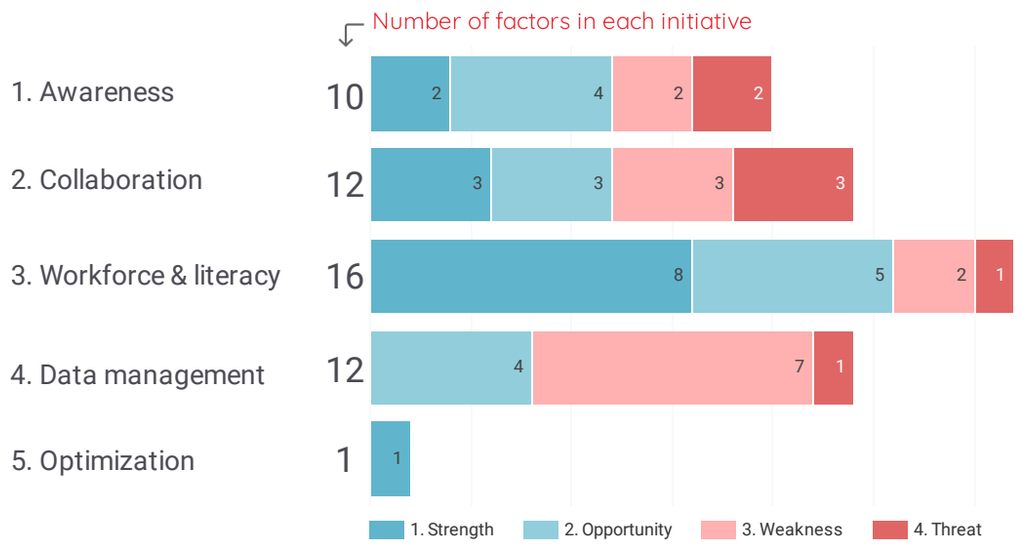
How do we leverage strengths to drive our improvements?

6 **drivers** and 14 **strengths** will be used to improve the scores of 14 **weaknesses**.

Our initiatives strategically target 7 **threats** while taking advantage of 16 **opportunities.**



How are our initiatives designed to overcome challenges?



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Strategic improvement initiatives

A detailed view of the roadmap improvement initiatives

The strategic initiatives are designed to focus efforts on key improvements by leveraging our strengths to help overcome our challenges. Each initiative is composed of enterprise success factors that, when improved in combination, will help achieve our long term goals.

1. Awareness and engagement

Bring attention to how enterprise GIS serves as the MSD's comprehensive platform for innovation, analytics, business and location intelligence and insights. By communicating regularly and effectively MSD can increase awareness for management and the public, changing the common misconception that GIS is just maps.

2. Collaboration

Leverage internal and external partnerships to increase capacity and geospatial capabilities. By engaging participation with inter-departmental business units MSD can provide additional solutions and value to the organization.

3. Workforce and geospatial literacy

Improve long term competencies and adoption of modern practices will shift focus away from ad-hoc mapping to centralize and quality-controlled data ready for integration. End users will learn not just how to use existing GIS solutions but also about the opportunities the platform has to offer. Engaging in new initiatives will raise awareness and spatial literacy throughout the MSD.

4. Data management

Improve data management will be supported by quality control procedures that are centralized and shared across the siloes. Data quality will help increase adoption of the GIS solutions and decrease data and applications redundancy.

5. Optimization

Continue to move towards the optimized state of GIS is ongoing priority for MSD. This approach will ensure the systems are operational and data is accessible to all GIS users 24/7/365. To support optimization stage, it is important that MSD continues to provide environment that fosters innovation, collaboration and long term budget commitment to ensure the MSD's core technologies are up to date.

1. Awareness and engagement

Slimgim success factors	Driver	Swot
5.1 Long term corporate budget commitment	Enabl...	1. Strength
1.5 Have GIS vision, comprehensive use & innovation	Driver	1. Strength
1.7 Senior management learning benefits & use of GIS		2. Opportunity
1.12 Broad strategic use of GIS by senior management		2. Opportunity
2.3 Staff accept EGIS as a reliable data source		2. Opportunity
5.9 Ubiquitous access to web self-service maps		2. Opportunity
2.7 GIS related communication is frequent & guided by plans		3. Weakness
6.5 Data common & available for integration		3. Weakness
1.3 Formal GIS governance established		4. Threat
3.1 Staff are "process-minded" - value & adhere to process		4. Threat

2. Collaboration

Slimgim success factors	Driver	Swot
1.4 Resource allocation support GIS	Enabl...	1. Strength
2.2 Environment of the organization fosters innovation	Enabl...	1. Strength
3.4 Plan to improve & align process to strategic plan		1. Strength
5.5 Mechanism to maintain business unit participation	Enabl...	2. Opportunity
2.1 Business units have active EGIS participation		2. Opportunity
1.11 GIS Projects align with enterprise vision		2. Opportunity
1.6 Benefits of GIS are tracked & measured		3. Weakness
3.2 EGIS process & goals shared across silos		3. Weakness
6.8 Direct integration to business systems		3. Weakness
1.9 Inter-department cooperation emphasized		4. Threat
2.4 Open cross-unit cooperation & information sharing		4. Threat
3.5 Process documentation standardized & central		4. Threat

3. Workforce and geospatial literacy

Slimgim success factors	Driver	Swot
5.4 Blending of IT, analysis, visualization & GIS	Enabl...	1. Strength
1.1 GIS manager or coordinator role exists	Driver	1. Strength
1.8 Corp commitment to spatial competency & capacity	Driver	1. Strength
2.5 Adaptable hiring practices ensure modern skills	Driver	1. Strength
4.1 EGIS led by appropriate and sufficient staff	Driver	1. Strength
4.4 GIS 'operators' no longer carto/map focused		1. Strength
5.2 Balance of tech resources & data admin		1. Strength
2.8 Employees at all levels encouraged to use GIS		1. Strength
2.6 Core spatial competency improved with training plans		2. Opportunity
3.3 GIS operation align with performance management		2. Opportunity
5.3 End-users well supported		2. Opportunity
5.6 External support utilized (to fill gaps & accelerate)		2. Opportunity
6.3 System architecture current		2. Opportunity
1.10 Adaptable hierarchy aligns with change		3. Weakness
5.7 Long term competency & training plans followed		3. Weakness
4.3 Corporate-wide spatial competency		4. Threat

4. Data management

Slimgim success factors	Driver	Swot
1.2 GIS data promoted as authoritative		2. Opportunity
5.8 Spatial data is core & mission-critical		2. Opportunity
5.10 Data and application backups		2. Opportunity
6.11 Foundational & Sec Data (where appropriate)		2. Opportunity
3.6 Data maintenance embedded in business workflow		3. Weakness
4.2 GIS data interoperatibility exists		3. Weakness
6.1 Business unit data owners & stewards controlled		3. Weakness
6.2 Production & published database of reliable data		3. Weakness
6.6 Redundancy of information management reduced		3. Weakness
6.7 All foundation datasets modeled & centralized		3. Weakness
6.9 Metadata		3. Weakness
6.4 Formal QA/QC process		4. Threat

5. Optimization

Slimgim success factors	Driver	Swot
6.10 Technical Infrastructure sufficient to meet GIS need	Driver	1. Strength

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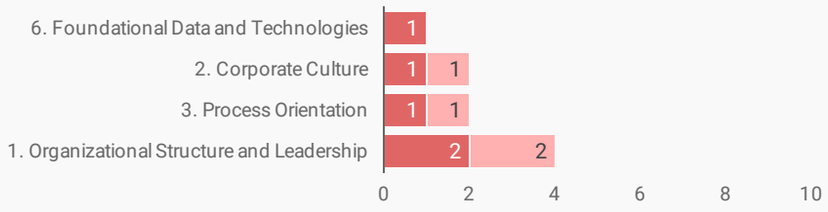
Understanding our challenges

What is impacting our geospatial maturity & transformation

Maintaining a strong foundation of geospatial services and technologies is essential for increasing awareness, engagement, integration and collaboration between business units, management and stakeholders. Geospatial services and technologies have a significant role in understanding our world and leveraging spatial data to derive insight to support decision making and solutions.

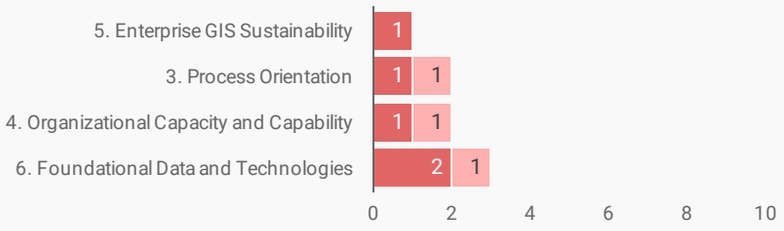
Challenge 1: Governance

Strategic use of geospatial technology by management will yield new innovations, improved communication and comprehensive benefits.



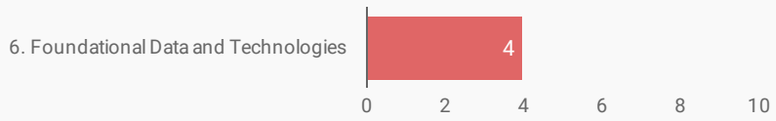
Challenge 2: Process

Communicating the value of geospatial technology and encouraging broad use throughout MSD teams will raise awareness of the need for modern skill sets and bring attention to the opportunities the technology provides.



Challenge 3: Data practices

Promoting inter-departmental collaboration will result in active participation from business units as required to align processes that manage data across silos. Working collaboratively with stakeholders will ensure effective use and prioritization of GIS resources.



Challenge 1: Governance

5 | 4

OrdCategory	Slimgim success factors	SWOT	'18	'19	BaseL	Likeli...
1. Organizational Structure and Leadership	1.3 Formal GIS governance established	Threat	1.0	1.0	1.0	2.0
1. Organizational Structure and Leadership	1.6 Benefits of GIS are tracked & measured	Weakness	1.0	2.0	2.0	3.0
1. Organizational Structure and Leadership	1.9 Inter-department cooperation emphasized	Threat	0.5	2.0	1.0	2.0
1. Organizational Structure and Leadership	1.10 Adaptable hierarchy aligns with change	Weakness	2.0	2.5	2.0	2.5
2. Corporate Culture	2.4 Open cross-unit cooperation & information sharing	Threat	2.0	2.0	2.0	2.5
2. Corporate Culture	2.7 GIS related communication is frequent & guided by plans	Weakness	1.0	2.0	2.0	2.5
3. Process Orientation	3.2 EGIS process & goals shared across silos	Weakness	1.0	2.0	2.0	2.5
3. Process Orientation	3.5 Process documentation standardized & central	Threat	1.0	2.0	2.0	2.0
6. Foundational Data and Technologies	6.1 Business unit data owners & stewards controlled	Weakness	2.0	2.0	2.0	2.5

Challenge 2: Process

5 | 3

OrdCategory	Slimgim success factors	SWOT	'18	'19	BaseL	Likeli...
3. Process Orientation	3.1 Staff are "process-minded" - value & adhere to process	Threat	1.0	2.0	2.0	3.0
3. Process Orientation	3.6 Data maintenance embedded in business workflow	Weakness	1.0	2.0	2.0	2.5
4. Organizational Capacity and Capability	4.2 GIS data interoperability exists	Weakness	1.0	2.0	2.0	2.5
4. Organizational Capacity and Capability	4.3 Corporate-wide spatial competency	Threat	2.0	2.0	3.0	2.5
5. Enterprise GIS Sustainability	5.7 Long term competency & training plans followed	Weakness	2.0	2.0	2.0	2.5
6. Foundational Data and Technologies	6.4 Formal QA/QC process	Threat	1.0	2.0	2.0	2.0
6. Foundational Data and Technologies	6.6 Redundancy of information management reduced	Weakness	2.0	2.5	2.5	2.5
6. Foundational Data and Technologies	6.8 Direct integration to business systems	Weakness	1.0	2.5	2.0	3.0

Challenge 3: Data practices

4

OrdCategory	Slimgim success factors	SWOT	'18	'19	BaseL	Likeli...
6. Foundational Data and Technologies	6.2 Production & published database of reliable data	Weakness	2.0	2.5	3.0	3.0
6. Foundational Data and Technologies	6.5 Data common & available for integration	Weakness	1.0	2.0	2.0	2.5
6. Foundational Data and Technologies	6.7 All foundation datasets modeled & centralized	Weakness	2.0	2.0	2.0	2.5
6. Foundational Data and Technologies	6.9 Metadata	Weakness	1.0	1.0	1.0	2.0

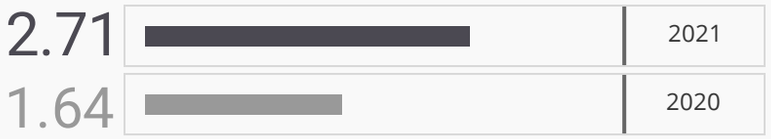
Current state assessment

Performance as a year to year comparison

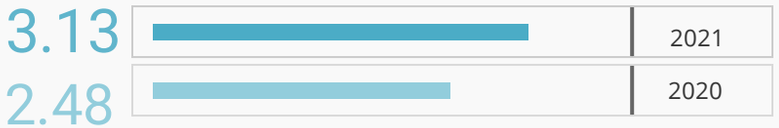
51 enterprise GIS success factors assessed

10 factors unchanged

Enterprise GIS Maturity



Likelihood to improve (readiness index)



What are the year to year differences?

14 major maturity gains since last assessment

27 factors improved

0 major maturity losses since last assessment

- factors had a slight decline

1. Organizational Structure & Leadership

Slimgim success factors	Δ	'18	'19
1.1 GIS manager or coordinator role exists	2	2.0	4.0
1.2 GIS data promoted as authoritative	2	2.0	4.0
1.3 Formal GIS governance established	0	1.0	1.0
1.4 Resource allocation support GIS	1	2.0	3.0
1.5 Have GIS vision, comprehensive use & innovation	2	2.0	4.0
1.6 Benefits of GIS are tracked & measured	1	1.0	2.0
1.7 Senior management learning benefits & use of GIS	1	1.0	2.0
1.8 Corp commitment to spatial competency & capacity	1	2.0	3.0
1.9 Inter-department cooperation emphasized	2	0.5	2.0
1.10 Adaptable hierarchy aligns with change	1	2.0	2.5
1.11 GIS Projects align with enterprise vision	1	2.0	3.0
1.12 Broad strategic use of GIS by senior management	0	2.0	2.0

2. Corporate Culture

Slimgim success factors	Δ	'18	'19
2.1 Business units have active EGIS participation	1	2.0	3.0
2.2 Environment of the organization fosters innovation	1	3.0	4.0
2.3 Staff accept EGIS as a reliable data source	1	2.0	3.0
2.4 Open cross-unit cooperation & information sharing	0	2.0	2.0
2.5 Adaptable hiring practices ensure modern skills	1	3.0	4.0
2.6 Core spatial competency improved with training plans	1	2.0	3.0
2.7 GIS related communication is frequent & guided by pla…	1	1.0	2.0
2.8 Employees at all levels encouraged to use GIS	1	2.0	3.0

3. Process Orientation

Slimgim success factors	Δ	'18	'19
3.1 Staff are "process-minded" - value & adhere to process	1	1.0	2.0
3.2 EGIS process & goals shared across silos	1	1.0	2.0
3.3 GIS operation align with performance management	2	1.0	3.0
3.4 Plan to improve & align process to strategic plan	2	2.0	3.5
3.5 Process documentation standardized & central	1	1.0	2.0
3.6 Data maintenance embedded in business workflow	1	1.0	2.0

4. Organizational Capacity & Capability

Slimgim success factors	Δ	'18	'19
4.1 EGIS led by appropriate and sufficient staff	4	1.0	5.0
4.2 GIS data interoperatibility exists	1	1.0	2.0
4.3 Corporate-wide spatial competency	0	2.0	2.0
4.4 GIS 'operators' no longer carto/map focused	2	1.0	3.0

5. Enterprise GIS Sustainability

Slimgim success factors	Δ	'18	'19
5.1 Long term corporate budget commitment	2	2.0	4.0
5.2 Balance of tech resources & data admin	3	1.0	4.0
5.3 End-users well supported	2	1.0	3.0
5.4 Blending of IT, analysis, visualization & GIS	2	1.0	3.0
5.5 Mechanism to maintain business unit participation	1	2.0	3.0
5.6 External support utilized (to fill gaps & accelerate)	0	3.0	3.0
5.7 Long term competency & training plans followed	0	2.0	2.0
5.8 Spatial data is core & mission-critical	2	1.0	2.5
5.9 Ubiquitous access to web self-service maps	1	2.0	3.0
5.10 Data and application backups	1	2.0	3.0

6. Foundational Data & Technologies

Slimgim success factors	Δ	'18	'19
6.1 Business unit data owners & stewards controlled	0	2.0	2.0
6.2 Production & published database of reliable data	1	2.0	2.5
6.3 System architecture current	1	1.0	2.0
6.4 Formal QA/QC process	1	1.0	2.0
6.5 Data common & available for integration	1	1.0	2.0
6.6 Redundancy of information management reduced	1	2.0	2.5
6.7 All foundation datasets modeled & centralized	0	2.0	2.0
6.8 Direct integration to business systems	2	1.0	2.5
6.9 Metadata	0	1.0	1.0
6.10 Technical Infrastructure sufficient to meet GIS need	0	3.0	3.0
6.11 Foundational & Sec Data (where appropriate)	1	2.0	3.0

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The 2020 Enterprise GIS Roadmap

A data-driven strategic approach to enterprise improvement

Current state (Dec 2020)

Current 2.7

On a scale of 1-5, our enterprise GIS maturity is nearing Level 3 "Corporately but not consistently."

Objectives & key results

Objective 8

Key result 19

This roadmap incorporates objectives & key results (OKR) that focus effort across 5 enterprise improvement initiatives.

Anticipated improvement

Increase 6.0

The 2021 geospatial roadmap is designed to create an overall improvement. Through assessment, we've set a realistic target & designed to set conditions for continuous improvement.

Target state (Dec 2021)

Target 3.3

1. Awareness & engagement

Current 2.5 | Obj 3 | KR 7 | Increase 1.0 | Target 3.0

1.3 Formal GIS governance established

1.5 Have GIS vision, comprehensive use & innovation

1.7 Senior management learning benefits & use of GIS

1.12 Broad strategic use of GIS by senior management

2.3 Staff accept EGIS as a reliable data source

2.7 GIS related communication is frequent & guided by plans

3.1 Staff are "process-minded" - value & adhere to process

5.1 Long term corporate budget commitment

5.9 Ubiquitous access to web self-service maps

6.5 Data common & available for integration

2. Collaboration

Current 2.7 | Obj 2 | KR 6 | Increase 1.0 | Target 3.4

1.4 Resource allocation support GIS

1.6 Benefits of GIS are tracked & measured

1.9 Inter-department cooperation emphasized

1.11 GIS Projects align with enterprise vision

2.1 Business units have active EGIS participation

2.2 Environment of the organization fosters innovation

2.4 Open cross-unit cooperation & information sharing

3.2 EGIS process & goals shared across silos

3.4 Plan to improve & align process to strategic plan

3.5 Process documentation standardized & central

5.5 Mechanism to maintain business unit participation

6.8 Direct integration to business systems

3. Workforce & geospatial literacy

Current 3.1 | Obj 1 | KR 2 | Increase 1.0 | Target 3.4

1.1 GIS manager or coordinator role exists

1.8 Corp commitment to spatial competency & capacity

1.10 Adaptable hierarchy aligns with change

2.5 Adaptable hiring practices ensure modern skills

2.6 Core spatial competency improved with training plans

2.8 Employees at all levels encouraged to use GIS

3.3 GIS operation align with performance management

4.1 EGIS led by appropriate and sufficient staff

4.3 Corporate-wide spatial competency

4.4 GIS 'operators' no longer carto/map focused

5.2 Balance of tech resources & data admin

5.3 End-users well supported

5.4 Blending of IT, analysis, visualization & GIS

5.6 External support utilized (to fill gaps & accelerate)

4. Data management

Current 2.4 | Obj 1 | KR 2 | Increase 1.0 | Target 3.1

1.2 GIS data promoted as authoritative

3.6 Data maintenance embedded in business workflow

4.2 GIS data interoperatibility exists

5.8 Spatial data is core & mission-critical

5.10 Data and application backups

6.1 Business unit data owners & stewards controlled

6.2 Production & published database of reliable data

6.4 Formal QA/QC process

6.6 Redundancy of information management reduced

6.7 All foundation datasets modeled & centralized

6.9 Metadata

6.11 Foundational & Sec Data (where appropriate)

5. Optimization

Current 3.0 | Obj 1 | KR 2 | Increase 1.0 | Target 3.5

6.10 Technical Infrastructure sufficient to meet GIS need

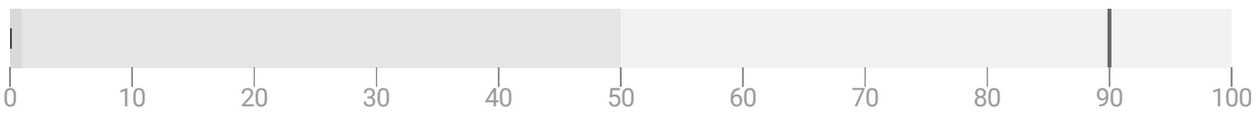
Tracking roadmap performance

Regularly updated objectives & key results (OKR)

Progress of our Roadmap's strategic objectives & key results

+0% progress made on the roadmap so far updated monthly

with the goal to deliver 90% of our key results by 2021

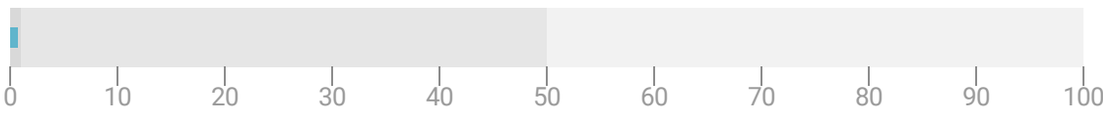


Roadmap start: Dec 2020

End: Dec 2021

Initiative 1: Awareness and engagement

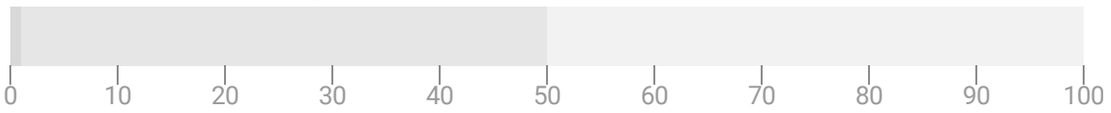
1%



2	Objective	Data available for use and integration with other business solutions			0%
3	Key result	All data authors have access to GIS tools and are trained on GIS Policy	12	0	0%
4	Key result	OpenData site available for authoritative and publicly available GIS data	1	0	0%
5	Objective	Become outstanding communicators			2%
6	Key result	Showcase GIS tools during monthly GIS/IT meetings	12	0	0%
7	Key result	Share GIS benefits during MSD Board of Trustees meeting quarterly	4	0	0%
8	Key result	Work with Communication Manager to deliver communication to the public via monthly newsletter	12	1	8%
9	Objective	Architect GIS infrastructure in the Cloud			0%
10	Key result	POC of three Cloud providers	3	0	0%
11	Key result	GIS infrastructure supports GIS vision	1	0	0%

Initiative 3: Workforce & literacy

0%



22	Objective	Align workforce development plans with PDS-wide strategy			0%
23	Key result	Training Plan for GIS professional staff	6	0	0%
24	Key result	Training Plan for GIS users	4	0	0%

Initiative 2: Collaboration

0%

13	Objective	No single point of failure			0%
14	Key result	SOPs available to support continuity of operations	6	0	0%
15	Key result	Each team member has backup that is familiar with SOP	6	0	0%
16	Objective	Cross-unit cooperation to create, collect, maintain and share high-quality geospatial data			0%
17	Key result	Understanding connections between internal teams	6	0	0%
18	Key result	Understanding connections between external agenices	2	0	0%
19	Key result	MSD Geospatial Information Office Portal for information sharing	1	0	0%
20	Key result	Foster GIS collboration between MSD and other Local Governments	3	0	0%

Initiative 4: Data Management

0%

26	Objective	Develop an effective QA/QC process			0%
27	Key result	Comprehensive data model review & standardization	10	0	0%
28	Key result	Define & document editing workflows for major datasets	4	0	0%

Initiative 5: Optimization

0%

30	Objective	Continue to move GIS towards an optimized state			0%
31	Key result	GIS team meeting to score 2021 Slimgim	1	0	0%
32	Key result	GIS team meeting to review 2021 score and plan 2021 ...	1	0	0%

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