Enterprise Architecture

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Case Study II – Scottish Water – Diagnosis and Design

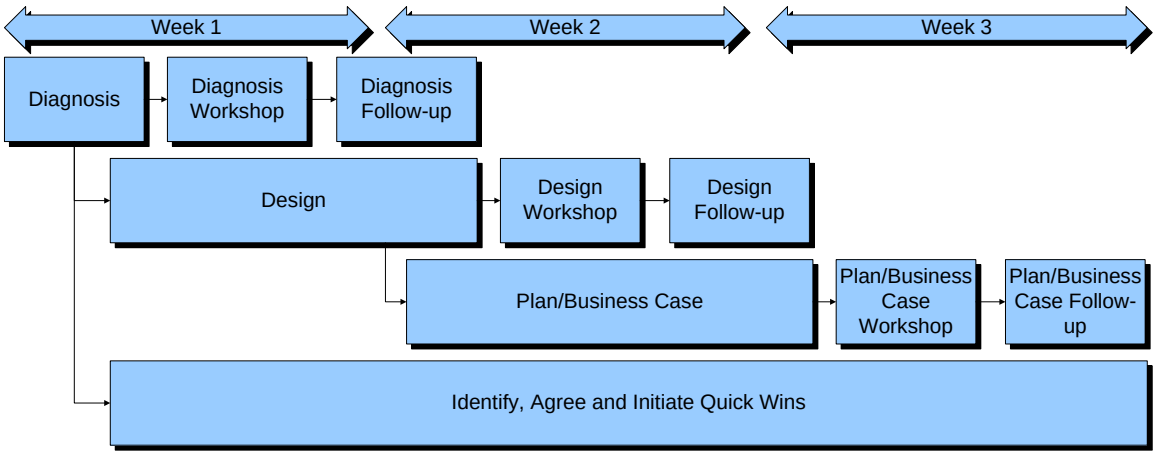
Here, we will trace the history of a case study -Scottish Water, where VISION Consulting teamed up with Scottish Water's Mark Dickson and Bill Bryson to perform a Diagnosis and Design of their Leakage Process. The project only took about three weeks. This was a hugely demanding timescale, and we needed to field our best people. We built up a head of steam and ambition which still drives Scottish Water, years later.

1 WHAT SCOTTISH WATER ASKED VISION TO DO

- VISION partnered with Scottish Water to develop and implement an enhanced process that allowed the repair of 80% of water leaks within 3 days, and put Scottish Water on track to achieve the targets being set by the Regulator for 2014.
- Phase 1 (of the project and Case Study) was a rapid process diagnosis and design for the enhanced processes for repair cycle time improvements.
- This was followed by multiple implementation phases, to help Scottish Water to roll out the process across eight regions, quickly to meet short term objectives and to continue to move towards the 2014 targets being set by the Regulator.

2 PHASE 1 – APPROACH TO DIAGNOSIS, PROCESS RE-DESIGN AND IMPLEMENTATION PLANNING

We



As in the last Case Study, the timeline for the project was very short, making heavy demands on the team's skills and time.

3 DIAGNOSIS

3.1 Approach to Diagnosis

- Interviews, briefings, and workshops to prepare a diagnosis of the current processes, roles, MI, etc., and to identify breakdowns and opportunities
- Prepare an “as is” model
- Prepare for the Diagnosis Workshop
- Diagnosis interview list to include, ca. 15 interviews, covering, but not limited to:
    - Customer Service Centre
    - Operations Management Centre
    - Leakage planning teams
    - Various leakage repair teams including 3rd party contractor organisations
    - Road Traffic/ Road Opening
    - Local Authorities

Briefings:

- Existing Processes
- Current volumes (number and duration of leaks, volumes, recurrence, etc.)
- Current MI (What’s available, medium, who receives it, timeliness, accuracy, effort to produce, etc.)

3.2 Prepare and Present the Diagnosis

- Present the diagnosis
- Present initial thoughts about design and “the size of the prize”
- Present and discuss Quick Wins identified so far
- Identify open issues with diagnosis
- Get Management buy-in

3.3 Draft the Design

- Prepare the Design
- Present the Design
- Speculate about the Business Case

3.4 Deliverables from Phase 1

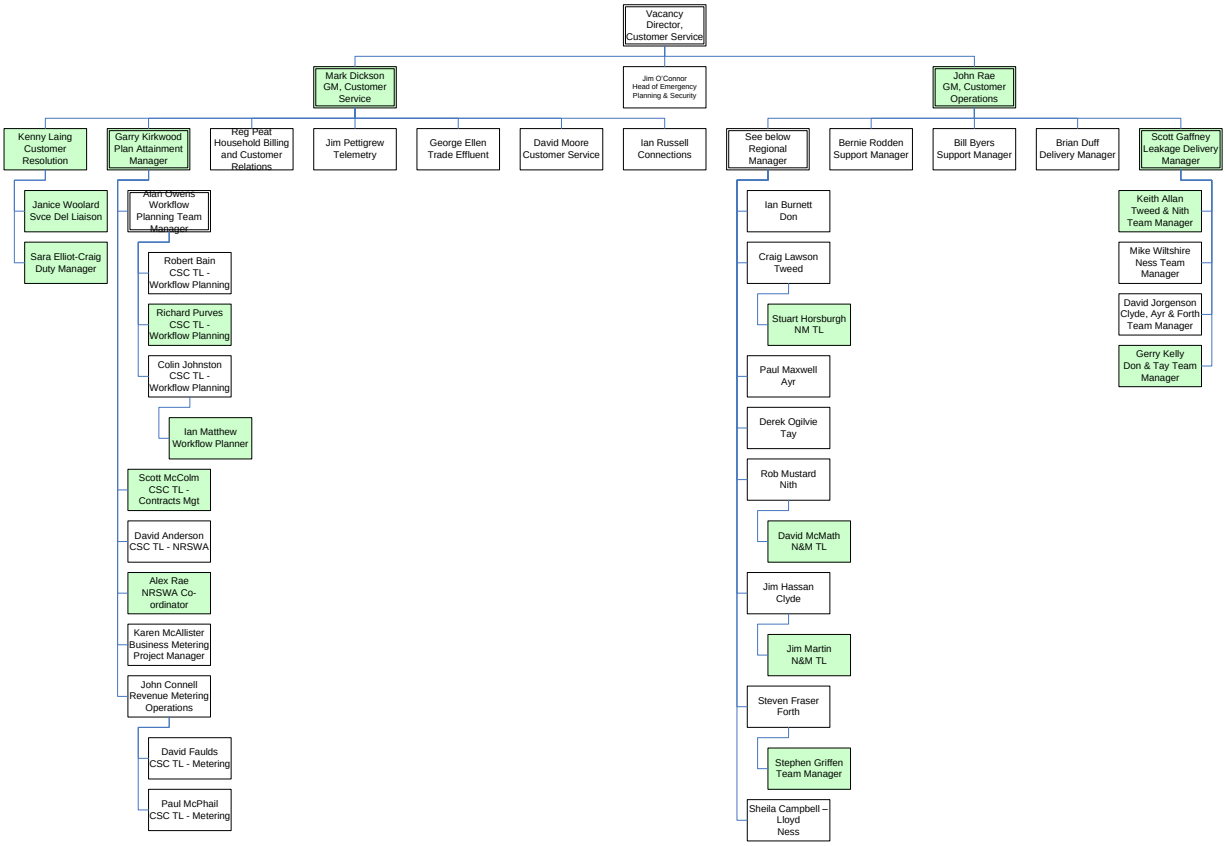
- The scope and draft design of an improved and documented water leakage process that will significantly shorten cycle times between identification and repair.
- Wherever possible quick wins will be initiated and new improved MI were identified with both deadlines and implementation advice for Scottish Water to implement.
- A high level business case (excluding ICT costs) for a leakage cycle time reduction project including benefits, scope, effort, timescales and fees that shows an attractive return on investment.
- A project implementation plan, with deadlines for the initial implementation project (Phase 2) and a high level plan for the overall programme.

3.5 What we did during Diagnosis

We interviewed a lot of people, and were briefed on / reviewed relevant documents.

3.5.1 Interviews / Meetings

We interviewed and /or met 23 people, represented by the following Customer Service Organisation Chart (Single Directorate, positionsin green interviewed):



3.5.2 Document Briefings / Reviews

We received briefings, and reviewed a large number of documents.

- Processes
  - Planned work
  - Reactive work
  - Reinstatement
  - Contracting
- Metrics
  - Leakage Performance – Jan – July 2007.ppt
  - Leak Repairs SG LPI July 07 v2 0.ppt
  - Jobs
- CSI Project
  - CSI Proposed Solution 07-07-25.ppt
  - CSI Thoughts August 2007

- General
  - SW Organisation Charts
- Plan Attainment
  - Plan Attainment RP 19 09 07.ppt
  - SW P2R Programme – Prioritisation Matrix – Revised
  - Worksheets
    - Daily
    - Weekly
- MI
  - Business Reporting Awareness Workshops
  - Ellipse data for May 2007 and August 2007
- Scheduling Project
  - BRS for Scheduling v2.pdf
  - Advanced Scheduling 150807.pps
- Targets
  - 03 LEAKAGE.ppt
  - Customer OPA Homepage.doc
  - Leak Repairs Strategy - Target Repair Times V1.xls

3.6 Results of Interviews

Having completed interviews and document reviews, VISION came to the following assessments, which were used as the basis for the development of the new design:

3.6.1 Key Promises

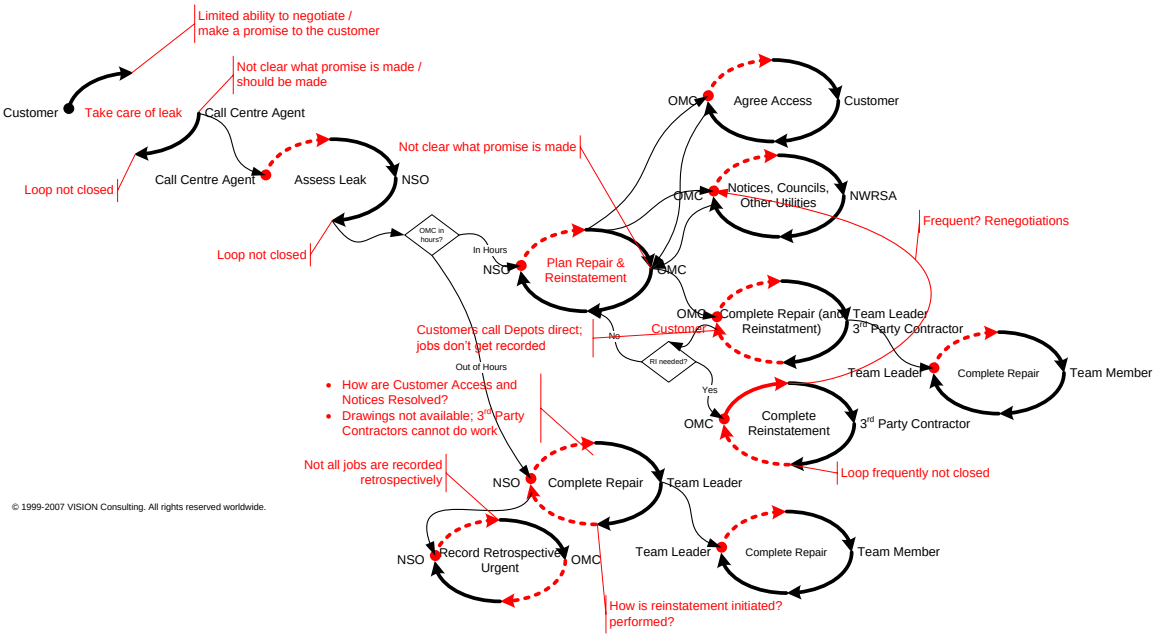
- The promises being made to the Customer are unclear … you cannot be successful if you don't know what success is.
  - The promises do not appear to be compelling
  - The promises appear to be broken frequently
  - We don't close the loop with the customer, and we make it difficult for the customer to close the loop with us
- Regulator requirements are clear, but may need interpretation to create satisfied customers
- Promises to Chief Executive and Directors?

3.6.2 Internal Promises

- No sense of people making promises to each other. Work being driven by "technical" SLA's and business unit concerns; not on end-to-end outcomes for the customer (or Regulator)
- Tolerance / expectation of non-fulfilment
- Prioritisation standards of work is unclear – Emergency / Urgency matrix; but what about leakage volume? Closeness to deadline? Penalties? Two or more jobs that could be done together?

3.6.3 Process

- Call Centre is meeting standard targets
- End-to-end process is complex
  - Many handovers
  - Many routes
  - Many systems; forms
  - Apparent duplication of function
- Widespread workarounds – around specific business units, processes, practices, tools
- Non-adherence to use of systems, practices
- No consequences to - indeed, a general acceptance of - this non-adherence



Last Trip Map

3.6.4 People

- Very enthusiastic, very committed, very frustrated
- “Bad” moods – resignation, despair
- Business units are not confident that other business units will do their bit in the end-to-end process, and the MI is not there to demonstrate actual results
- Mixed reports on competence / engagement

3.6.5 Technology

- Many satellite systems
- Lots of re-keying, with opportunities for error and omission
- Core systems not automatically integrated
- No end-to-end identifier for a request, making pulling end-to-end MI difficult
- Coding issues, e.g.:
- 400 job types in Ellipse, but it still does not allow analysis of leaks at a level at which volumes can be estimated

- No way to identify all leaks

3.6.6 MI

- Great deal of uncertainty about the reliability of the data – both in terms of data input and data reporting – and acceptance of this uncertainty
- Not tied back to promises … or even SLA's
- Not clear how the current MI drives action
- Unclear definitions of business events (what am I looking at, here?)

4 DESIGN

4.1 The Customer Proposition

Having completed our diagnosis, the first step in the design was to develop the Customer proposition. We explored two scenarios; first where a caller was reporting a leak which was not affecting them, and second, where the leak *was* affecting them.

Concerns include:

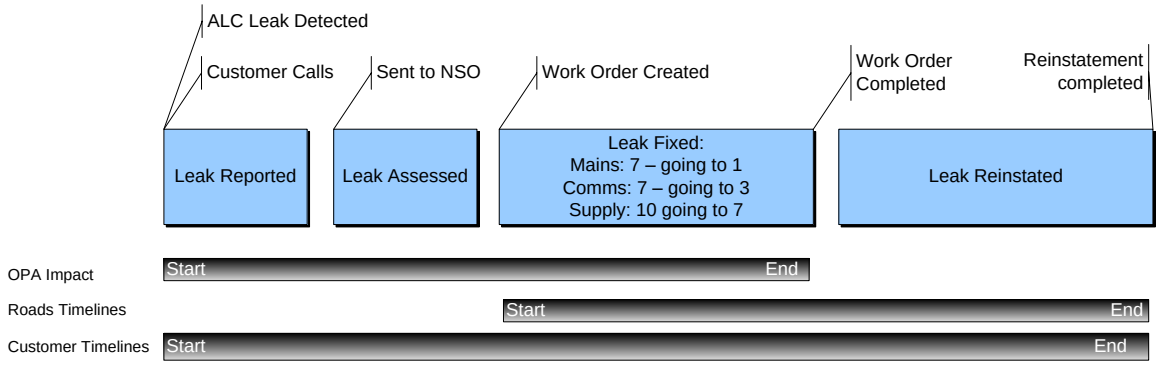
- Being listened to
- Jointly diagnosing the leak, and jointly agreeing the urgency of the leak
- Giving advice regarding the impact of 'no water', e.g., how to open the washing machine, rescuing the laundry, and so forth)
- Jointly agreeing the time that will be taken to assess the leak, to fix it, and to reinstate it
- The utility keeps its promises
- The utility will be able, quickly and accurately, to respond to queries.
- Leak repair performance as a whole
- And so on

From these concerns, some workshops and role plays drove out the following promise:

"We will listen carefully to your concerns, and provide telephone assistance. We will have an engineer visit and assess the leak in three hours. Once assessed, the engineer will make a new promise to fix the leak within one, or three days, depending on the agreed urgency of the case, and then to reinstate it within a certain time".

The Assessing Engineer would give the caller a card, with reference number, and contact details, to make sure the person responsible for the commitment is clear and contactable.

The following diagram illustrates the timeline, reflecting the impact on OPA (The points awarded by the Regulator), the Roads Authority, and the Customer:



4.2 Target Commitment Map

The following commitment map illustrates the process. This was enormously useful to the team in testing the process by role plays.

Starting with the main process being 'Fix and Reinstate within 1 / 3 days', at 10 o'clock, The Customer calls in reporting a leak. The Customer Service Advisor (CSA) engages the customer in a good conversation, eliciting and listening to the customer's concerns, agreeing the priority of the leak, and advising the customer in terms of taking care of immediate problems.

The CSA hands off the well-constructed report to an NSO, promising that the NSO will start the assessment within two hours, and that when the leak has been assessed, the NSO will make a new commitment to fix the leak within 1 / 3 days, depending on the agreed urgency.

This takes place, and the NSO gives a contact card to the customer, with a reference number and contact details for the CSA to allow the customer make a query of the CSA who originally answered the phone.

The NSO brings the initial process to 12:00 by making a detailed request to the Workflow Planner. The Workflow Planner arranges for access with the customer, and permission to complete the works with Roads, and so forth.

The WP initiates a 'Fix' request with a Service Provider team, and, when she has been notified that the leak has been fixed, initiates a 'Reinstate' request of a Service Provider.

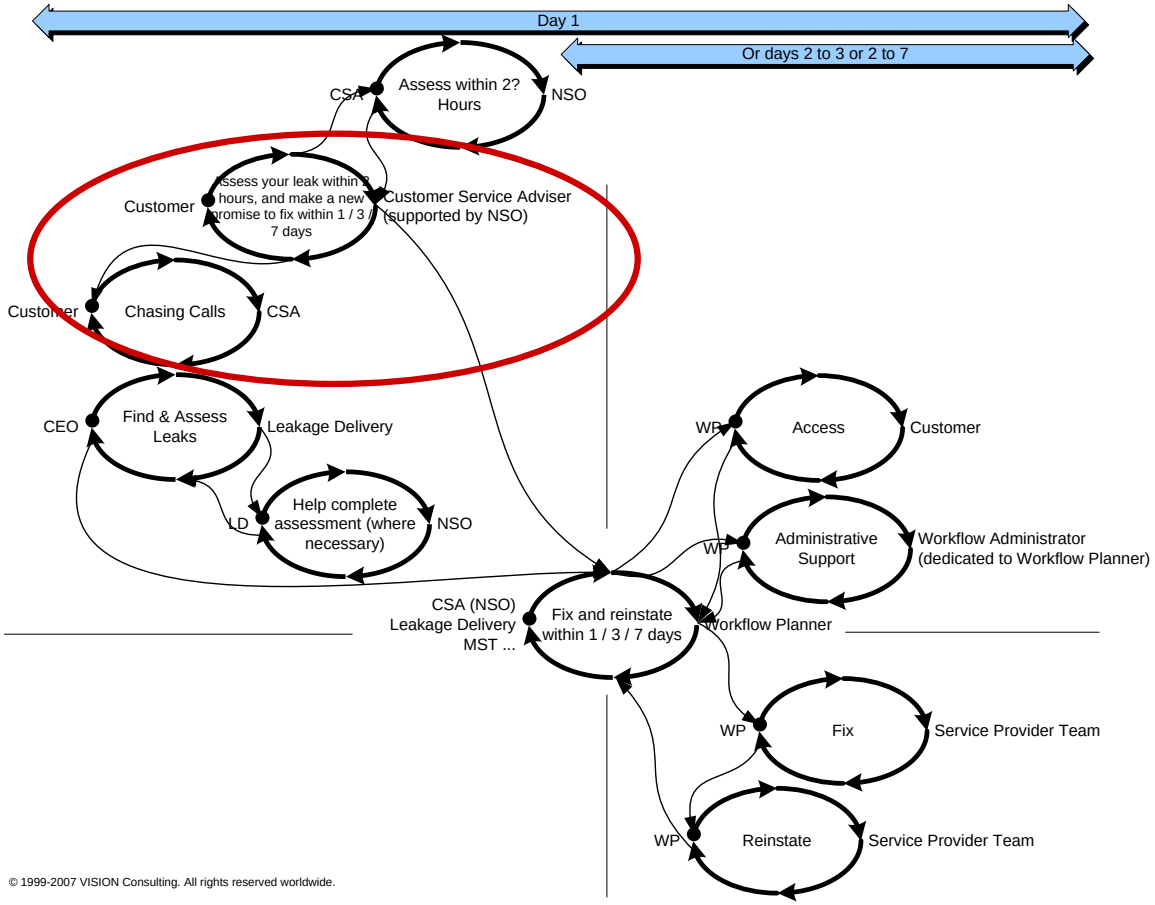
When reinstatement is complete, the process is closed.

The 'Leakage Delivery' team part of the process was not pursued at the time.

The timelines at the top of the diagram illustrate the timings of an urgent (1 day) and non-urgent (3 day) cycles.

4.3 Mobilization Concerns

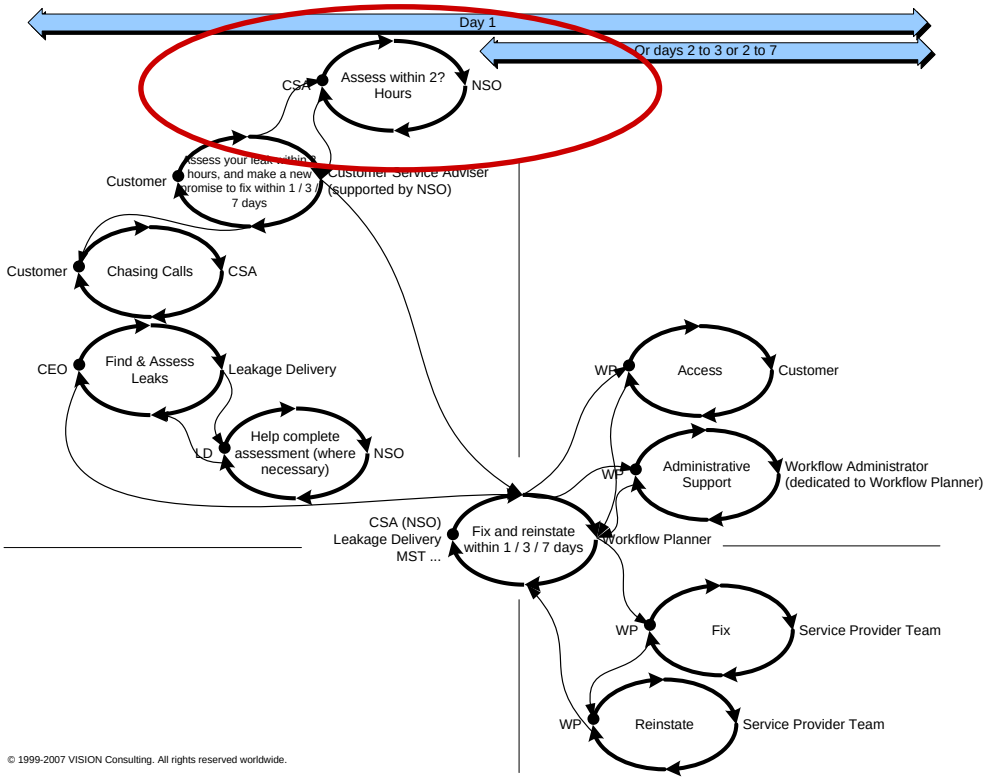
The maps below depict the points in the process where real-time coaching was planned:



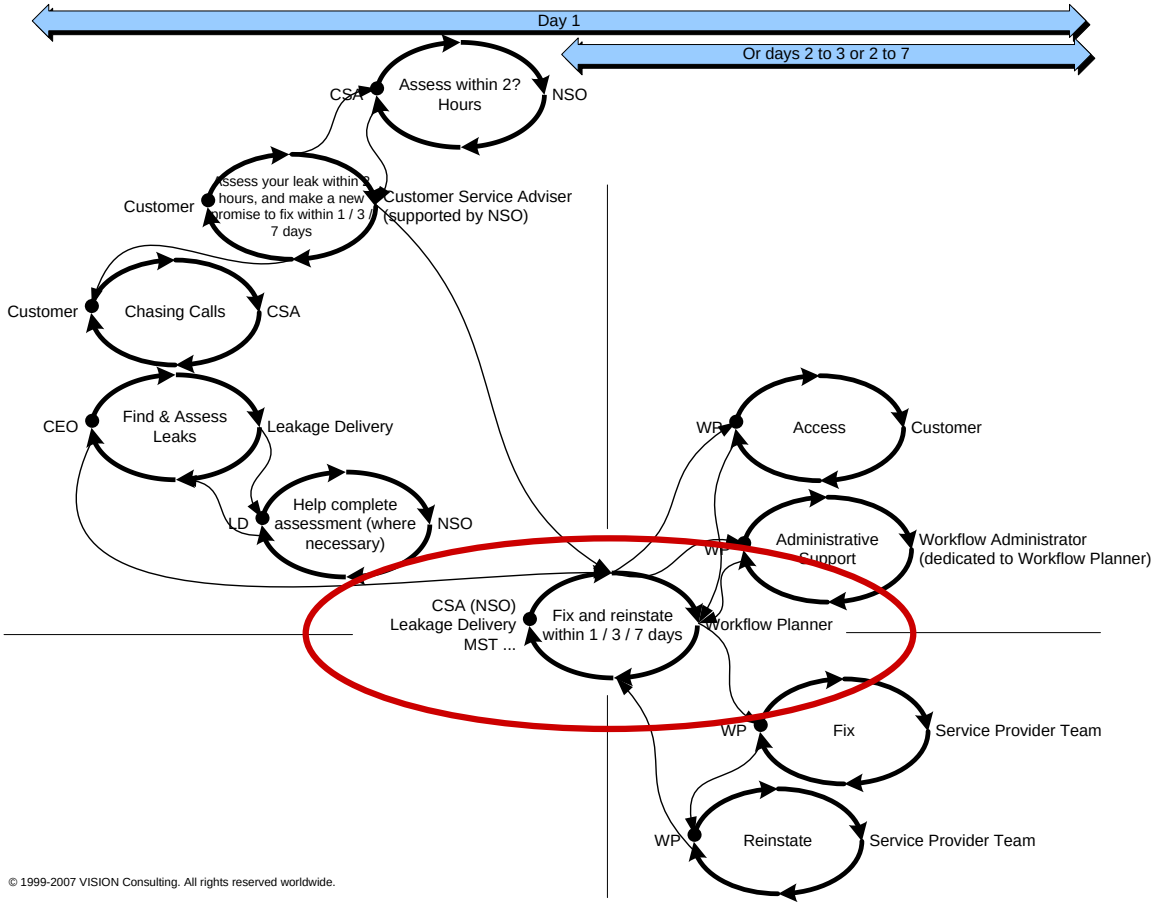
In this first map, the conversations between the Customer and the CSA are an opportunity for coaching. In fact, we employed VISION's Learning Teams™ approach to maximize performance among call centre teams, or 'pods'.

Coaching opportunities are depicted as follows:

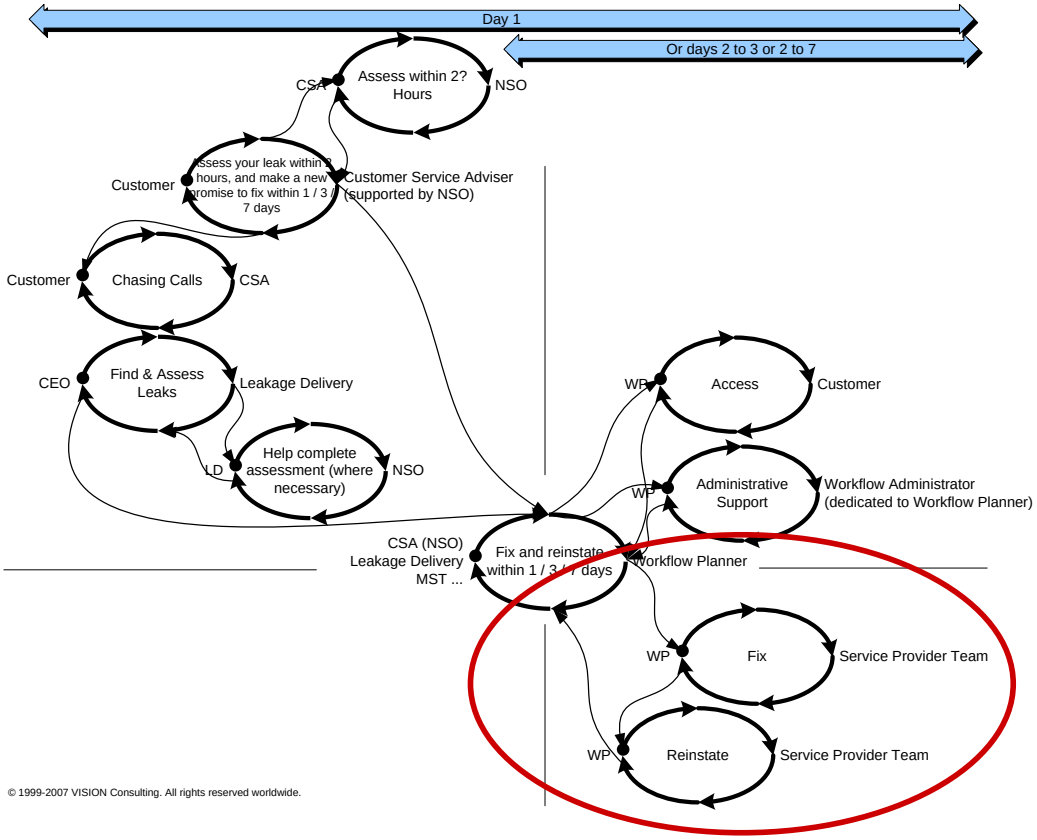
- The CSA making the Request to the NSO to assess the reported leak.



- The NSO making a good request of the Workflow Planner to plan and manage the Fix & Reinstatement



- The Workflow Planner managing the Fix and Reinstatement of the leak



5 RESULTS

After a fast-moving mobilization, the new process which has achieved a sustainable cycle time reduction from an average of 15 to 3 days, earning SW a saving of about 36 million litres of water a day, which led to an Institute of Customer Service (ICS) ServiceMark Award., 7 regions of Scottish Water are consistently fulfilling their commitment to fix and reinstate 100% of reported leaks within three days.

Figure: ICS award presented to Scottish Water

"Visiting Edinburgh and seeing first-hand how Scottish Water is striving for customer service excellence was an interesting and rewarding experience…"Witnessing how field staff integrate with the contact centre and customers illustrated the commitment to constantly improving the service they provide." Shirley McNabney, membership director of ICS, October 2009.

For more recent Awards, see the URL below:

ij.co.uk/Aboutus/Pages/scottishwater.aspx