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Leveraging the ArcGIS platform for mining

A Common Geo-information Framework

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ArcGIS for Mining

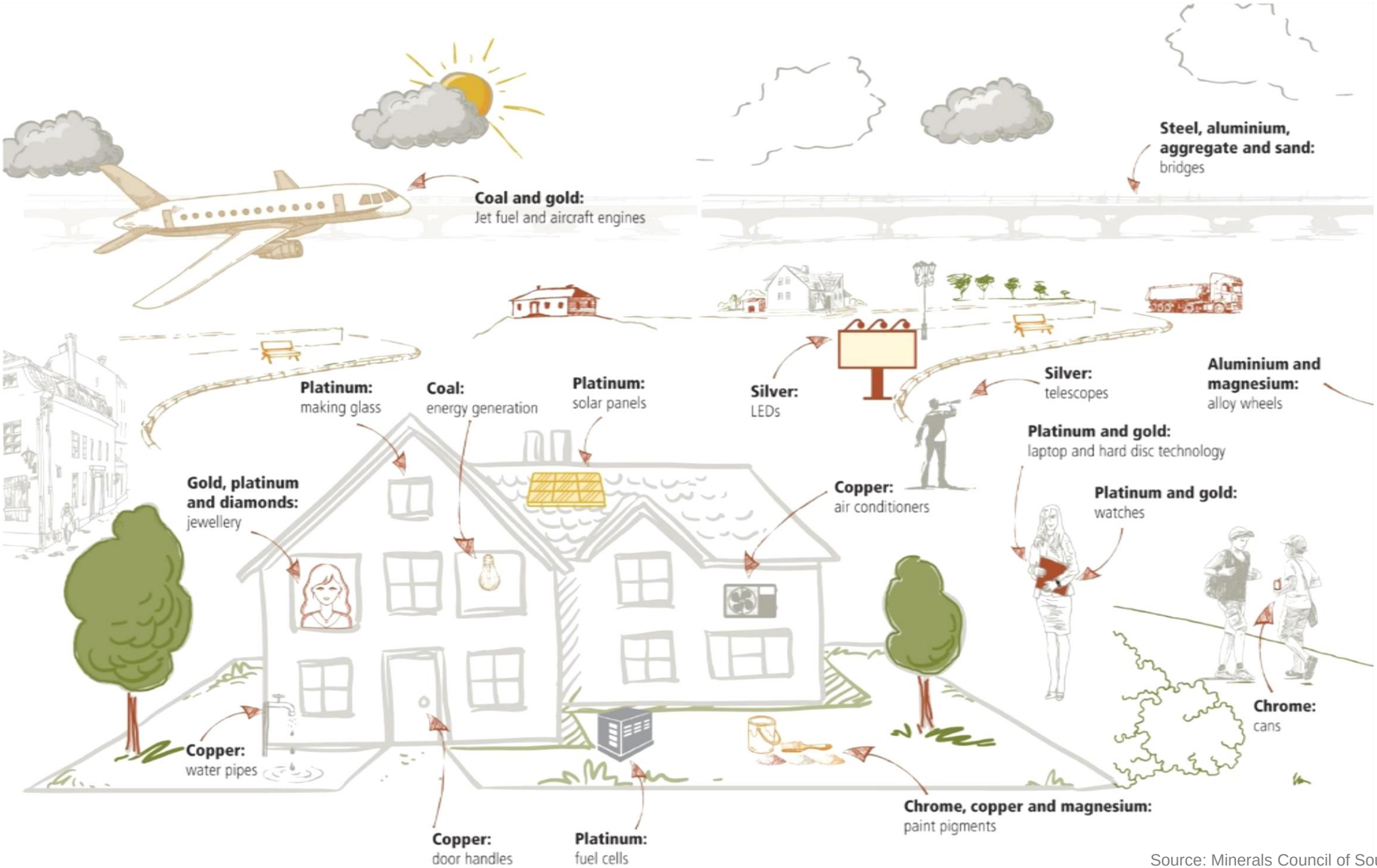
Intelligent Spatial Mine

Our Human Footprint

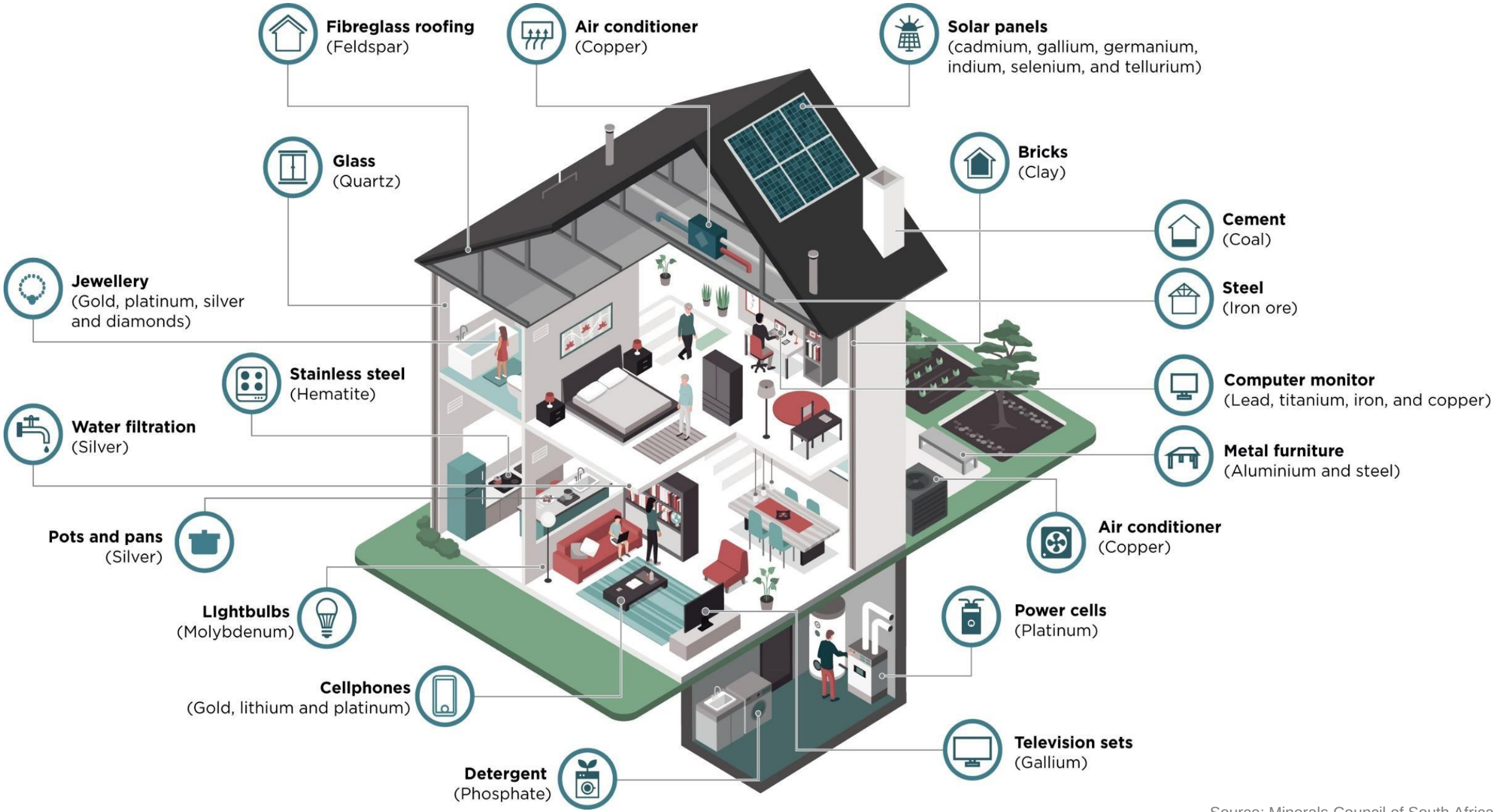
Is Creating Many Challenges . . .

. . . Creating an Unsustainable Future

Our Human Footprint
Is Creating Many Challenges . . .
Natural Disasters
Social Conflict
Water
Overpopulation
Climate Crisis
4IR
Loss of Nature
Loss of Biodiversity
Congested Cities
Energy
Pollution
Unconstrained Development
. . . Creating an Unsustainable Future



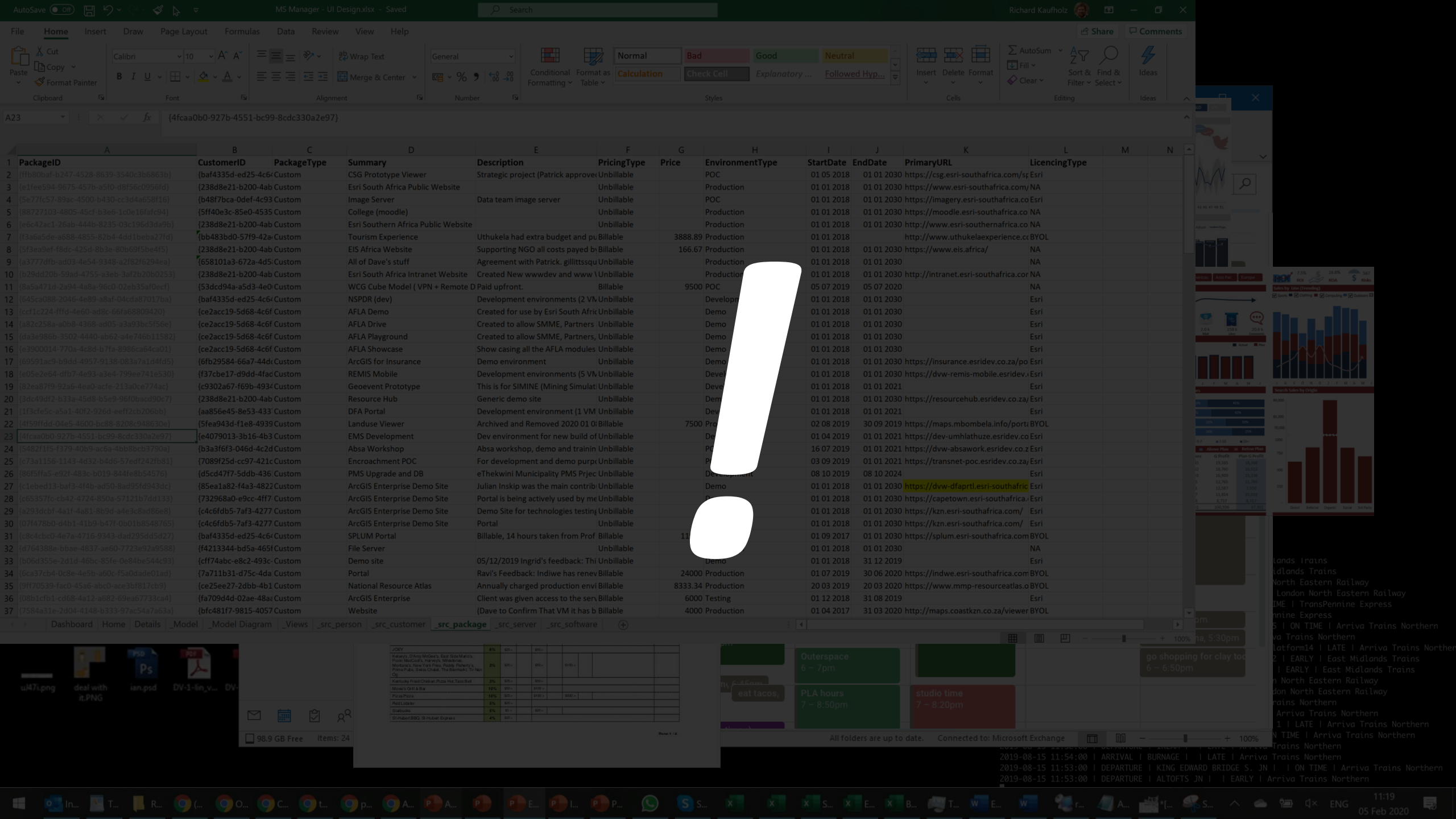
Source: Minerals Council of South Africa



Source: Minerals Council of South Africa

“But Mining is already under pressure!”

- Reduce cost
- Eliminate safety incidents
- Reduce legal liability
- Increase profit margin
- Manage labour expectations
- Cater for fluctuating demand
- Improve efficiency
- Deliver to shareholders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Richard Kaufholz
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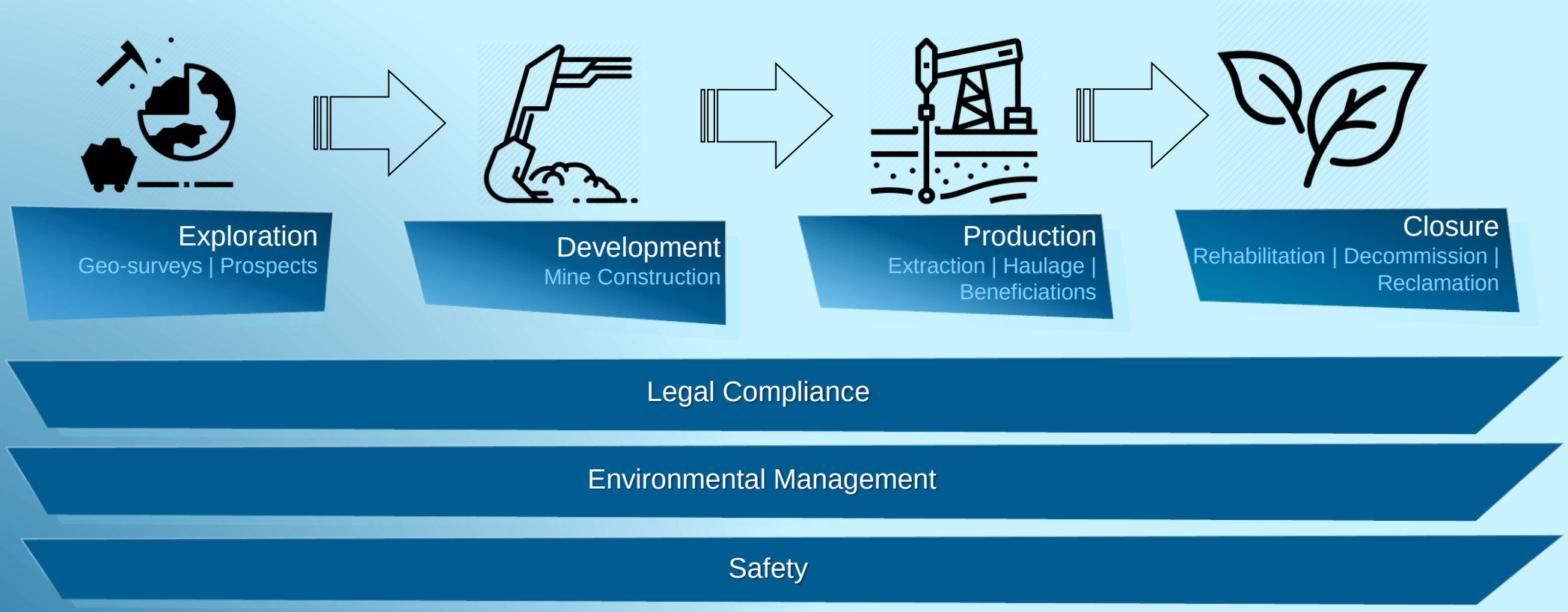
The Mining Industry is Complex!

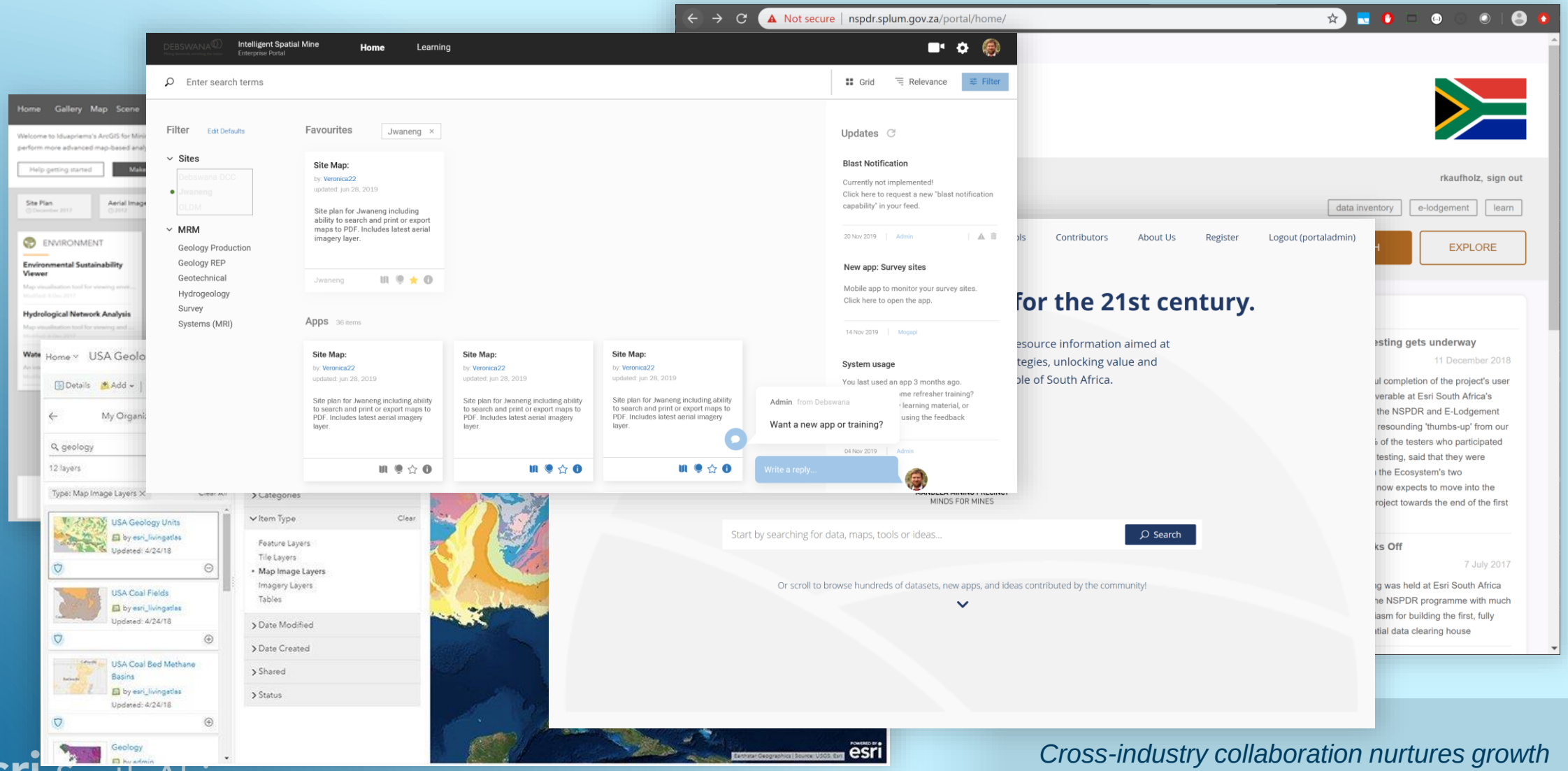


We need to work **smarter!**

- Integrates all spatial data into a single source of the truth
- Curated
- Decentralised
- Accessible
- Standardised
- Open and interoperable

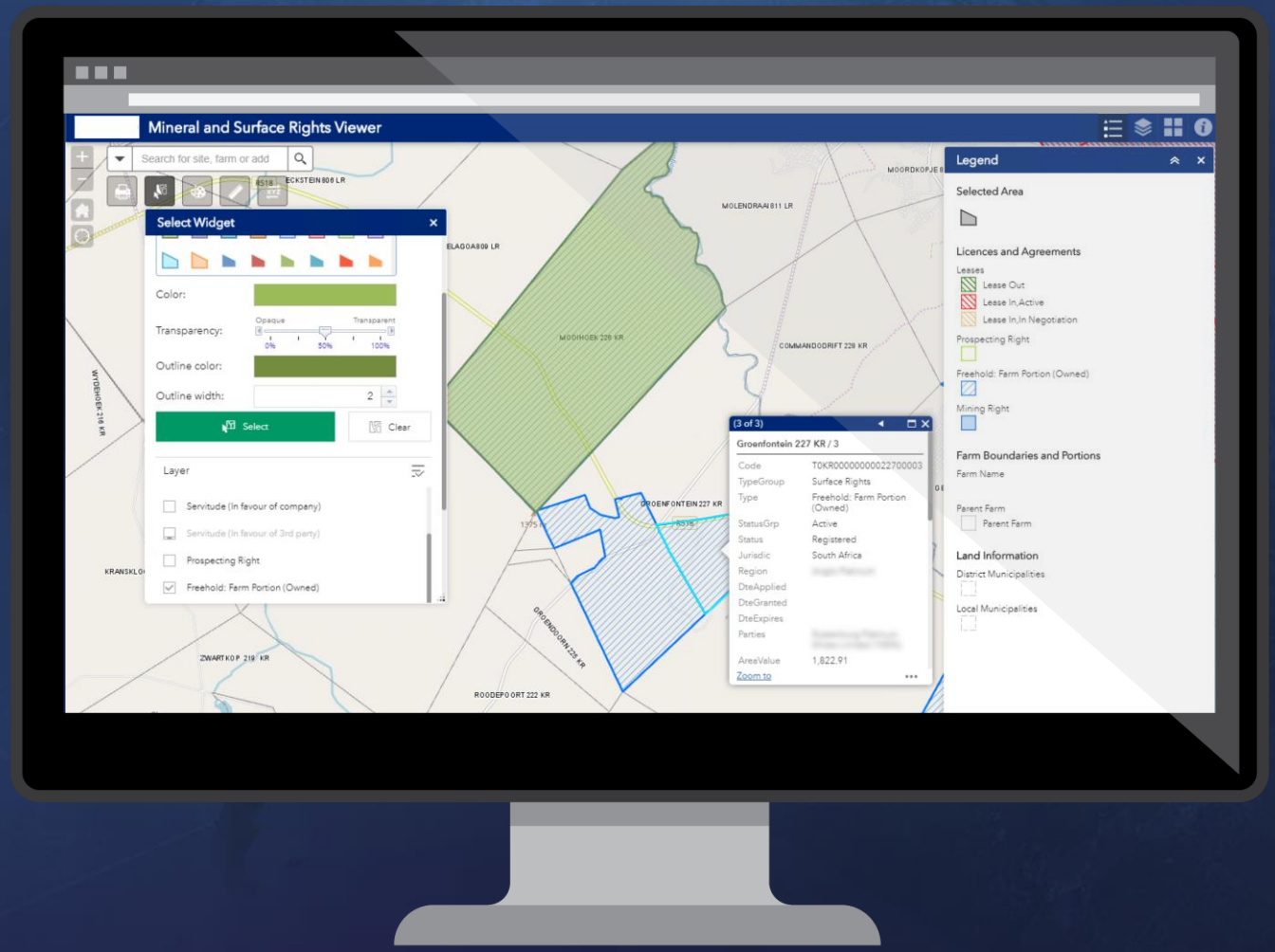
COMMON GEO-INFORMATION FRAMEWORK

What can we learn from others?



Cross-industry collaboration nurtures growth

More than just data create a new web visualization tool (viewer)



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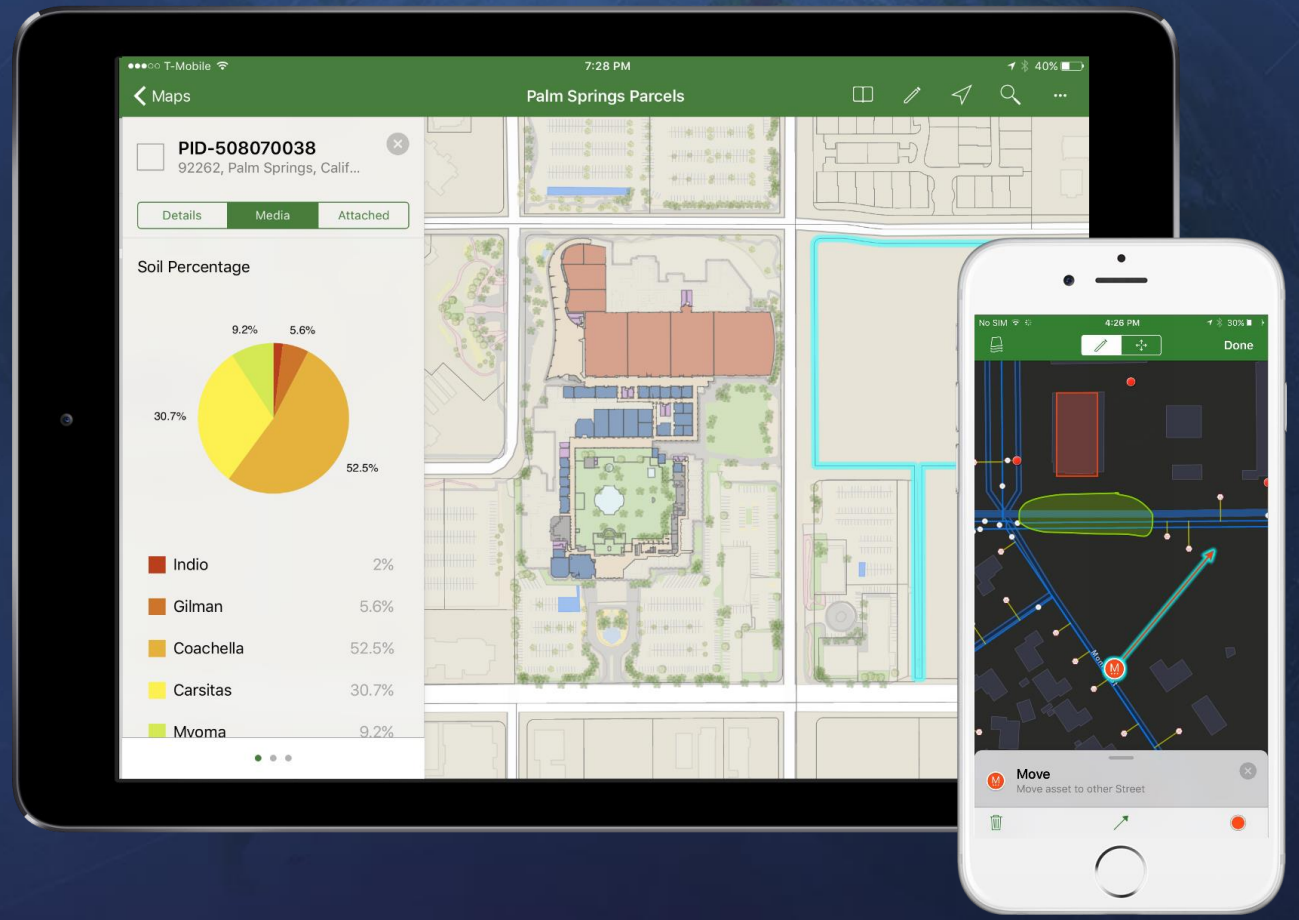
More than just data access it anywhere, anytime



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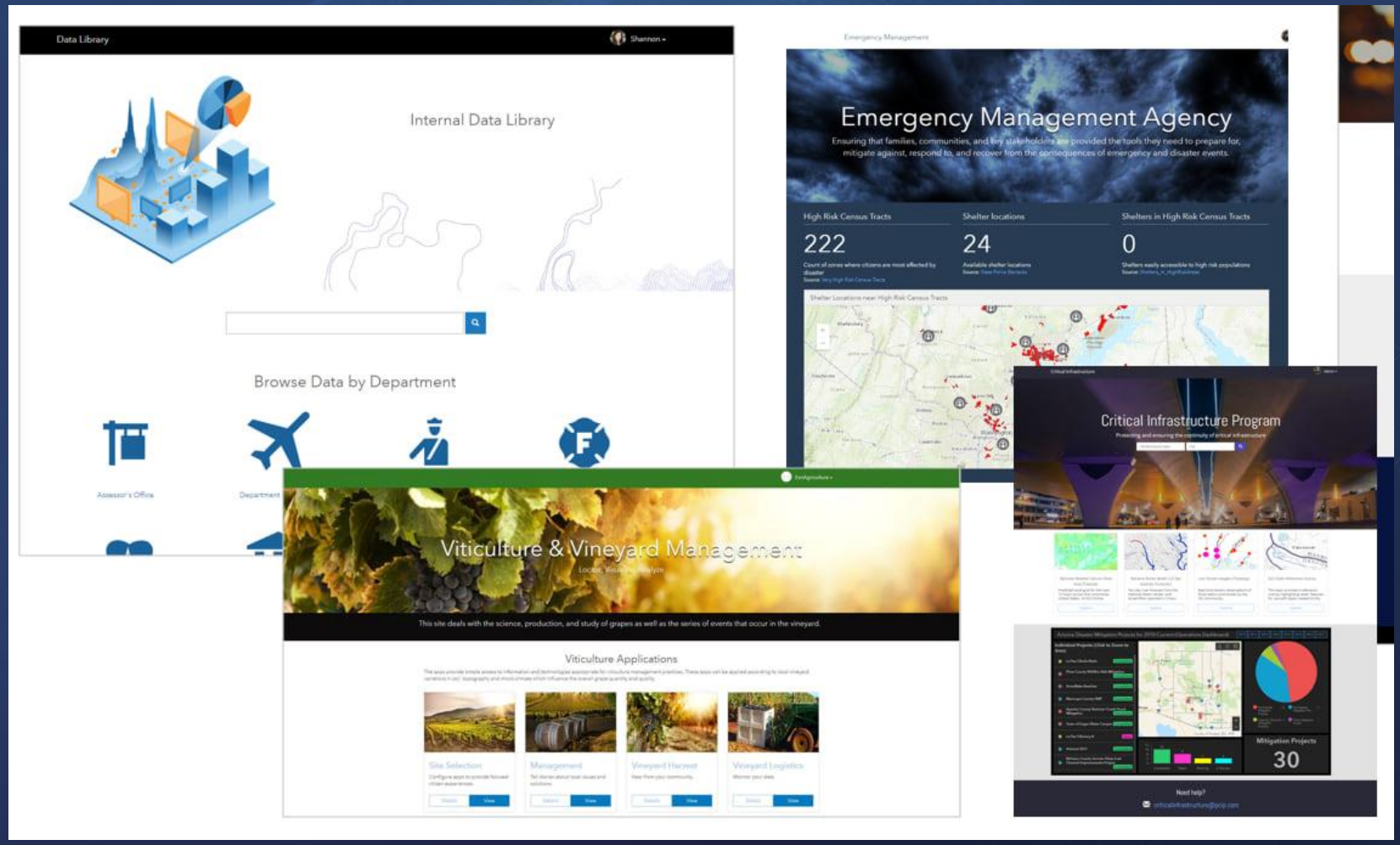
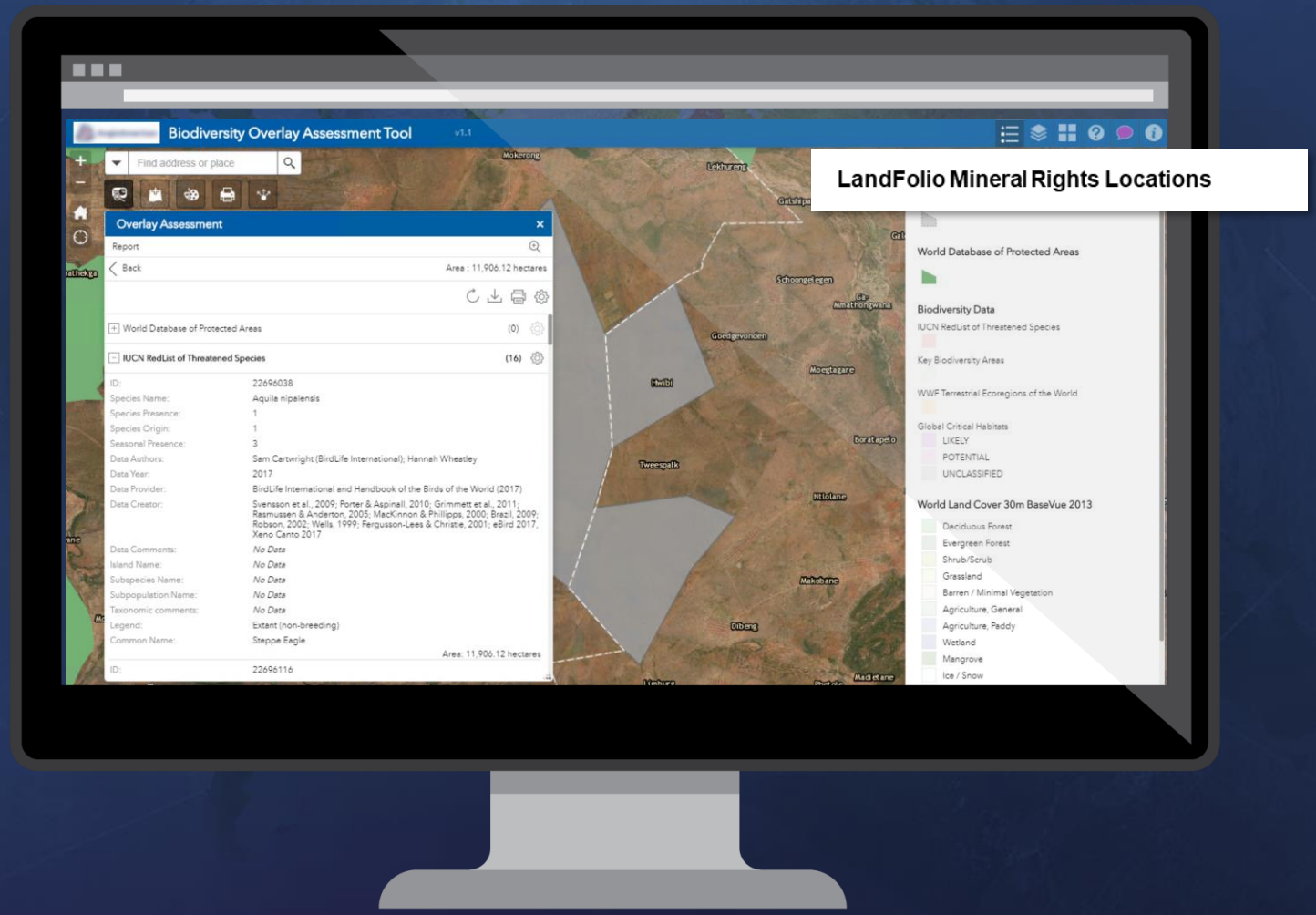
More than just data tailor the user experience to your audience(s)



More than just data support other business applications with authoritative rights data



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More than just data gain new insights by overlaying it with other data for analysis

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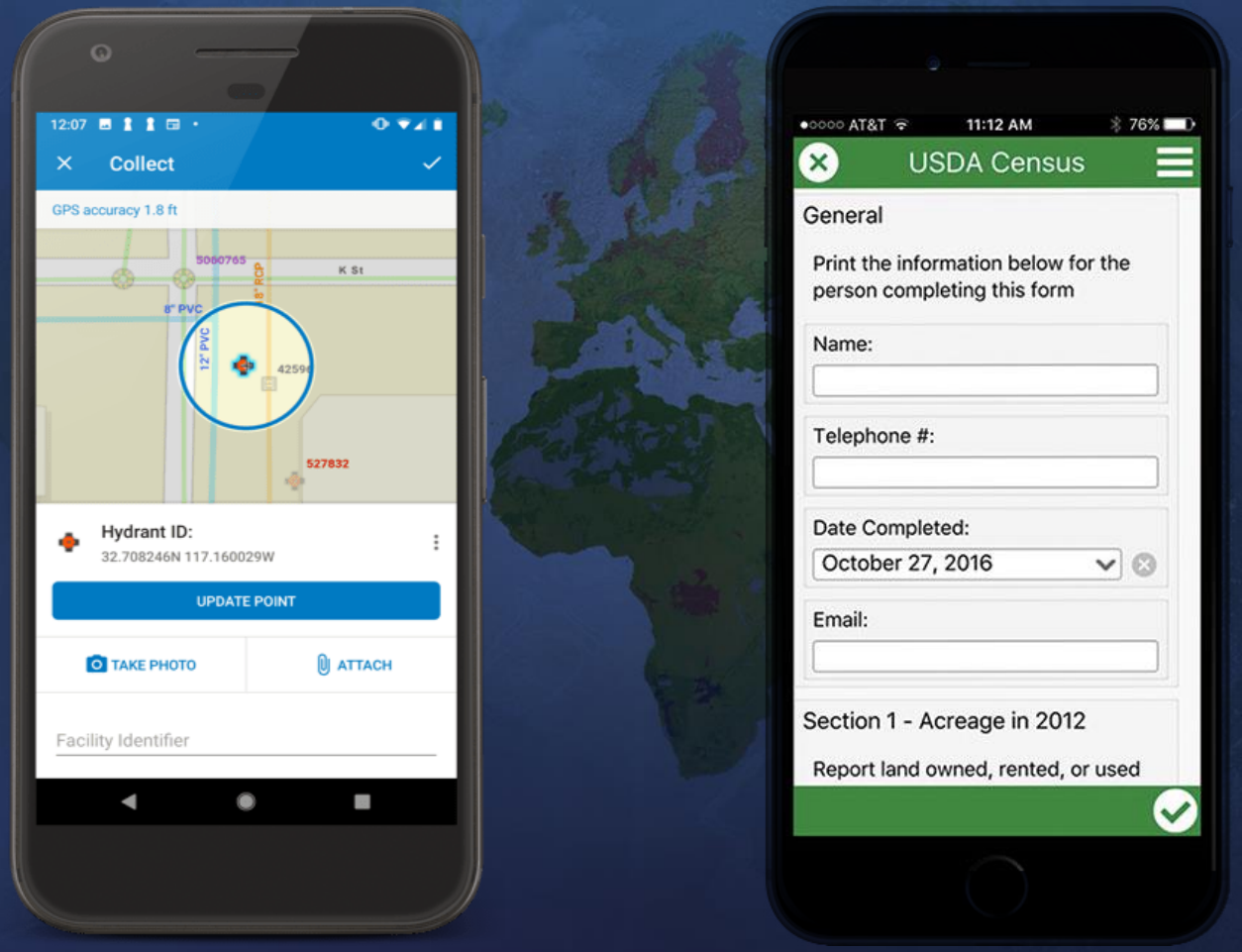
More than just data augment your understanding with data captured in the field



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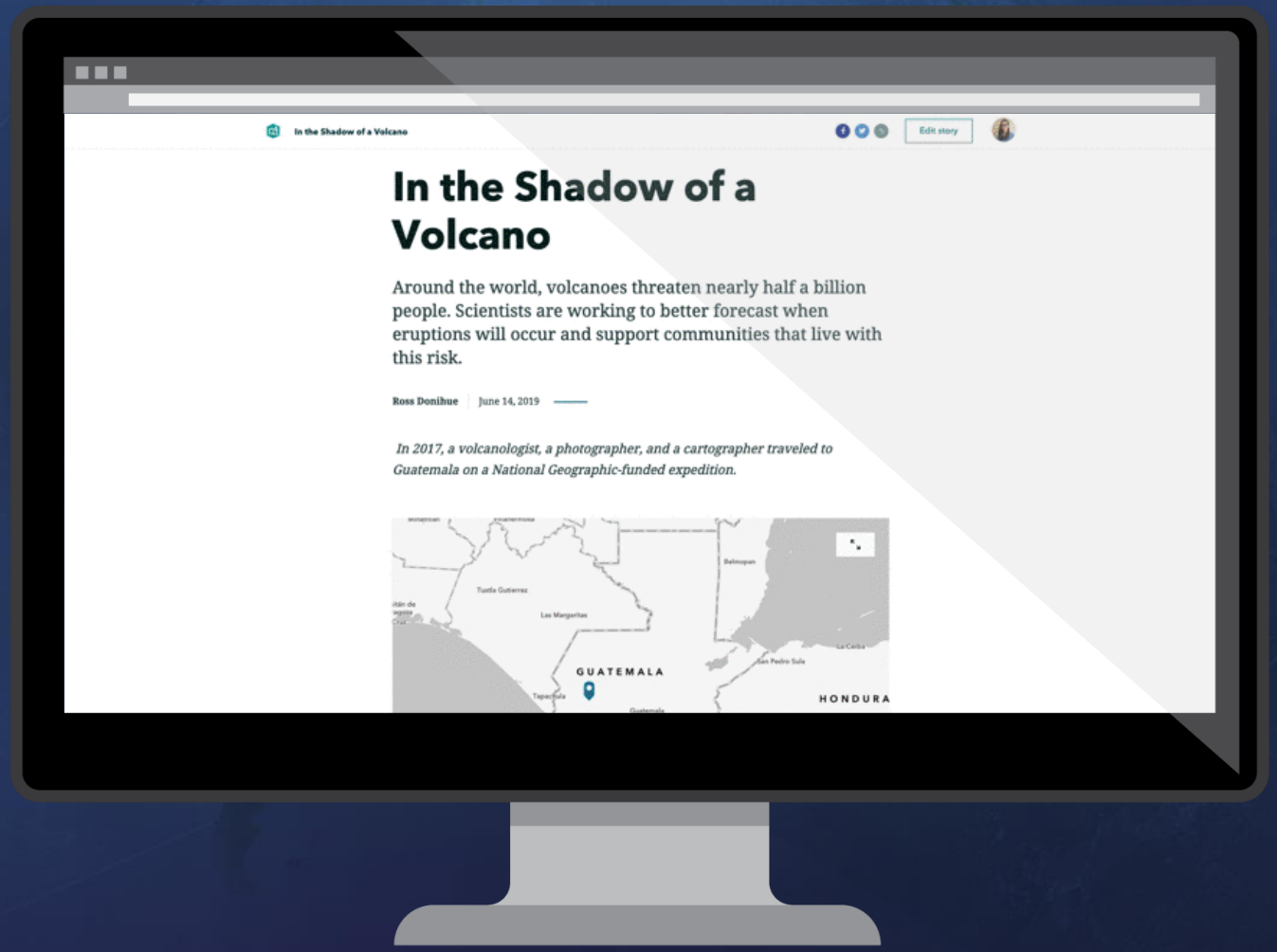
More than just data collaborate with internal and external stakeholders



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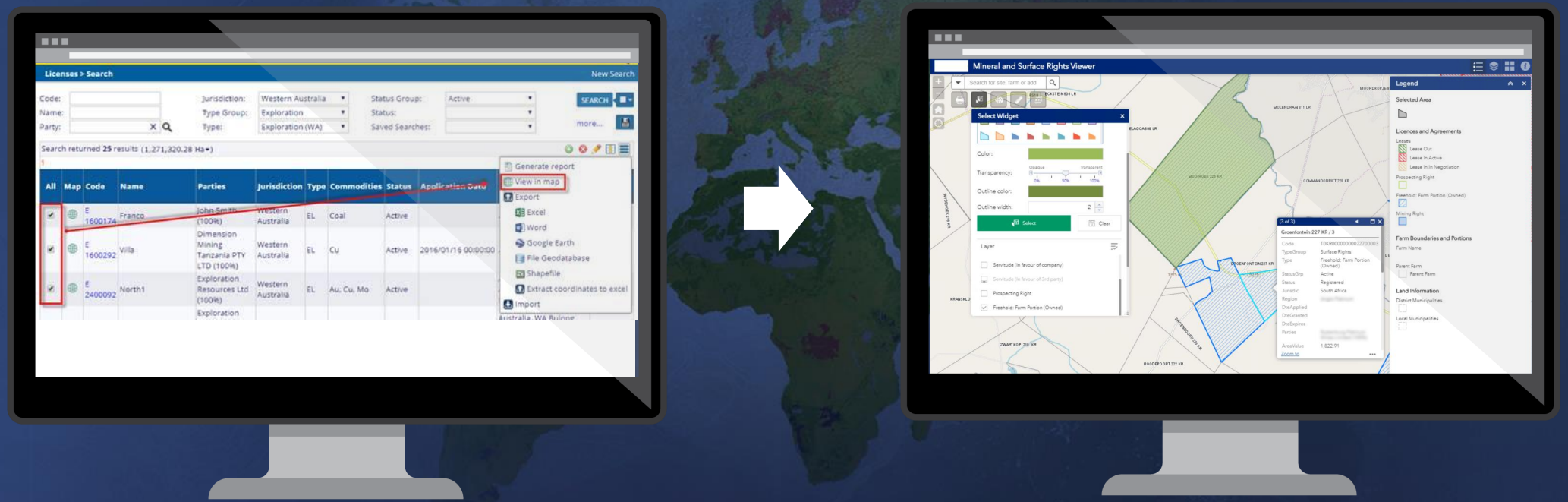
More than just data ensure trust by utilizing the authoritative source of rights data



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ArcGIS for Mining as a Common GI Framework: *what is the value?*

OPERATIONAL EFFICIENCY

Complete tasks in less time
Streamline processes
Automation

DATA INTEGRITY

Data-driven capture
Standardised data model
Reliable + consistent reporting

BETTER DECISIONS

Data-in-context
Real-time data
Actionable information

REDUCE COSTS

Reduced risk of failure
Reduce expenses through optimisation
Avoid legal action

INTEGRATED ANALYTICS

New insights for benefit
Uncover patterns
Inter-discipline relationships

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Real, tangible benefits to your business…

Who is already working smarter?

AngloAmerican

mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

RioTinto

GLENCORE

MANDELA MINING PRECINCT
MINDS FOR MINES

Council for Geoscience

DEBSWANA
Mining diamonds, enriching the nation

LETŠENG DIAMONDS

we are one
Sibanye Stillwater

ANGLOGOLD ASHANTI

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