I COME FROM THE LAND OF THE GAANGALU NATION AND LANDS OF
THE IMAN PEOPLE, WULLI WULLI PEOPLE, WADJA PEOPLE, WAKKA
WAKKA PEOPLE AND DARUMBAL PEOPLE.

I ACKNOWLEDGE THAT WE ARE MEETING ON THE TRADITIONAL
COUNTRY OF THE KAURNA PEOPLE OF THE ADELAIDE PLAINS
AND PAY RESPECTS TO ELDERS PAST AND PRESENT.
I RECOGNISE AND RESPECT THEIR CULTURAL HERITAGE, BELIEFS AND
RELATIONSHIP WITH THE LAND.
I ACKNOWLEDGE THAT THESE ARE OF CONTINUING IMPORTANCE TO
THE KAURNA PEOPLE LIVING TODAY.
I ALSO EXTEND THAT RESPECT TO OTHER ABORIGINAL LANGUAGE
GROUPS AND OTHER FIRST NATIONS WHO ARE PRESENT TODAY.
SPATIAL NIRVANA: FROM CELLULOSE TO ELECTRONS

A brief explanation of the journey undertaken by the Banana Shire Council (BSC) GIS unit in support of the Local Disaster Coordination Centre (LDCC) transitioning from paper spatial products to a digital spatial tool for undertaking spatial queries supporting LDCC activities during emergency events and immediately displaying the results to the LDCC.
LOCATED IN CENTRAL QUEENSLAND – 120 KM WEST OF GLADSTONE.
LAND AREA OF 28577 SQ. KM. WITH 27 SQ. KM. OF URBAN AREA COMPRISING OF 12 TOWNS/VILLAGES.
HOME TO APPROX. 15700 INHABITANTS.
THE PRINCIPAL SHIRE TOWN IS BILOELA – HOME TO APPROX. 5300 RESIDENTS, AND HOME TO THE ONLY TWO SETS OF TRAFFIC LIGHTS IN THE SHIRE, 100M APART.
BANANAS ARE NOT GROWN IN THE SHIRE.
THE SHIRE IS NAMED AFTER A DUN COLOURED STEER.
Scope: To replace the existing LDCC paper spatial products with a digital spatial capability

1. IDENTIFIED THE NEED TO RETIRE THE OUT OF DATE PAPER PRODUCTS USED BY THE LDCC TO;
   A. IDENTIFY RISKS, PLAN FOR AND MANAGE RESPONSES TO DISASTER EVENTS.
   B. TO ASSIST IN UNDERTAKING EVENT MITIGATING ACTIONS AND
   C. POST EVENT RECOVERY ACTIVITIES.

   THESE MAPS WERE STORED ROLLED UP IN A METAL TRUNK.

2. CREATE A DIGITAL TOOL FOR USE BY THE LDCC TO APPLY SPATIAL QUERIES TO IDENTIFY AND UNDERSTAND EVENT RISKS AND ISSUES.
Objective: Develop and install a spatial tool for LDCC spatial analytical activities

A. PURCHASE A GIS WORKSTATION FOR LDCC USE (SPECIFIC PROCESSOR, RAM AND GRAPHICS CARD REQUIREMENTS) – THE STANDARD CORPORATE LAPTOP WITH ONLY 4GB OF RAM WAS NOT CAPABLE OF PERFORMING THE SPATIAL TASKS REQUIRED.
IN ADDITION

A LARGE SCREEN TV WAS PURCHASED AND MOUNTED ON THE LDCC WALL TO ENABLE ALL MEMBERS OF THE LDCC (AROUND 15) TO VIEW THE SPATIAL DATA AND ANY SPATIAL QUERY RESULTS.
B. CREATE A SINGLE LDCC MAPINFO WORKSPACE WITH ALL THE REQUIRED SPATIAL DATA NEEDED FOR ANY LDCC SPECIFIC SPATIAL QUERIES.

CONCURRENTLY WITH C.
C. CREATE THE DATA SETS TO BE USED BY THE TOOL – CURRENTLY 37 LDCC SPECIFIC DATA SETS HAVE BEEN CREATED, BUT NOT COUNTING THE ORIGINAL CORPORATE DATA SETS USED AS BASE LAYERS.

THE ORIGINAL PAPER PRODUCT DATA CONSISTED OF BASIC INFORMATION; A RANGE OF BSC DATA – ROADS, SEWER AND WATER RETICULATION INFRASTRUCTURE AND SOME GEOSCIENCE AUSTRALIA AND STATE DATA – 10M CONTOURS SHIRE COVERAGE AND LANDING FIELDS.
THE BSC CORPORATE DESKTOP SPATIAL SOLUTION IS PITNEY BOWES MAPINFO PROFESSIONAL.

THE LDCC MAPINFO INSTALLATION IS A VERSION 12 EXAMPLE RUNNING ON A 64-BIT WINDOWS OS WITH AN I7 PROCESSOR AND 32GB OF RAM.

A MAPINFO WORKSPACE WAS CREATED THAT CONTAINS ALL THE LDCC SPECIFIC SPATIAL DATA
LDCC WORKSPACE CONTAINING ALL THE BSC DATA SETS CREATED AND DATA SOURCED FROM EXTERNAL SOURCES EG. QLD GOVT QSPATIAL PITNEY BOWES

A RANGE OF BASE DATA – SHIRE BOUNDARY, TOWNS WITH LDCC SPECIFIC DATA GROUPED UNDER LOGICAL HEADINGS: FIRST RESPONDERS, COUNCIL FACILITIES, MEDICAL FACILITIES EDUCATIONAL FACILITIES, INDUSTRIAL AND MINES, TRANSPORT BUILDINGS, TERRAIN, RISKS HYDROGRAPHIC, LOGISTICS EMERGENCY SUPPORT CAMPING AND TOURIST SITES
ALL DATA ARE EITHER POINTS, LINES OR POLYGONS.

POINT FEATURES, INDICATING THE LOCATIONS OF, INCLUDE:
FIRST RESPONDERS: POLICE STATIONS AMBULANCE STATIONS FIRE STATIONS AND SES.

COUNCIL FACILITIES: EVACUATION CENTRES DEPOTS COMMUNICATIONS INFRASTRUCTURE
MEDICAL FACILITIES:
HOSPITALS

EDUCATION FACILITIES:
PRIMARY SCHOOLS
SECONDARY SCHOOLS
CQ UNIVERSITY STUDY CENTRE/TAFE

INDUSTRIAL AND MINES:
CALLIDE POWER STATION
QLD NITRATE FACILITY
COTTON GIN
SEVERAL LARGE OPEN CUT COAL MINES
- COAL FOR EXPORT AND
POWER STATION SUPPLY
CRACOW GOLD MINE
TRANSPORT:
ROADS
RAILWAY NETWORK
AIRPORTS
HELICOPTER LANDING SITES
- WITH HOTLINK TO HLS DESCRIPTIONS
BUILDINGS:
GEOVISION
BUILDING POLYGONS
URBAN AND RURAL
TWO DIFFERENT ELEVATION ATTRIBUTE SETS

TERRAIN:
CONTOURS
VARIOUS DATA SETS
10M WHOLE SHIRE COVERAGE
INDIVIDUAL TOWNS AT 1M
RISKS:
MINIMAL FIRE, EARTHQUAKE OR LANDSLIP RISK.
MAJOR IMPACTS FROM FLOOD EVENTS EITHER FROM RIVERINE - DAWSON, DEE AND DON RIVERS, CALLIDE CREEK AND TRIBUTARIES OR CALLIDE DAM OVERFLOW IMPACTING DOWNSTREAM COMMUNITIES

MAJOR FLOOD STUDY COMPLETED WITH RESULTANT DEFINED EVENT MODEL POLYGONS THESE MODEL EXTENTS USED TO CREATE EMERGENCY ALERT POLYGONS (EAP) FOR RESIDENT WARNINGS BY TEXT MESSAGE NOTIFICATION FROM STATE
THEODORE: DEFINED FLOOD EVENT POLYGON
BUILDING POLYGONS
POINT FEATURES
Image below:
December 2010 - For the first time in Queensland history, an entire town was evacuated when Theodore flooded.
Photo Daryl Wright
NOW USING THE PITNEY BOWES GEOVISION PRODUCT, SPATIAL QUERIES ON HOW MANY BUILDINGS MIGHT BE IMPACTED, AND THEREFORE PEOPLE, BY A DEFINED EVENT, CAN NOW PROVIDE AN ACCURATE ANSWER.
WaterRIDE IS COUNCIL’S TOOL FOR FLOOD MODELING AND COUNCIL HAS BEEN INSTALLING ITS OWN RAIN AND RIVER HEIGHT GAUGES TO GATHER DATA, AS WELL AS USING DATA FROM EXISTING BOM GAUGES, TO PROVIDE ACCURATE REAL TIME DATA FOR THE FLOOD MODELLING TOOL SO AS TO PROVIDE RESIDENTS WITH MORE TIMELY WARNINGS ON ANTICIPATED FLOOD HEIGHTS.
SPATIAL VISION FOR THE FUTURE

CREATE MORE DATA SETS
EG. POINT FEATURES INDICATING ALL THE KNOWN ROAD FLOODING SITES

3D CAPABILITY

CONVERTING ALL DATA TO SPATIAL OBJECTS IN A SQL SERVER
WaterRIDE:

waterRIDE is an offering from Digital Enterprise, the digital arm of the independent global advisory firm Advisian.

Advisian is part of the WorleyParsons Group.

waterRIDE is the ultimate Floodplain Management software allowing anyone to manage flood risks easily and visually.

waterRIDE enables you to utilise flooding information to determine the specific impact on you, your community, or your business.

The word waterRIDE is an acronym for water resources integrated development environment, representing the original concept.

waterRIDE has evolved to encompass a number of other fields where visualisation and analysis of time-varying spatial data is relevant. Whilst access to numerical modelling results remains a key focus, the tools are increasingly being used for presentation of GIS data and parametric models, and for field data capture.

Images courtesy of waterRIDE network

http://waterride.net/
COUNCIL’S LDCC USES THE GUARDIAN SYSTEM FOR DISASTER MANAGEMENT AND INCIDENT MANAGEMENT.

THE GIS SPATIAL TOOL ASSISTS THE LDCC TO MANAGE ITS RESPONSE.

Guardian:

The Guardian software suite is a QIT Plus company disaster management software and incident management solution.

Guardian Control – Local incident coordination

and

Guardian Disaster Dashboards – Public incident information portal

Images courtesy of QITPlus

https://www.qitplus.com/#workProcess
Banana Shire Council
Council Chambers

LDCC CONFIGURATION

Diagram of Local Disaster Coordination Centre
Activation configuration

Banana Shire Council
Council Chambers
Configured for Local Disaster Coordination Centre
TC Iris Alert activation
BANANA SHIRE INFORMATION

Banana Shire Council

Disaster Management Dashboard

http://emd.banana.qitplus.com/

Images courtesy of Banana Shire Council

Banana Shire Council

Tourism web site

“Sandstone Wonders”

https://sandstonewonders.com/