DemandFlow Network Change Management

DEMANDFLOW®

Every change scoped against the network model, risk-scored, booked, verified and evidenced

DATA SHEET

Most network changes are approved on a description. The change manager reads what the engineer wrote, asks whether anything important is affected, and takes the answer on trust. The maintenance window is checked by eye against a calendar, customer notices are drafted by hand, and whether the change did what it said is confirmed by the absence of complaints.

DemandFlow® ties a change to the records it touches: the site, platform, devices, ports, links, services, ducts, cables, closures and strands in scope. From that scope it works out which services, customers, circuits and premises are affected, whether diversity is lost, whether DR cover is reduced and whether a spare exists, scores the risk, checks the booking against other changes and freeze periods, drafts the customer notices and verifies the outcome against a discovery snapshot.

What it is

Change management for the network estate: change records with type, category, impact, risk and a lifecycle from draft to completed; implementation, rollback and test plans; a computed impact report with affected services, customers, links, circuits and premises; a likelihood by impact risk matrix; conflict, booking clash and freeze checks; maintenance windows and change freezes on a calendar; DR and spares exposure; customer notices; evidence files; pre-change and post-change verification from discovery snapshots; and a post-implementation review.

It sits inside DemandFlow, so a change can be raised from a plan scenario, a discovery proposal, a migration cutover wave or a data centre reclaim plan; a change cannot complete while its work orders are open; and the affected services, customers and premises are the same records the service, CRM and fibre layers hold.

What an operator gets

- **Impact worked out, not described.** The scope is walked through carriage, shared risk and service links to the services, customers, links, circuits and premises affected, with lost diversity flagged and the result saved as impact records.
- **Risk from a matrix.** Likelihood by impact on a five by four heat map, scored out of 25, raised to Critical when a critical service is affected and to High when diversity is lost.
- **Bookings that do not clash.** Overlapping changes on the same platform, site, device, link or service are flagged; a change inside a freeze is refused without an approved exception.
- **DR and spares in view.** Whether an affected asset is in a DR pairing (cover lost, failing over, reduced capacity or no DR), with its RTO, and whether a spare is available.
- **Notices from the record.** One notice per affected customer from a template, edited before sending, with each row marked when sent.
- **Verified against the network.** A discovery snapshot before and after; planned changes that happened show green, planned ones that did not show red, unplanned ones amber.
- **Sensing customers warned.** A change to a sensing source site shows the zones it affects with feasibility before and after.
- **An audit trail per change.** Submitter, approver, dates and notes, activity, evidence files, notice status and a post-implementation review with lessons.

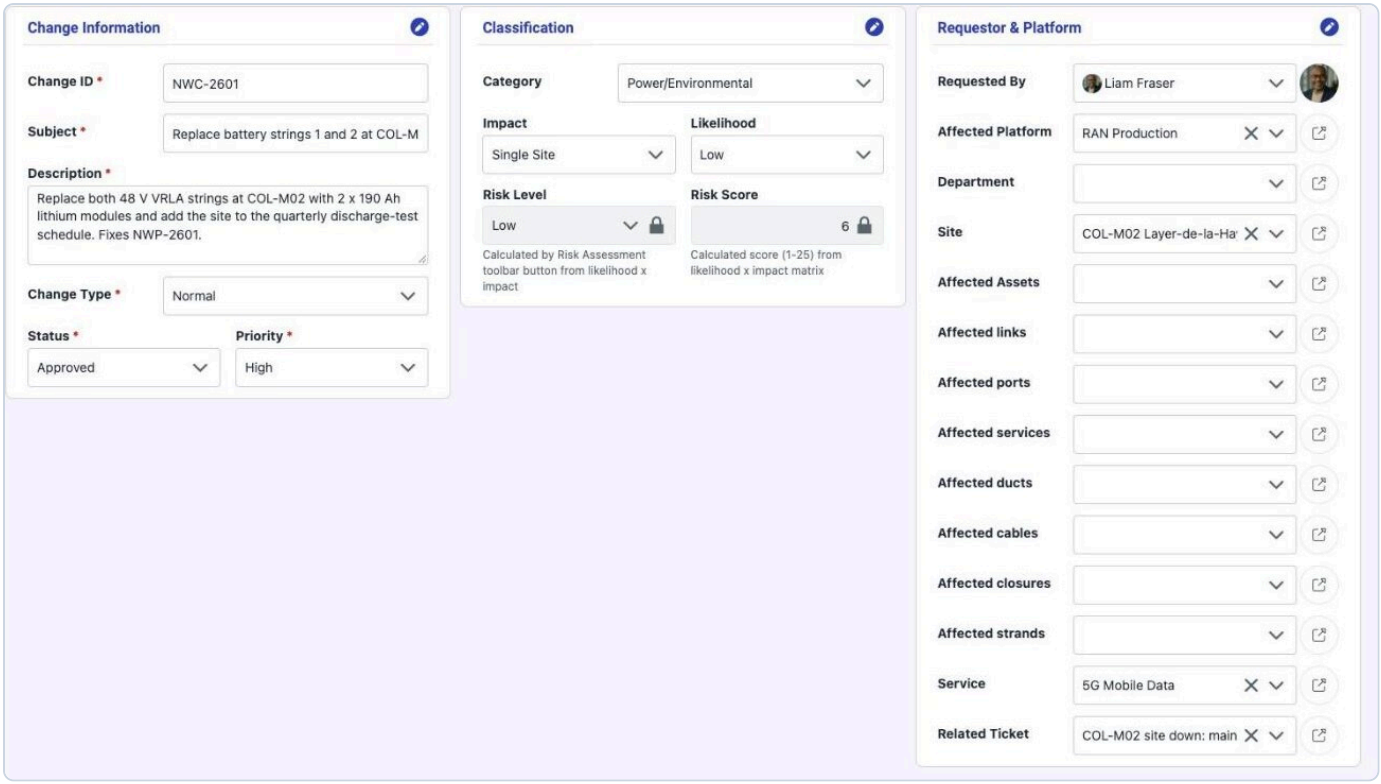

FIGURE 1. A CHANGE RECORD: SUBJECT, DESCRIPTION, TYPE AND STATUS; CATEGORY, IMPACT, LIKELIHOOD AND THE COMPUTED RISK; REQUESTER, PLATFORM, SITE, THE SCOPE FIELDS FOR ASSETS, LINKS, PORTS, SERVICES AND FIBRE, AND THE RELATED TICKET

The change record

A change has a subject, description, type (standard, normal, emergency or major), one of ten categories (radio and RF, transport, core, IP and MPLS, optical, access, power and environmental, security, configuration, capacity), an impact (network-wide, regional, single site or single element), a likelihood and a priority. Its status moves through draft, submitted, approved or rejected, scheduled, in progress, completed, failed or cancelled. Submission needs a subject, description, type and implementation plan.

Scope is the heart of the record: the site, platform instance, affected assets, ports, links and services, and for fibre work the ducts, cables, closures and strands. Changes are also raised from a logical plan scenario, from a bundle of discovery proposals, from a migration cutover wave, from a data centre reclaim plan, or as a draft by an assistant through MCP, which cannot submit or approve.

The Planning panel holds the implementation, rollback and test plans and the approvals block: who submitted and when, who approved or rejected, when, and the approval notes. Schedule and Execution holds the window, the matching maintenance window written on scheduling, the executor and the outcome. Related tickets, evidence files and activity notes sit on their own panels.

Approval acts on a submitted change, stamps the approver and date, and refuses a High or Critical risk change until a current impact report exists. A change whose work orders are still open cannot be completed.

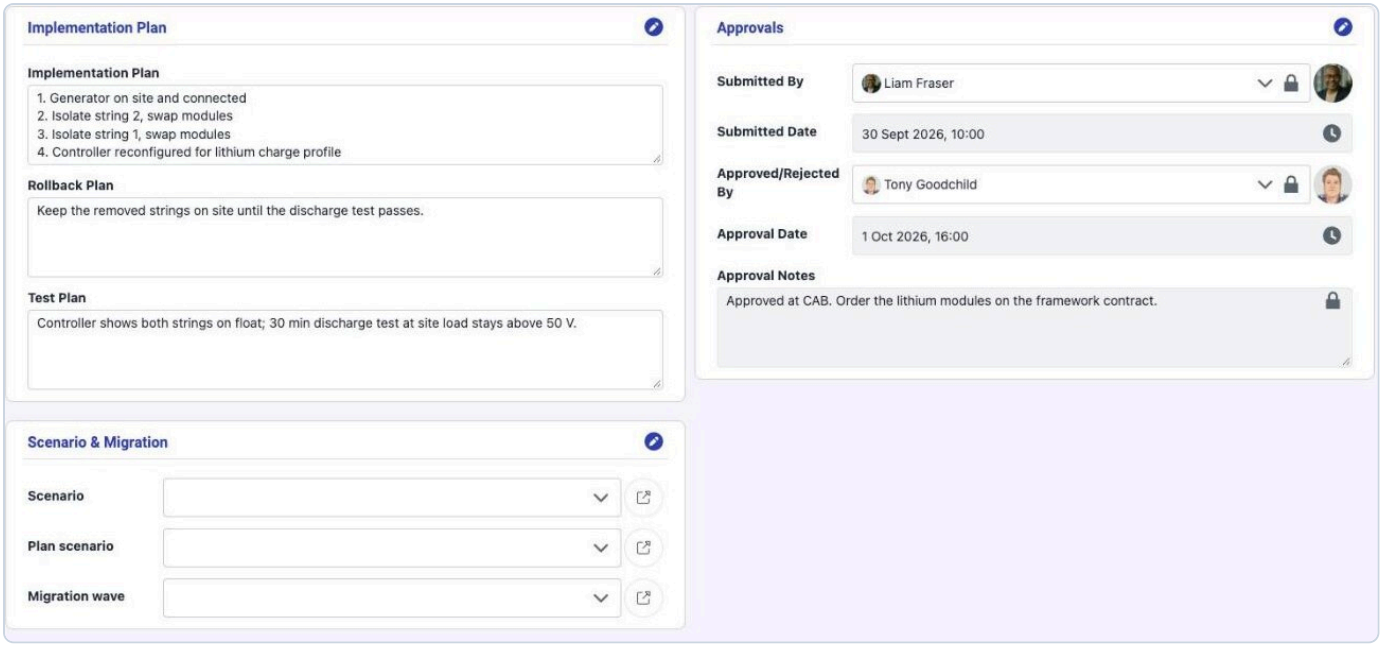

FIGURE 2. PLANNING: IMPLEMENTATION, ROLLBACK AND TEST PLANS BESIDE THE APPROVAL RECORD, WITH LINKS TO THE PLAN SCENARIO OR MIGRATION WAVE THE CHANGE CAME FROM

Impact, risk and conflicts

Impact report. The scope is walked through carriage, shared-risk groups and service links to every service (with its criticality and whether it goes fully down), customer, link, circuit and premise affected. Fibre scope runs the outage blast radius. Lost diversity is flagged. The result is saved as impact records with summary fields on the change and a hash of the scope, so the panel warns when the scope has moved since the report was run. The Impact and Verification panel shows the risk badge, conflicts and booking, sensing zones affected with feasibility before and after, stat tiles, DR impact and spares, the impact grid and a map of the planned works and affected plant.

Risk assessment. Likelihood (very low to very high) against impact (single element to network-wide) on a heat map, scored from 1 to 25 with bands at 5 (medium), 10 (high) and 15 (critical). The badge is raised to Critical when a critical service is affected and to High when diversity is lost.

Check conflicts. Other open changes that overlap in time are listed; the same platform instance rates High, otherwise Low. A booking clash is an overlap that shares a site, device, link or service, and the later booking is flagged. A change inside a change freeze cannot be saved without a freeze exception and the name of who approved it.

DR and spares. Any active DR pairing whose primary or secondary is an affected asset or link is reported as DR cover lost, failing over, reduced capacity or no DR at all, with its RTO. Spares are listed per affected device with their status, and a device with no available spare is flagged.

Customer notices. One notice per affected customer, built from the planned works template with an editable subject and message, sent only on confirmation and marked Sent on the row.

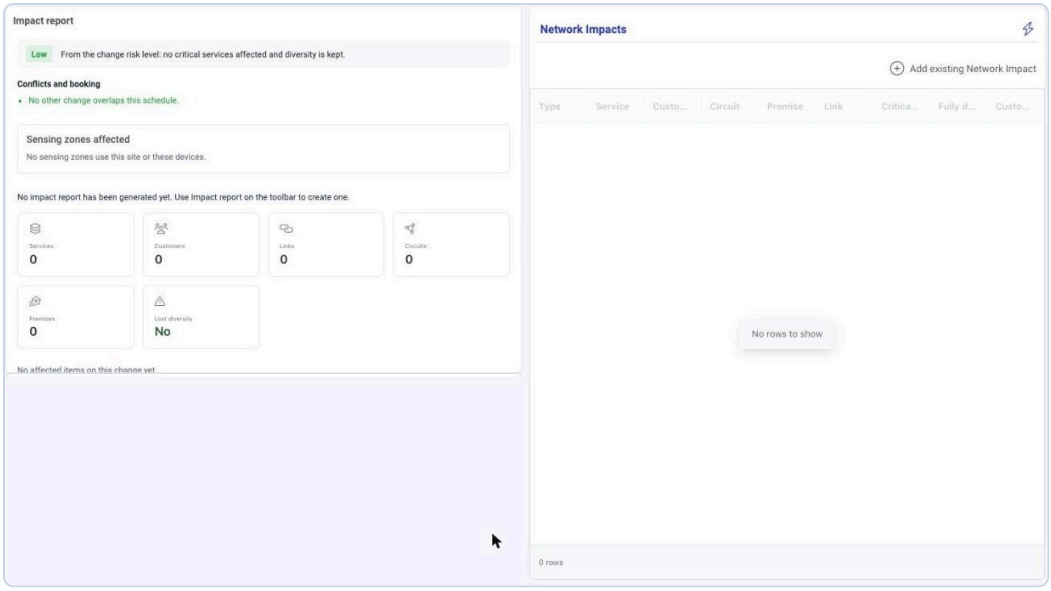

FIGURE 3. IMPACT AND VERIFICATION BEFORE THE REPORT IS RUN: RISK BADGE, CONFLICTS AND BOOKING, SENSING ZONES AFFECTED, THE STAT TILES AND THE IMPACT GRID



FIGURE 4. RISK ASSESSMENT: LIKELIHOOD BY IMPACT ON THE HEAT MAP, SCORED OUT OF 25

Calendar, windows and verification

Maintenance windows and change freezes are records with a one-off, weekly or monthly recurrence and a scope of global, site, platform or service. The change calendar shows windows, freezes and booked changes by month or week with risk, clash and freeze badges, filters by site, service and platform, and tabs for clashes in view and planned-work notices. Scheduling a change writes the window it falls in onto the record.

The network operations dashboard shows open changes with pending and scheduled counts, a change status chart and the upcoming scheduled changes beside tickets, SLA and problems.

Verification. Moving a change to In Progress takes a pre-change discovery snapshot; Completed or Failed takes a post-change one. The diff across devices, interfaces, neighbours, BGP, routes and ARP shows planned items that changed in green, planned items that did not in red and unplanned changes in amber. It needs a discovery job that covers the site.

Audit. Submitter, approver and timestamps; activity notes; evidence files; notice status; and a post-implementation review with result, notes and lessons. Blast radius from any affected record lists the open changes on it, and impact records can be saved to a change or ticket with an evidence PDF.

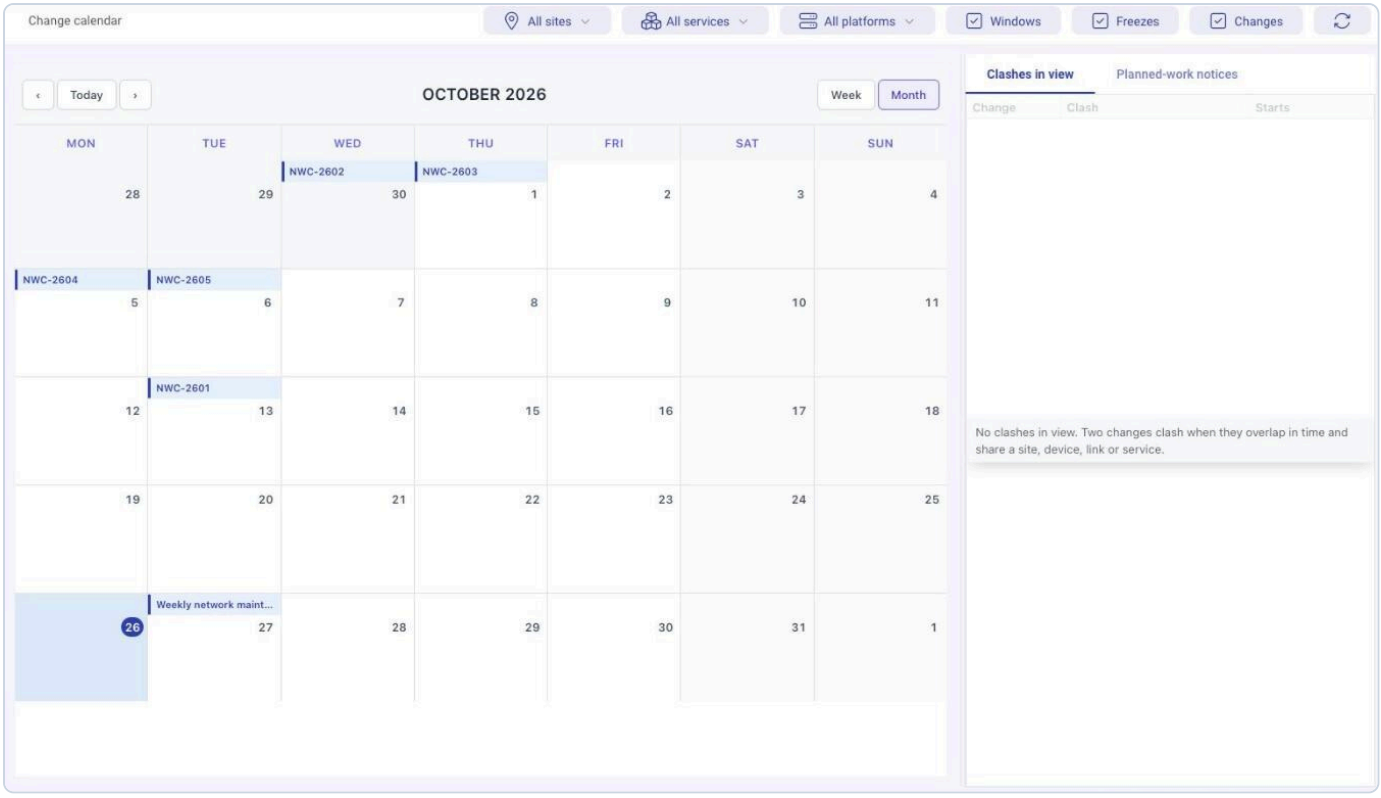

FIGURE 5. THE CHANGE CALENDAR: BOOKED CHANGES AND THE WEEKLY MAINTENANCE WINDOW BY MONTH, WITH SITE, SERVICE AND PLATFORM FILTERS AND THE CLASHES AND NOTICES TABS

Summary of specifications

Item	Detail
Change record	Types standard, normal, emergency, major; 10 categories; impact network-wide, regional, single site, single element; risk critical to none; status draft, submitted, approved, rejected, scheduled, in progress, completed, failed, cancelled
Scope	Site, platform instance, assets, ports, links, services, ducts, cables, closures, strands
Sources of changes	Manual; logical plan scenario; discovery proposals (bundled); migration cutover wave; data centre reclaim plan; MCP draft_change (draft only, a person submits and approves)
Impact report	Walks carriage, shared risk and service links; services with criticality and fully-down flag, customers, links, circuits, premises; fibre blast radius; lost diversity; saved impact records; scope hash warns when stale
Risk	Likelihood (5) by impact (4) heat map; score 1 to 25; bands 5 medium, 10 high, 15 critical; raised for critical service or lost diversity
Conflicts and booking	Overlapping open changes (same platform High); booking clash on shared site, device, link or service; freeze needs exception and approver; scheduling writes the window; no completion with open work orders
DR and spares	Active DR pairings on affected assets or links: cover lost, failing over, reduced capacity, no DR, with RTO; spares per device with status
Notices	One per affected customer from the planned works template; editable; sent on confirmation; rows marked Sent
Windows and calendar	Maintenance windows and change freezes; one-off, weekly, monthly; scope global, site, platform, service; month and week calendar with risk, clash and freeze badges; clashes and notices tabs

Item	Detail
Verification	Pre-change snapshot on In Progress, post-change on Completed or Failed; diff over devices, interfaces, neighbours, BGP, routes, ARP; green, red, amber
Audit	Submitter, approver, timestamps, approval notes, activity, evidence files, notice status, post-implementation review

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