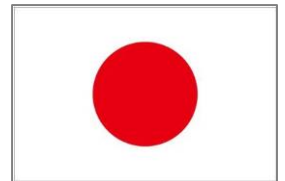




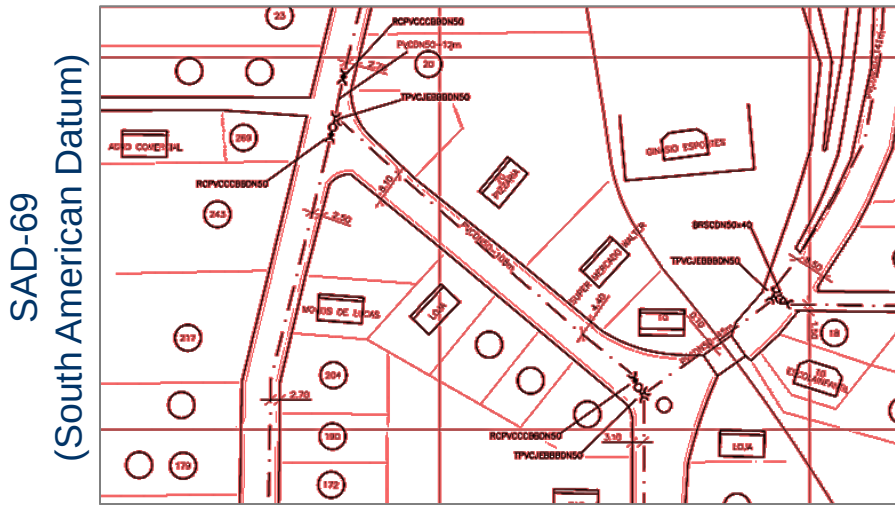
Implementation of a Pipeline Information Management System (Mapping System)

Paulo Elias de Souza

Brazil



Current Water Supply Situation



Network Mapping (Technical division)

Pipes and connections

- Databases use different geodetic reference systems (datum)
- Don't use current official Brazilian geodetic reference system (SIRGAS)
Geocentric reference system for the Americas

- Operations Division use a 3rd database for Network Maintenance

Meters

Commercial Mapping (Commercial division)



WGS84
(World Geodetic System)

Current Water Supply Situation



There is ~~no~~ Procedure for network mapping



OM divisions

- ~~Don't~~ Update mapping
- ~~Don't~~ Send updated drawings to Mapping division

Construction division

- ~~Doesn't~~ Require mapping of the networks deployed by the contracted companies



Contracted companies

- ~~Don't~~ Send updated mapping after network deployment

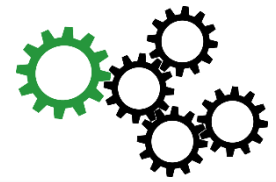


Network mapping is ~~not~~ updated

-
- The flowchart is a hand-drawn diagram titled "Reading water management book (for Mikulap's constructions)". It is divided into two main horizontal sections. The top section is labeled "Water management" and contains several interconnected boxes. At the top left, a box labeled "Water management" is connected to a box labeled "Water management" which in turn connects to a box labeled "Water management". Below this, a box labeled "Water management" is connected to a box labeled "Water management". In the center, a box labeled "Water management" is connected to a box labeled "Water management". To the right, a box labeled "Water management" is connected to a box labeled "Water management". The bottom section is labeled "Reading water management book (for Mikulap's constructions)" and contains a box labeled "Reading water management book (for Mikulap's constructions)" which is connected to a box labeled "Reading water management book (for Mikulap's constructions)". To the right of this box is a box labeled "Reading water management book (for Mikulap's constructions)". Below this box is a box labeled "Reading water management book (for Mikulap's constructions)". To the right of this box is a box labeled "Reading water management book (for Mikulap's constructions)".



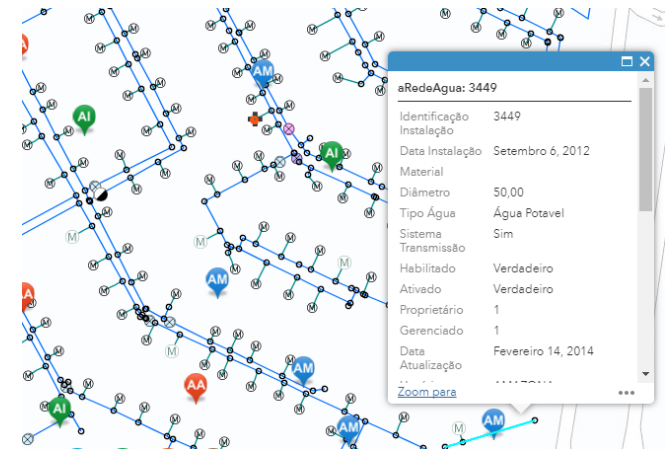
Actions



- Database
 - Mapping update
 - Pipe locator
 - Connections details
- Software
 - Acquisition
 - Conversion of drawings to new system
 - Databases integration
 - Definition of data access
 - Training

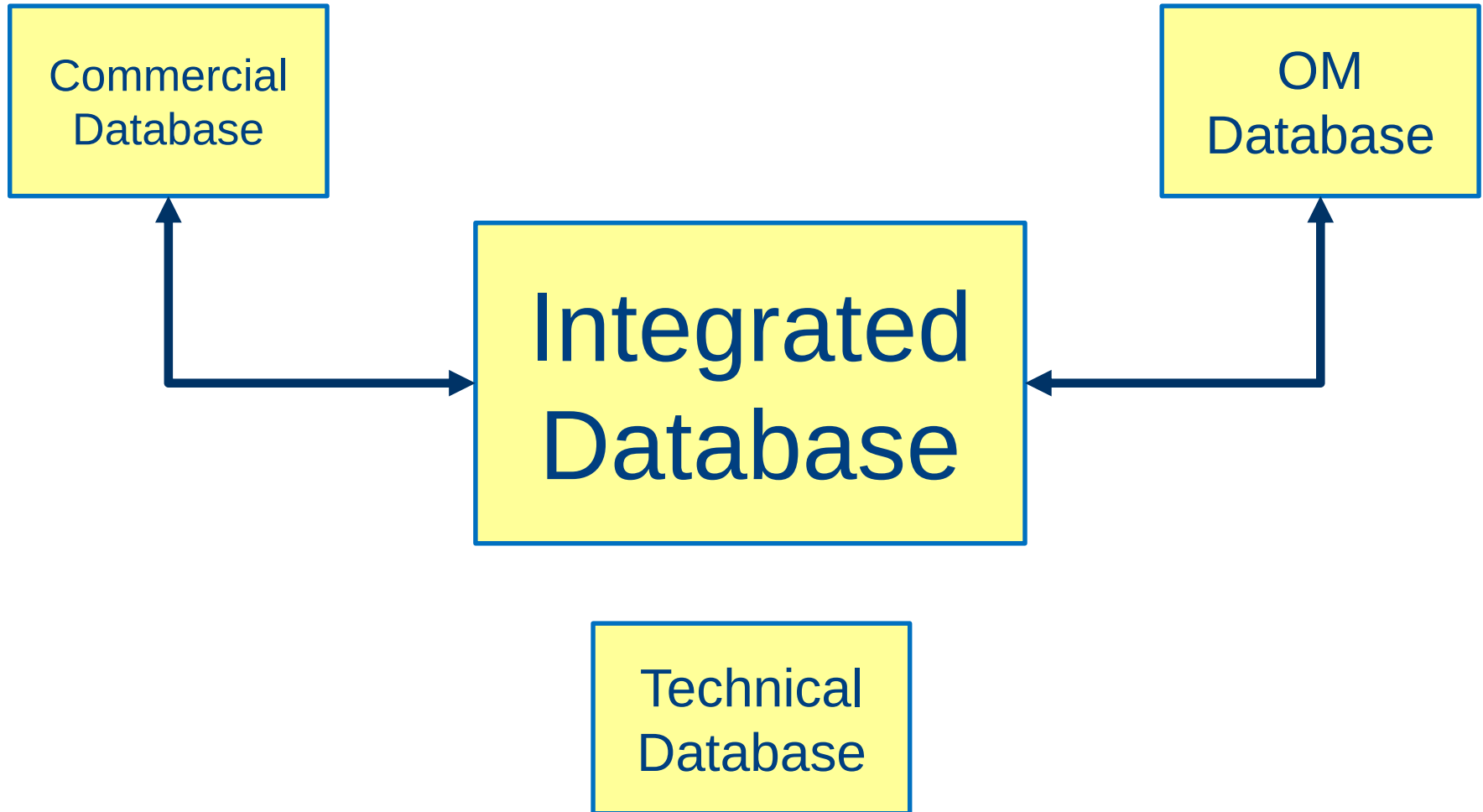
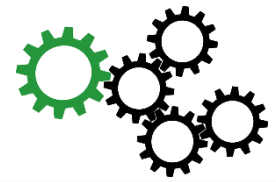


Source: Fuji Tecom Inc.



Source: Imagem-Esri

Actions



Time Table / Budget



Action	2017		2018				2019				Budget
	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4	US\$
Procedure											
Write / Consensus											
Implantion											
Training											
Database											
Mapping update											
Pipe locator			10				10				20.000
Software											450.000
Conversion											
Integration											
Training											
Whole Project											470.000

Thank you



ありがとうございました

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