

The background features a large, light gray curved shape on the left side, and a stylized globe icon with a grid pattern on the far left. The main text is centered in a dark blue serif font.

Idiom to calculate Development Contributions

The Domain

- **Development Contributions**

- Local Body Councils must fund future infrastructure improvements. Development Contributions are a funding stream to fund future growth related to development.

- **Judicial Review**

- North Shore City Council was subject to a Judicial Review over the method it used to calculate development contributions.
- The JR held the amount charged must be fair, it must be related to future growth and it must be justifiable.

The Business Problem

- North Shore City Council needed to be able to easily configure a development and accurately calculate the develop contribution it attracted.
- The rules for the calculation were policy dependent and potentially changed for each policy.
- The calculation needed to be implemented and in production the day after the policy was ratified by Council.
- Amendments to Assessment Application needed to be auditable.
- Existing business rules were encapsulated in a large unwieldy spreadsheet.

How we solved it

- The policy related aspects of the calculation were extracted into an external business rule engine.
- Externalising the business rules allowed:
 - The rules to be maintained and verified independently of the application.
 - Policy changes could be applied to the rules without requiring application changes.
 - Business rule changes are not implemented by programmers.
- Application created to allow simple, intuitive configuration of any development.

Idiom Benefits



- **Business Rules Independence**
 - Business Rules are stored in a central location.
 - Easily testable and verifiable against requirements.
 - Business Rules can be tested independently of the application code.
 - Business rules are maintained by business people.
 - Quick to change.

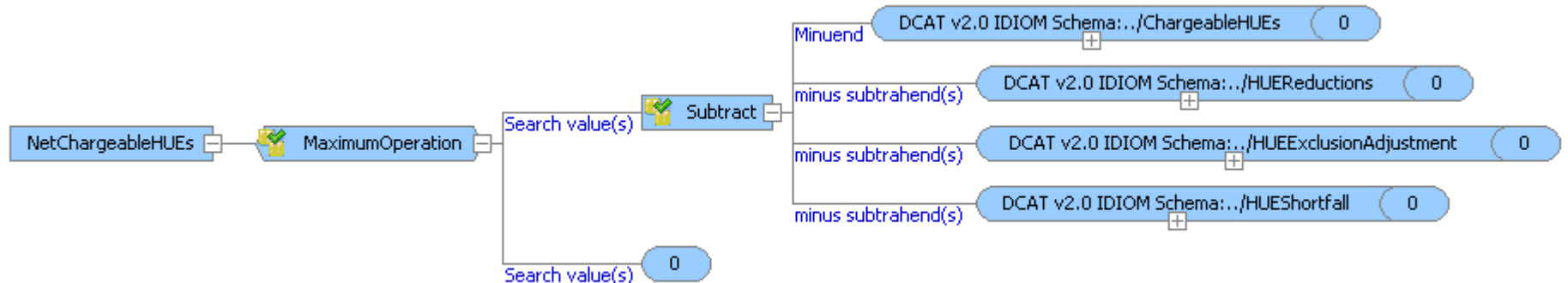
Example of features

- An application can be assessed under a specific policy. The application is configured and the business rules engine calculates the development contributions.
- An application can be amended – a ‘snap-shot’ is taken of the original application (auditability) and the application is reconfigured and the contribution re-calculated.
- An application can be processed and charged for in stages.
- All changes to an application are recorded and reviewable.
- Complete traceability of charges for the various Activity Types (Transport, Storm water, Waste-water, Water Supply etc).

Example

Calculating Net Chargeable HUE (Household Unit Equivalent)

- *Take 'ChargeableHUEs' as an input and deduct any reductions, exclusion adjustments or shortfalls.*
- *Finally, ensure that the chargeable amount is either a positive value or zero (to eliminate "negative charges").*



Screenshot – List of Applications



DCAT II

Logout System Admin About

+ New DC Assessment + New DC Estimate Refresh Save Filter Load Filter Show Filter Street No: Street Name: Property Id: Orig Assmnt Id: Search

Application Assessments

| Assessment # | Application # | Applicant | Created By | Created D... | Assessed By | Assessment Date | Assessment Type | Application Gr... | Processin... | Review Sta... | | | | | | | | | | | | | | | | | | | | | |
|--|----------------------|----------------|----------------------|---------------------|---------------|---------------------|-----------------|---------------------|-----------------|-------------------|----------|------------|--------|----------|----------------|--------|---------------------|-----------|----------------------|-------------|----------------------|---------------------|------|-------------|--|--|--|--|--|--|-------------|
| 20000-0v0 | SA-3009821 | Applicant20000 | Gallagher Bob | 23/06/2008 | Gallagher Bob | 23/06/2008 | DC Assessment | Subdivision Consent | Amended | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20000-0v1 | SA-3009821 | Applicant20000 | Gallagher Bob | 23/06/2008 | Gallagher Bob | 23/06/2008 | DC Assessment | Subdivision Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20009-0v0 | BB-1092131 | Applicant20009 | Gallagher Bob | 23/06/2008 | Gallagher Bob | 25/06/2008 | DC Assessment | Building Consent | Complete Pos... | Request Declined | | | | | | | | | | | | | | | | | | | | | |
| 20011-0v0 | SA-3008961 | Applicant20011 | Gallagher Bob | 24/06/2008 | Gallagher Bob | 24/06/2008 | DC Assessment | Subdivision Consent | Amended | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20011-0v1 | SA-3008961 | Applicant20011 | Gallagher Bob | 02/02/2009 | Gallagher Bob | 24/06/2008 | DC Assessment | Subdivision Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20016-0v0 | BB-1085131 | Applicant20016 | Gallagher Bob | 24/06/2008 | Gallagher Bob | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20017-0v0 | LH-2018111 | Applicant20017 | Peter Flinn | 24/06/2008 | Peter Flinn | 25/06/2008 | DC Assessment | Land Use Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Stage ID</th> <th>Stage Name</th> <th>Policy</th> <th>Schedule</th> <th>Payment Status</th> <th>Locked</th> <th>Total Stage Charges</th> </tr> </thead> <tbody> <tr> <td>20017-1v0</td> <td>Complete Development</td> <td>2004 Policy</td> <td>2004 Master Schedule</td> <td>FullPaymentReceived</td> <td>True</td> <td>\$37,911.18</td> </tr> <tr> <td colspan="6"></td> <td>\$37,911.18</td> </tr> </tbody> </table> | | | | | | | | | | | Stage ID | Stage Name | Policy | Schedule | Payment Status | Locked | Total Stage Charges | 20017-1v0 | Complete Development | 2004 Policy | 2004 Master Schedule | FullPaymentReceived | True | \$37,911.18 | | | | | | | \$37,911.18 |
| Stage ID | Stage Name | Policy | Schedule | Payment Status | Locked | Total Stage Charges | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20017-1v0 | Complete Development | 2004 Policy | 2004 Master Schedule | FullPaymentReceived | True | \$37,911.18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | \$37,911.18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20020-0v0 | BB-1088141 | Applicant20020 | Nick Fletcher | 24/06/2008 | Nick Fletcher | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20021-0v0 | BB-1093671 | Applicant20021 | Peter Flinn | 24/06/2008 | Peter Flinn | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20022-0v0 | BB-1087511 | Applicant20022 | Gallagher Bob | 24/06/2008 | Gallagher Bob | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20023-0v0 | LF-2079661 | Applicant20023 | Gallagher Bob | 24/06/2008 | Gallagher Bob | 24/06/2008 | DC Assessment | Land Use Consent | Complete Pos... | Request Declined | | | | | | | | | | | | | | | | | | | | | |
| 20024-0v0 | LF-2074971 | Applicant20024 | Peter Flinn | 24/06/2008 | Peter Flinn | 24/06/2008 | DC Assessment | Land Use Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20025-0v0 | BB-1092781 | Applicant20025 | Gallagher Bob | 24/06/2008 | Gallagher Bob | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20026-0v0 | BB-1088161 | Applicant20026 | Nick Fletcher | 24/06/2008 | Nick Fletcher | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20027-0v0 | BB-1090691 | Applicant20027 | Gallagher Bob | 24/06/2008 | Gallagher Bob | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Request Declined | | | | | | | | | | | | | | | | | | | | | |
| 20028-0v0 | BB-1085351 | Applicant20028 | Gallagher Bob | 24/06/2008 | Gallagher Bob | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Request Accepted | | | | | | | | | | | | | | | | | | | | | |
| 20029-0v0 | BB-1092951 | Applicant20029 | Nick Fletcher | 24/06/2008 | Nick Fletcher | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20030-0v0 | BB-1078721 | Applicant20030 | Peter Flinn | 24/06/2008 | Peter Flinn | 24/06/2008 | DC Assessment | Building Consent | Amended | Request Accepted | | | | | | | | | | | | | | | | | | | | | |
| 20030-0v1 | BB-1078721 | Applicant20030 | Peter Flinn | 24/11/2008 | Peter Flinn | 24/11/2008 | DC Assessment | Building Consent | Amended | Request Accepted | | | | | | | | | | | | | | | | | | | | | |
| 20030-0v2 | BB-1078721 | Applicant20030 | Gallagher Bob | 25/11/2008 | Gallagher Bob | 25/11/2008 | DC Assessment | Building Consent | Complete Pos... | Request Accepted | | | | | | | | | | | | | | | | | | | | | |
| 20031-0v0 | BB-1093291 | Applicant20031 | Nick Fletcher | 24/06/2008 | Nick Fletcher | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Review Not Req... | | | | | | | | | | | | | | | | | | | | | |
| 20032-0v0 | BB-1093271 | Applicant20032 | Nick Fletcher | 24/06/2008 | Nick Fletcher | 24/06/2008 | DC Assessment | Building Consent | Complete Pos... | Request Declined | | | | | | | | | | | | | | | | | | | | | |

Database: Production System User Name: chris

Business Value Delivered

Screenshot – Application Details



Application Assessment # 20017-0v0

Application Details Assessment #: 20017-0v0 Assessment Type: DC Assessment
Application #: LH-2018111 Application Group: Land Use Consent

Assessment Configuration

| | | | |
|--------------------------|---|----------------|------------|
| Assessment #: | 20017-0v0 | When Lodged: | 17/09/2003 |
| Application #: | LH-2018111 | When Granted: | 23/07/2004 |
| Applicant: | Applicant20017 | Source System: | DCAT2004 * |
| Development Description: | 3 units on a Residential 7 with s/works and service court infringements * | | |
| Original Assessment ID: | 135 | | |

| | | | |
|-----------------------|---|--|--------------------------|
| Application Group: | Land Use Consent | Special Assessment Type: | |
| Application Type: | New Residential Units 2 or more | Vesting Total: | |
| Application Sub Type: | | <input type="checkbox"/> PDA <input type="checkbox"/> SLC <input type="checkbox"/> Missed Opportunity <input type="checkbox"/> Duplicate | |
| Responsible Officer: | P Neeve | <input type="checkbox"/> Revaluation Reminder Sent | |
| Assmnt Record Status: | Locked | When Created: | 24/06/2008 08:30:48 |
| Processing Status: | Complete Posted Change | Created By: | Peter Flinn |
| Review Status: | Review Not Requested Change | Last Assessed: | 25/06/2008 10:50:33 a.m. |
| | | Last Assessed By: | Peter Flinn |

Save Cancel

Business Value Delivered

Screenshot – Configure an Entity



Application Assessment # 27999-0v0

Entity Configuration

Assessment #: 27999-0v0
Application #: LH-2018111
Assessment Type: DC Assessment
Application Group: Land Use Consent

NORTH SHORE CITY

Entity Configuration

Entity Type: **Proposed** Active Entity Name: Unit 2 *

Future Status: Current Entity Description:

Entity Land Use: Residential * Application Group: Land Use Consent

Stage Property: 22186000 * Zone:

CMLV: \$250,000.00 * Valuation Date: 12/08/2004 * Last valuation date for CMLV is more than 12 months.

Net Site Area: 862.00000 * Dollars per msq: \$290.02

Actual GFA: Calculated GFA:

Actual ISA: Calculated ISA:

MALA Date: Previously Assessed

Days Through Ramp-Up: Ramp-Up %:

Entity Chargeable Make Assignment HUEs Available
 Is Blank Site Entity Included for HUE Assignment

Entity Multiplier: 1 * Allocation Property: Add Property

Source Entities:

Save Cancel

Business Value Delivered

Screenshot – Assessment Summary



Application Assessment # 20017-0v0

Assessment Summary Assessment #: 20017-0v0 Assessment Type: DC Assessment
 Application #: LH-2018111 Application Group: Land Use Consent

Application Assessment Summary Stage Assessment Summary

| | Charge By Activity |
|---------------------------------|--------------------|
| Community Infrastructure | |
| Community Services | \$1,372.00 |
| Parks - Community | \$3,492.00 |
| | <hr/> |
| | \$4,864.00 |
| Network Infrastructure | |
| Stormwater | \$2,046.00 |
| Transport | \$3,156.00 |
| Wastewater | \$6,086.00 |
| Wastewater Treatment | \$5,608.00 |
| Water Supply | \$338.00 |
| | <hr/> |
| | \$17,234.00 |
| Parks Reserves | |
| Parks - Reserves | \$11,600.80 |
| | <hr/> |
| | \$11,600.80 |
| Totals | |
| TOTAL excl. GST | \$33,698.80 |
| GST | \$4,212.38 |
| | <hr/> |
| TOTAL incl. GST | \$37,911.18 |
| Vesting of Land | |
| Value of Vested Land | \$0.00 |

Business Value Delivered

Screenshot – Assessment of a Stage



Application Assessment # 20017-0v0

Assessment Summary Assessment #: 20017-0v0 Assessment Type: DC Assessment
 Application #: LH-2018111 Application Group: Land Use Consent

Application Assessment Summary Stage Assessment Summary

| Stage ID | Stage Name | Policy | Schedule | Payment Status | When Invoiced | When Paid | Tot DC Chg ex GST |
|-----------|----------------------|--------|----------------------|---------------------|---------------|------------|-------------------|
| 20017-1v0 | Complete Development | 2004 | 2004 Master Schedule | FullPaymentReceived | 17/08/2004 | 27/06/2008 | \$33,698.80 |

Activity Summary Entity Summary

| Activity | HUE Req | Total HUE Entl | Net HUE Req | Net Chargeable HUEs | DC Charge ex GST | |
|----------------------|---------|----------------|-------------|---------------------|------------------|--|
| Community Services | 2.00000 | 0.00000 | 2.00000 | 2.00000 | \$1,372.00 | |
| Parks - Community | 2.00000 | 0.00000 | 2.00000 | 2.00000 | \$3,492.00 | |
| Stormwater | 2.00000 | 0.00000 | 2.00000 | 2.00000 | \$2,046.00 | |
| Transport | 2.00000 | 0.00000 | 2.00000 | 2.00000 | \$3,156.00 | |
| Wastewater | 2.00000 | 0.00000 | 2.00000 | 2.00000 | \$6,086.00 | |
| Wastewater Treatment | 2.00000 | 0.00000 | 2.00000 | 2.00000 | \$5,608.00 | |
| Water Supply | 2.00000 | 0.00000 | 2.00000 | 2.00000 | \$338.00 | |
| Parks - Reserves | 2.00000 | 0.00000 | 2.00000 | 2.00000 | \$11,600.80 | |
| \$33,698.80 | | | | | | |

Business Value Delivered