Digital Solutions Change Management Training

Presentation Outline

The following topics are covered in this presentation.

- 1. Change Management overview
- 2. Change Models
- 3. Retrospective Emergency Change Process
- 4. New KPI Update
- 5. Change Approval Flow
- 6. Implementing a Successful change
- 7. Do's & Don'ts Of Change Management
- 8. Roles and Responsibilities
- 9. Important Guidelines for Requestor and Coordinators
- 10. Chair Advisory Board Meeting
- 11. Appendix

Change Management Overview

What is Change Management?

- Our Change Management Process is based on a Service Management Framework known as ITIL.
- Change Management provides our organization with a structure for managing changes to our IT environment.

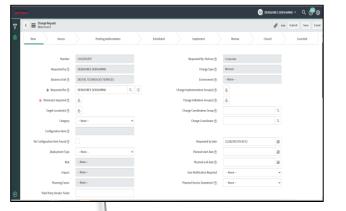
How is a Change defined?

A 'Change' is defined as the addition, modification or removal of anything from a Configuration Item (CI) that could have a direct or indirect effect on the delivery of an internal or external live Service.

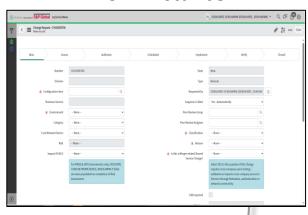
Scope of Digital Solutions (DS) Change Management:-

- All DS raised multi-division impacting Change
- All DS raised Corporate impacting Change
- All OSTTRA division impacting Change

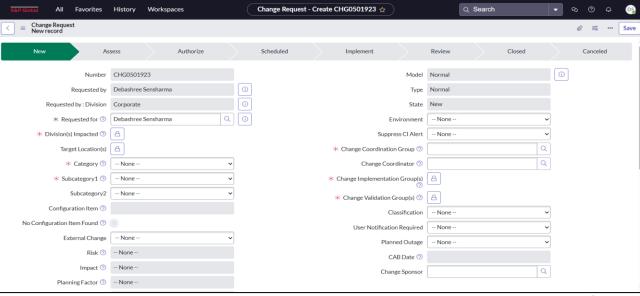
SPGI Instance



IHSM Instance



Gravity (Combined Instance)



Change Models (Change Types)

Normal Change

Changes that follow the full Change Management Approval Lifecycle.

Criteria / When it should be used?

- Should be used for All planned Single and Multi Division Impacting changes.
- All Planned Service Outage / Service Impacting changes need to go via Normal change type, so that enough notice can be provided to Impacted parties.

Does it have Lead times?

- Yes, Lead times depend on the Planning factor and Planning factor is calculated based on the Risk and Impact answer weightages.
- Planning Factor Small Lead time 3 Days
- Planning factor Moderate 7 to 15 Days
- Planning Factor High 15 Days

Note: Lead times are Calander days.

Emergency Change

They are required to restore a Service in response to a Critical or Major Incident. (P1 Crisis, P1 or P2)

Criteria / When it should be used?

- This change type should only be used to Restore a service during a P1 Critical / P1 or a P2 incident.
- Requestor can select one of the 2 options as per situation –
- Resolution Change Incident Ongoing Selecting this option means that team needs to wait to implement the change till all the Approvals are done. Only post Approvals team can implement the change.
- Retrospective change Incident Resolved Change can be raised post the incident resolution and activities done to resolve the incident should be recorded for audit purpose. Service Owner Approval need to be taken during the MIM bridge itself before proceeding with the change. Rest of the approvals will be done retrospectively.

Does it have Lead times?

No , but Change needs to be logged in 24 hrs if it's a Retrospective change.

Standard Change

Pre-Authorized and Pre-Approved, template driven change implemented with Technical and Business Approvals.

Criteria / When it should be used?

- Activity should be repetitive with large volumes.
- Activity should be low Impact and Low risk.
- Activities should have been done under Normal change at least 4 time successfully in the past.
- Implementation steps should remain constant and not change.
- Approved by Service owner / Tower Manager.

Process: Requestor to submit a proposal to change management if above criteria is met >> Proposal is discussed in TAB / CAB >> post approval a Template is created >> Once Template created it will become a Standard change.

Does it have Lead times?

No, can be raised and implemented any time.

Retrospective - Emergency Change process

Retro - Emergency Change Approval Workflow

In ITIL, Retrospective changes refer to:

- An attempt to restore a service via a change after an P1/P2 issue has occurred.
- The need to complete documentation retrospectively after fixing a problem.
- A change request created for changes that are already completed, for the purpose of recording it in the application.

In Corporate Division, we have only given the option to raise a Retrospective change in Emergency change Model.

Retro-Change should only be used for P1 Crisis/P1 and P2 incidents only.

Scenarios when Retrospective change can be raised:

Retrospective Emergency change can be raised to document the actions taken to mitigate Crisis/Major or Critical incidents (P1/P2). During the major incident, the focus of the teams is to mitigate the impact urgently. Although we have given the provision of raising Emergency retrospective changes, it should be noted that all actions needed to resolve the issue should be discussed and Approved (via mail or verbally) on the MIM bridge with all relevant stakeholders.

Retrospective Emergency changes need to follow below defined guidelines:

- Major Incident Management (MIM):
- Approval Documentation:- MIMs will use a whiteboard to document all emergency change approvals. Ensure to record the description, timestamp, and approvals from the relevant divisions.
- Alert all CTOs:- For P1 and P1 crisis incidents only, Service Owners from SPGI will notify the CTOs via email or during the bridge within 1 hour of the change implementation. This ensures that they are informed of the fix and the subsequent retroactive creation of the change record after resolution.
- Attach Approvals:- Include the whiteboard approval details in the change request.

Retrospective - Emergency Change process

2. Change Management:-

- **Pre-Implementation Approval**:- Obtain approval from the impacted Divisional IT Manager during the Major Incident call or via email before the implementation. Attach this approval to the change request.
- **Post Implementation Approval:-** Emergency Change approvals in Change request are recorded post-implementation. The change ticket should be added within 24 hours of post-implementation of the change.
- Testing Evidence: If a lower environment is available, a quick round of testing should be conducted to validate the change. This testing aims to identify potential issues before implementation. In situations where a lower environment is not available, alternative testing methods must be used. These include peer reviews, code reviews, simulated testing using available tools, and selective rollouts to a subset of the production environment. The results of these tests should be documented in retrospective Change.
- **Retrospective Change:** Submit the change ticket with the complete approval workflow, incident reference, and documented approvals from the whiteboard within 24 hours of executing the change.

3. Audit and Handling Process Deviations:

- · Change Managers must thoroughly review retrospective changes and highlight any process deviations.
- **Document deviations** from the standard emergency change process, including details and reasons.
- · Change Management will track all identified improvements and lessons learned in ServiceNow as part of problem management tasks.

ServiceNow Enhancements coming soon:

- 1. Restricting Retrospective Emergency change to be raised only on top of a P1 Crisis / P1 or a P2 Incident. (Meaning Going forward Retrospective Emergency changes cannot be raised for P3 / P4 Incidents.)
- 2. Adding a Check Box on Incident form "Retro-Emergency Change Required" which will be checked by the MIM team, for any incident requiring a Retrospective change. Clicking of this box should create a Retro-Emergency change with details of the incident copied directly in it.
- 3. Addition of a mandatory field in Emergency Retrospective Change form to attach the CTO approvals for all P1/P1 Crisis changes Only.

New KPI Update- Changes Implemented and Closed within Change window

Change management has implemented a process to track changes that do not adhere to the designated change window. Moving forward, two new key performance indicators (KPIs) will be reported for:

- 1. Changes that commence within the planned change window.
- 2. Changes that are completed within the planned change window.

There has been a lot of Improvement seen in the numbers for last 3 months but still everyone needs to improve on them further as the targets are very stringent.

New KPI (DTS)	MAY	JUNE	JULY
CHANGES WHICH STARTED WITHIN THE PLANNED CHANGE WINDOW	75.54%	85.76%	92.66%
CHANGES WHICH WERE CLOSED WITHIN THE PLANNED CHANGE WINDOW	33.57%	51.78%	64.22%

Common reasons why the baseline figures have been so low earlier:

For Criteria 1 - Changes that commence within the planned change window.

- Implementation Team forgot to click on the Implement button before starting the change (so that change falls in "Implement" state first)
- Implementation Team started Implementing the change without paying attention to the change window.
- Due to historic practice that Only Co Ordinator will deal with updating the change and Implementation team will just Implement their part once go ahead received from Co Ordinator or Change requestor.

For Criteria 2 - Changes that are completed within the planned change window.

- Implementation Team forgot to close their task post implementation as a result Validation task was also left unattended.
- Validation Team forgot to close their task post Validation.
- There could be genuine reasons for change Extensions like Vendor dependency, Technical difficulties during Implementation, Environmental factors outside of Implementation teams control, Dependency on Customer in case of Multiple Implementation / Validation task etc.

Change management has already started talking to the Towers and educating them about Good practices and Do's & Don'ts of Change Management. This is evident in the improvement in the trend as seen.

Change Approval Flow (Normal Change type)

How do you get your Change approved?

There are **7 GATEWAYS** that are used to manage the approval process of a Change. These gateways are displayed above the change form to give you an indication which stage of the process your Change is in. In addition to this each of these gateways are managed by a particular role.

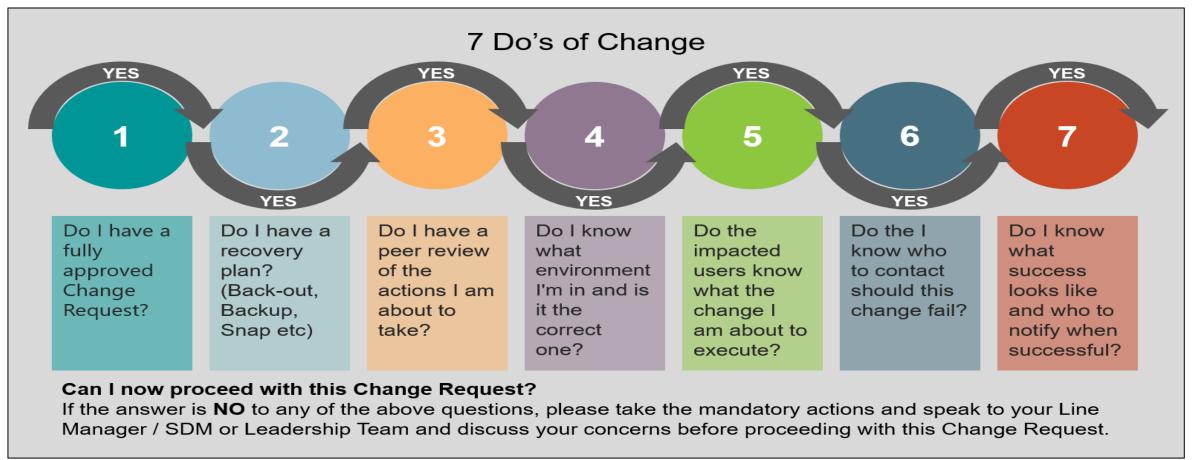
New	Assess	Authorize	Scheduled	Implement	Review	Closed	Canceled
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State	What needs to be done in this Stage ?	Who will Do this and what Approvals are triggered?
New	Change is in draft status and has not yet been submitted for approval. Here Requestor has to fill up all Mandatory fields. He will Select Change Coordinator Group , Change Implementation Group and Change Validation Group . Also he will assign a Person name to a Change Co Ordinator group.	Requester
Assess	Here, Change Coordinator will update the change request properly, will assign the Implementation task and Validation task to concerned named person. In this stage 2 Approvals will be generated one for Change Coordinator to review the entire change from Technical perspective and grant his approval and other for Change Manager to review the change from Quality perspective	Coordinator to Approve Change Coordinator group Approval and Change Manager to Approve DTS Change Manager Approval
Authorise	This is the stage where, Once both the Change Coordinator and Change Manager approvals are done the change will automatically travel in Authorize. In this stage All the Impacted Divisions which have been selected by the Requestor with get their own Approvals (LCCB Approvals). In this stage change will be taken trough the TAB and then CAB. Once ALL Div LCCB Approvals are done, system will generate the last CAB Approval for Change team (CHG-DTS-Global-CAB Approval)	Divisional Approval (LCCB) CAB Approval for Change team (DTS Global CAB
Schedule	Once all Stakeholders mentioned above have provided their approval, change travels in Schedule state. This is a holding state where Implementation team will have to wait till "Implement" Button appears on the change form. ("Implement" button will only appear once Planned Start date and time has elapsed.) Clicking of the Implement button will also capture the Actual Start time for the change.	Change is fully approved at this stage. And Implementation team to wait for the Implement Button to appear on the change, which after clicking they can start Implementation
Implement	As soon as Implement Button appears on the change, signifying the Planned Start time has reached, Implementor should click it and start with their Implementation.	The Engineer assigned to Implementation task Engineer assigned to Validation task
Review	Once Implementation team finishes their Implementation they should close their task and Validator / Verifier should start verifying the change outcome. Once both Implementation and Validation task are closed change automatically goes in Review State. (Time of closure of the Validation task captures the Actual End time of the change)	Closure Information tab will appear in this state. Coordinator / Requestor to update Closure details and save the change
Close	Once all implementation task have been closed the status of the change is set to closed.	Change Coordinator

Implementing a Successful Change

How to implement a Successful Change

A stable IT environment can only be achieved if the changes to the environment are carried out in controlled Manner. No matter how experienced an individual is or how many times an implementation task has been done, the **7 Do's of Change (7Doc)** checklist should be followed **EVERY TIME a Change is performed.**



Do's & Don'ts Of Change Management

ALL Staff must adhere to the Change Management Process when executing Changes to our IT Environment. A few guidelines are below however, full details can be found in the Change Management (sharepoint.com).

Changes implemented and found not to be compliant will be regarded as an **UNAUTHORISED CHANGE** and will lead to the appropriate actions being taken.

DO NOT	DO
DO NOT - Implement a Change Outside of the Planned change window at any cost, as doing so will result in your change being termed as an Unauthorized change.	Ensure you always implement your change within the defined change window. Coordinators should ensure that Implementation and Validation tasks are closed within the Change window.
DO NOT - Implement a Change in PRODCTION environment, without an APPROVED Change request.	Use the helpful hints on the Change form to give as much details about what is being planned. Information should be clear and concise.
DO NOT - Implement a Change in any other NON-PRODUCTION environment which can directly, or indirectly impact existing Services hosted in PRODUCTION without an APPROVED Change Request	Submit your changes as early as possible to give Approvers enough time to review and approve and raise queries if needed.
DO NOT - Raise Changes with minimal details that do not give the approvers enough details to understand what is required and how it will be achieved.	Respond to queries that have been raised against a Change, in a timely manner.
DO NOT - Proceed with implementing a Change without first logging into ServiceNow and moving the Change to "Implement" stage to confirm the change has started.	Immediately update a Change request with the outcome once the work has been successfully been completed.
DO NOT – Use the Emergency change type for any activity other than to resolve a Critical or Major Incident.	Do raise retrospective changes to record any changes that were implemented to resolve an incident.

Roles and Responsibilities

There are 7 Key roles that are carried out by various individuals within the change management process.

1. Change Requester

Initiates the change request in ServiceNow, it can be anyone with proper ServiceNow Access.

2. Change Implementer

Executes implementation plan during change window, Technology Towers.

3. Change Validator

Confirms successful implementation of change, QA, Requester, Coordinator or Implementer.

4. Change Coordinator

Manages change through its lifecycle, take care of ticket hygiene and documentation, manages resources for the Change Request. SME/Tech Lead.

5. Change Manager

Provides Change process operational oversight and compliance, Change Process Administrators.

6. Change Approvers

Approves changes, accept business risk, Business & Technology service owners.

7. Change Sponsor

Ensures alignment with business objectives, Senior Manager/VP.

Important Guidelines for Requestor / Coordinator

Preparatory work needed before raising a change.

- Requestor needs to identify all the requirements including business, functional and non-functional before initiating the change request.
- Requestor needs to secure Downtime approvals from relevant Service Owners / Business lines for changes involving Downtimes.
- Requestor needs to ensure there is proper representation of the change at the TAB / CAB meetings.
- Requestor needs to provide appropriate Justification for any Expedited changes raised and takes necessary Approvals to support them.
- Requestor should discuss the activities with all participating Implementation teams in advance and get an acknowledgement about feasibility of the work laid out.
- Requestor needs to attach / Update all testing evidences, Implementation Plan including Backout and Verification plans in the relevant sections in the change form.
- Requestor should validate and update the correct Affected services / Cl's in the change record.

Post Implementation Activities.

- Requestor should Communicate the Post implementation outcome of the change to all relevant stakeholders and update it in the Closure details section of the change right after the Verification / Review stage.
- Requestor should coordinate the closure of the task's post implementation in consultation with Implementation teams.
- Requestor to help with submitting the PIR if in case a Change is Unsuccessful or has cause an Incident.

Chair Advisory Board Meeting

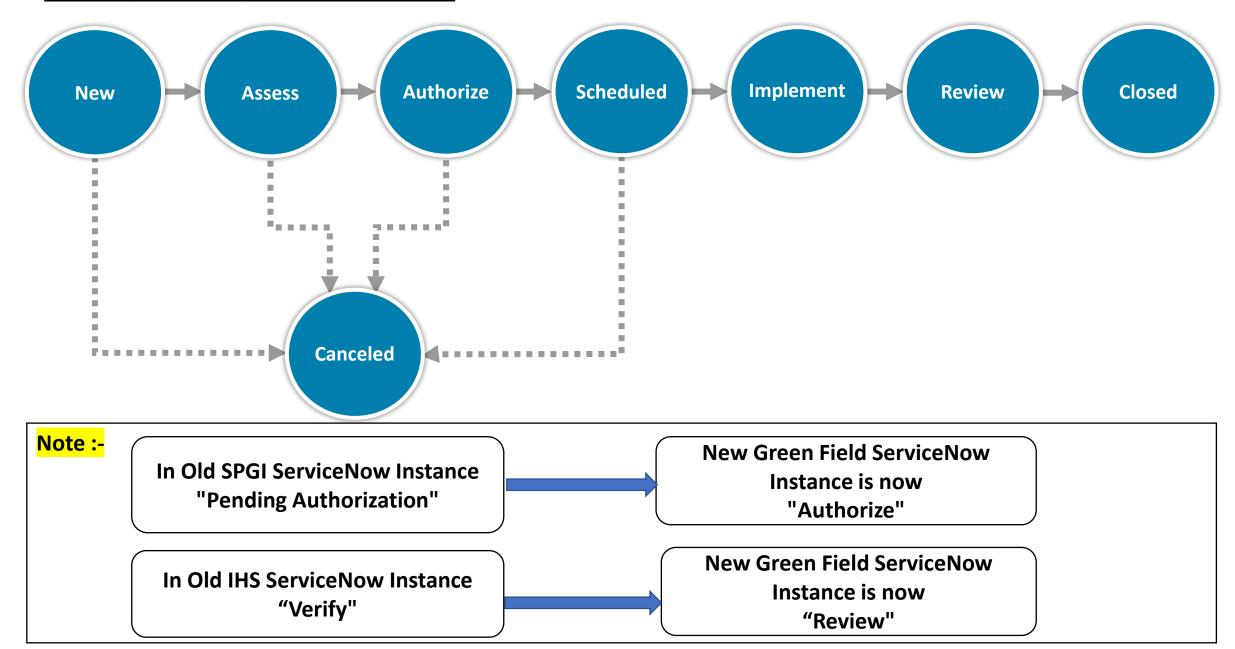
TAB/CAB Meetings schedule

There are currently 2 Technical Advisory Board (TAB) meetings and 2 Change Advisory Board (CAB) meeting:

TAB/CAB Meet	Date & Time (EST)	Date & Time (UTC)	Duration	Criteria	Targeted Division	Change submission Cutoff/ agenda Sent out by
SPGI Network TAB	Tuesday 11:00 AM EST	Tuesday 04:00 PM UTC	60 mins	DS and Wipro raised Network Changes in new greenfield instance. Change Type: - Normal, Expedited, External. Impacted Division: - Multi-division impacting.	Corporate, Ratings, Market Intelligence, Commodity Insight, S&P Dow Jones, Engineering Solution, Mobility, Sustainable1, OSTTRA	Monday- 2 PM EST/07.00 PM UTC
SPGI Global TAB	Wednesday 10:00 AM EST	Wednesday 03:00 PM UTC	90 mins	DS raised Non-Network Changes in new greenfield instance. Change Type: - Normal, Expedited, External. Impacted Division: - Multi-division impacting.	Corporate, Ratings, Market Intelligence, Commodity Insight, S&P Dow Jones, Engineering Solution, Mobility, Sustainable1, OSTTRA	Tuesday- 10 AM EST/ 03.00 PM UTC
SPGI Global CAB	Thursday 10:00 AM EST	Thursday 03:00 PM UTC	1 Hour	DS and Wipro raised Non-Network and Network Changes from SPGIS now instance. Change Type: - Normal, Expedited, External Impacted Division: - Multi-division impacting All OSTTRA raised Changes impacting OSTTRA division in new greenfield instance.	Corporate, Ratings, Market Intelligence, Commodity Insight, S&P Dow Jones, Engineering Solution, Mobility, Sustainable1, OSTTRA	Wednesday- 10 AM EST/ 03.00 PM UTC
SPGI OSTTRA CAB	Thursday 08:00 AM EST	Thursday 01.00 PM UTC	30 mins	All OSTTRA raised Changes impacting OSTTRA division in new greenfield instance. Change Type: - Normal, Expedited. Impacted Division: - OSTTRA only.	OSTTRA	Wednesday- 10 AM EST/ 03.00 PM UTC

Appendix

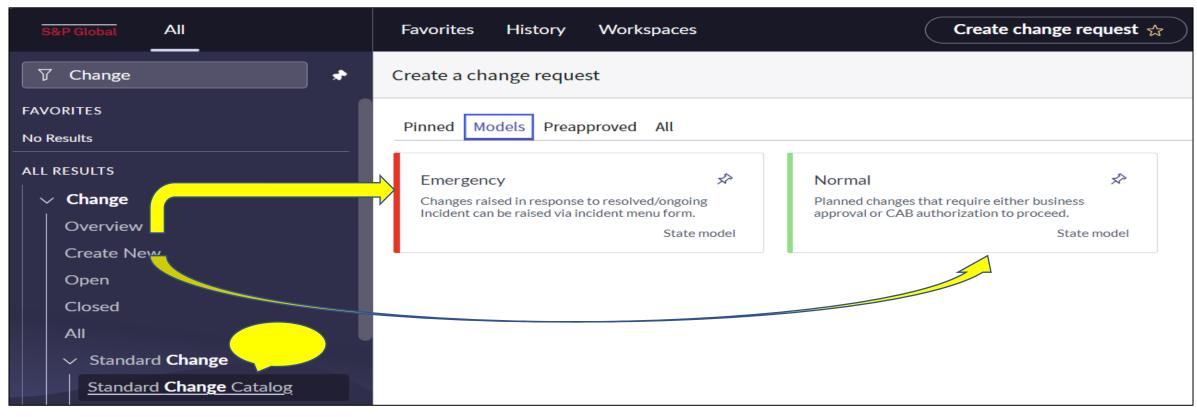
Change Lifecycle Overview



How to Raise A Change Request

Normal and Emergency Changes can be created by clicking the **Create New** module under **Change** and accessing the **Models** tab.

Standard Change can be created by clicking the **Standard Change Catalog.**



Note: Expedited changes are not directly created from the **Create New** module. Instead, Normal Change types will default to Expedited when the planned start date falls outside of the defined lead times.

Planning Factor and Lead Times

Planning Factor: Requestor is prompted to fill up the **Risk and Impact assessment form** during creation of the change. This form has 10 questions related to Risk parameters and 6 questions related to Impact parameters. Each question has a weightage, and the values are used to define the Planning Factor of a Change

There are 3 Planning factors:

- 1. High
- 2. Moderate
- 3. Small

Lead Time :- Defines The number of days that a change is required to be submitted in advance, to enable the required visibility and appropriate levels of approvals. Planning Factor values are used to calculate Lead Times.

Planning factor	Lead Time
Standard Change	Zero
Small	3 days (for single and multi-divisions)
Moderate	7 days single division and 15 days multi-division
High	15 days (for single and multi-divisions)

	Planning Factor Model			
Risk Impact	High	Medium	Low	
High	High	Moderate	Moderate	
Medium	High	Moderate	Small	
Low	Moderate	Moderate	Small	

Normal Change Approval Workflows

Changes Impacting Multiple Divisions



Normal Changes

Division	Approval Group (Assess)	Approval Group (Authorize)
Multiple	 Change Coordination Group DTS Change Manager Group 	 Impacted Local Divisional CAB(s) S&P Global CAB (Ex: CHG-DTS-Global-CAB Approval)
Multiple (Network changes where the Subcategory is Firewall)	Change Coordination Group DTS Change Manager Group	 Infosec Approval (Ex: CHG-Corp-Appr-SecOps) Impacted Local Divisional CAB(s) S&P Global CAB (Ex: CHG-DTS-Global-CAB Approval)

Expedited Change Approval Workflows:-

Changes Impacting Multiple Divisions



Expedited Changes

Division	Approval Group (Assess)	Approval Group (Authorize)
Multiple	Change Coordinator GroupDTS Change Manager Group	 Expedited Local Divisional CAB (Ex: CHG-Corp-LCCB- Expedited) Impacted Local Divisional CAB(s)
Multiple (Network changes where the Subcategory is Firewall)	 Change Coordinator Group DTS Change Manager Group 	 Infosec Approval (Ex: CHG-Corp-Appr-SecOps) Expedited Local Divisional CAB (Ex: CHG-DI-LCCB-Expedited) Impacted Local Divisional CAB(s)

Emergency Change Approval Workflows:-

Changes Impacting Multiple Divisions

Emergency Changes

Division	Approval Group (Assess)	Approval Group (Authorize)
Multiple	Change Coordinator GroupDTS Change Manager Group	 Emergency Local Divisional CAB (Ex: CHG-Corp-LCCB- Emergency) Impacted Local Divisional CAB(s)
Multiple (Network changes where the Subcategory is Firewall)	 Change Coordinator Group DTS Change Manager Group 	 Infosec Approval (Ex: CHG-Corp-Appr-SecOps) Emergency Local Divisional CAB (Ex: CHG-DI-LCCB-Emergency) Impacted Local Divisional CAB(s)

Standard Change Approval Workflows

Changes Impacting Single/ Multiple Divisions



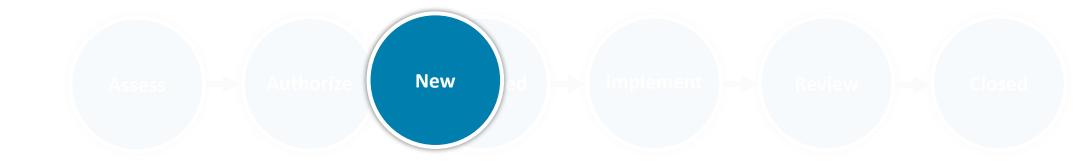
Standard Changes

Division	Approval Group (Assess)	Approval Group (Authorize)
Multiple	Change Coordinator Group	No Approval is required.
Single	Change Coordinator Group	No Approval is required.

New Standard Proposals

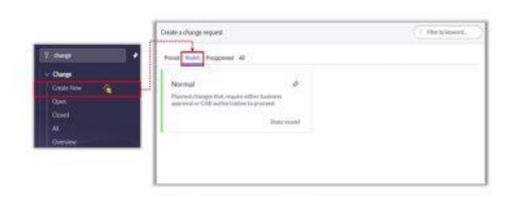
Division	Approval Group (Assess)
Multiple	DTS Change Manager Group
Single	DTS Change Manager Group

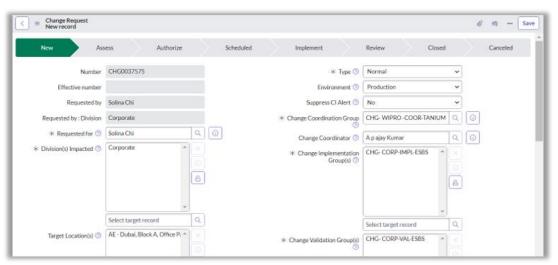
Deep Dive | Normal Change Request :-



New is the default state when a change request is initially created or opened and has yet to be submitted for approval.

After selecting the **Normal** change type, a blank change form will be displayed. You will need to complete the initial mandatory fields, marked by a **Red Asterisk** before you can save the form.

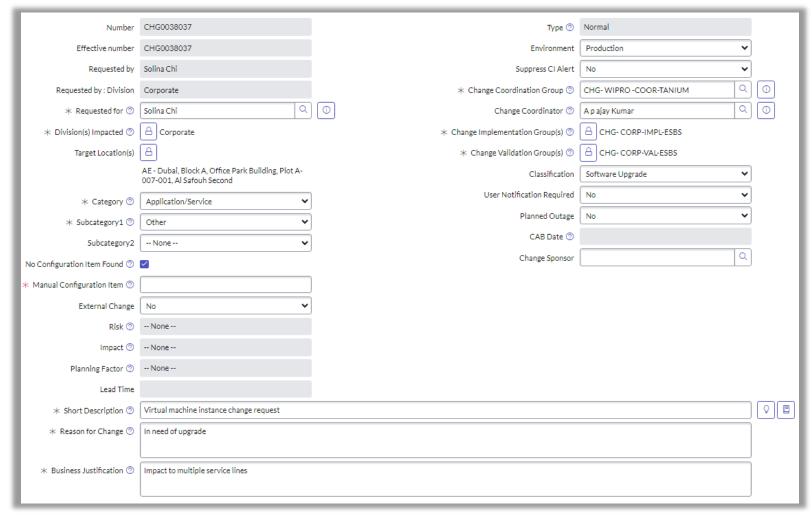




Note: A full list of all fields within the change form can be found in the Appendix.

Deep Dive | Populating Change Request :-

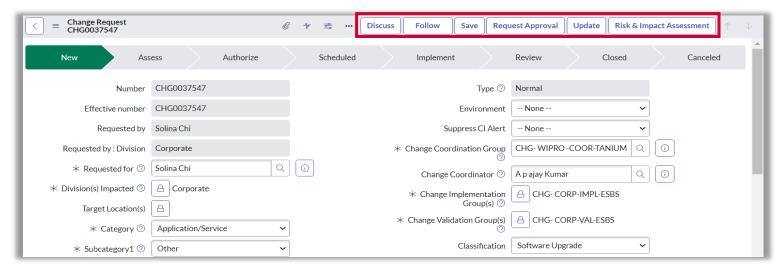
Some fields on the change form have a dual action, in which they will trigger another action on the change form. Some will be triggered right away, while others not until the change form has been saved.



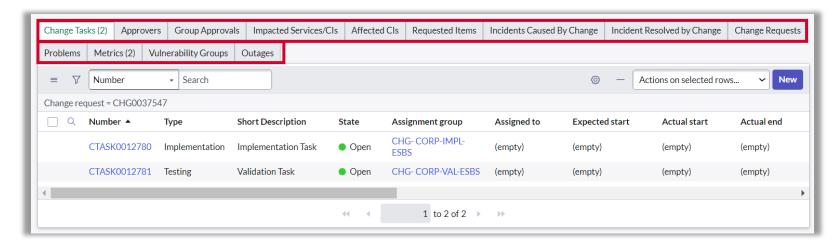
Field	Triggered Action
Category	Selected Category determines Subcategory 1 and Subcategory 2 values
No Configuration Item Found	Selected checkbox will prompt you to input a Manual Configuration Item
Environment	Selecting a Configuration Item that is linked to an environment will populate this field
Suppress CI Alert	Selecting Yes will run a script to suppress CI alerts
Change Implementation Group(s)	Change tasks will automatically be created ready to be assigned to an Implementer
Change Validation Group(s)	Change tasks will automatically be created ready to be assigned to a Validator
Classification	Selecting Problem Resolution or Incident Resolution will trigger additional mandatory fields to complete
User Notification Required	Selecting Yes will open a separate catalog item for the Communication team
Planned Outage	Selecting Yes will create an outage record in the Outages tab

Deep Dive | Save Change Request :-

Upon clicking Save, this will generate additional UI action buttons at the top of the form

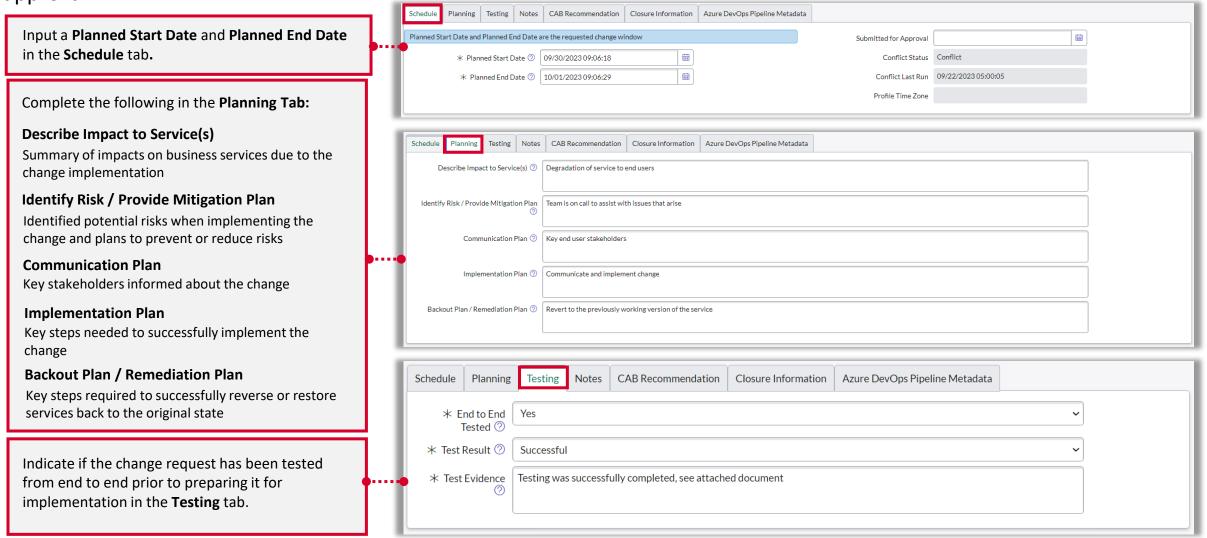


and **Related List tabs** at the bottom of the form. Under the **Change Tasks** tab, you will see the **Implementation and Validation tasks** that have been auto-created. The **Outages, Incidents Caused By Change, and Problems tabs** may also be populated if applicable.



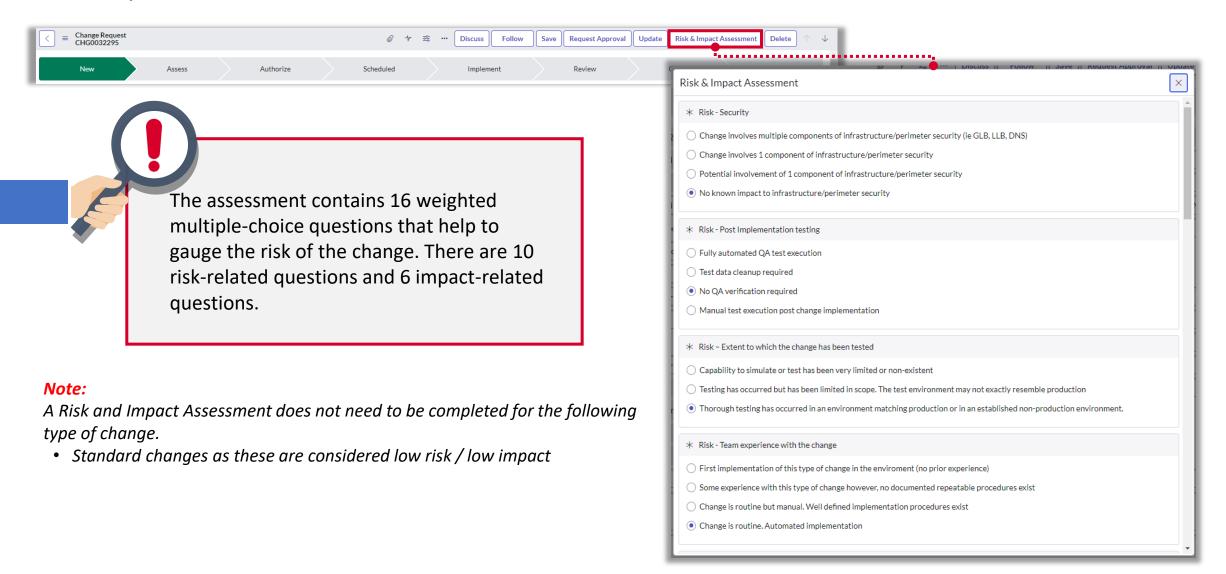
Deep Dive | Complete Change Request Details :-

Additional fields noted in the **Schedule**, **Planning**, and **Testing** tabs also need to be completed to submit the change for approval.



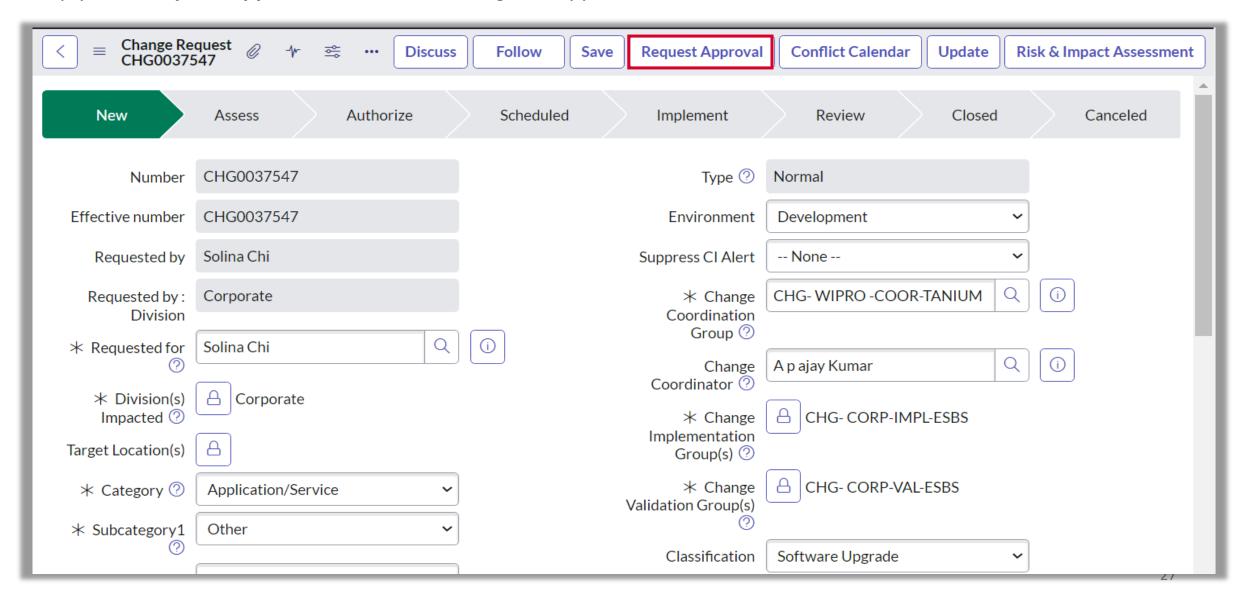
Deep Dive | Risk & Impact Assessment :-

Normal changes require a **Risk & Impact Assessment** to be completed. The option can only be accessed once the change has been initially saved.



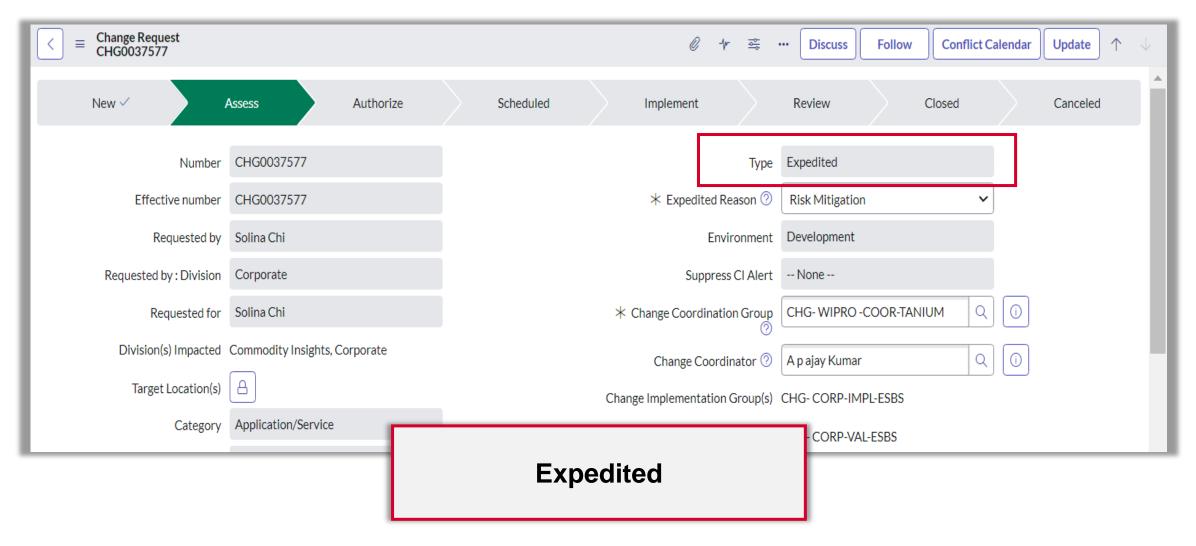
Deep Dive | Submit the Change for Approval :-

Simply click **Request Approval** to route the change for approval and move it from **New** to the **Assess** workflow state.



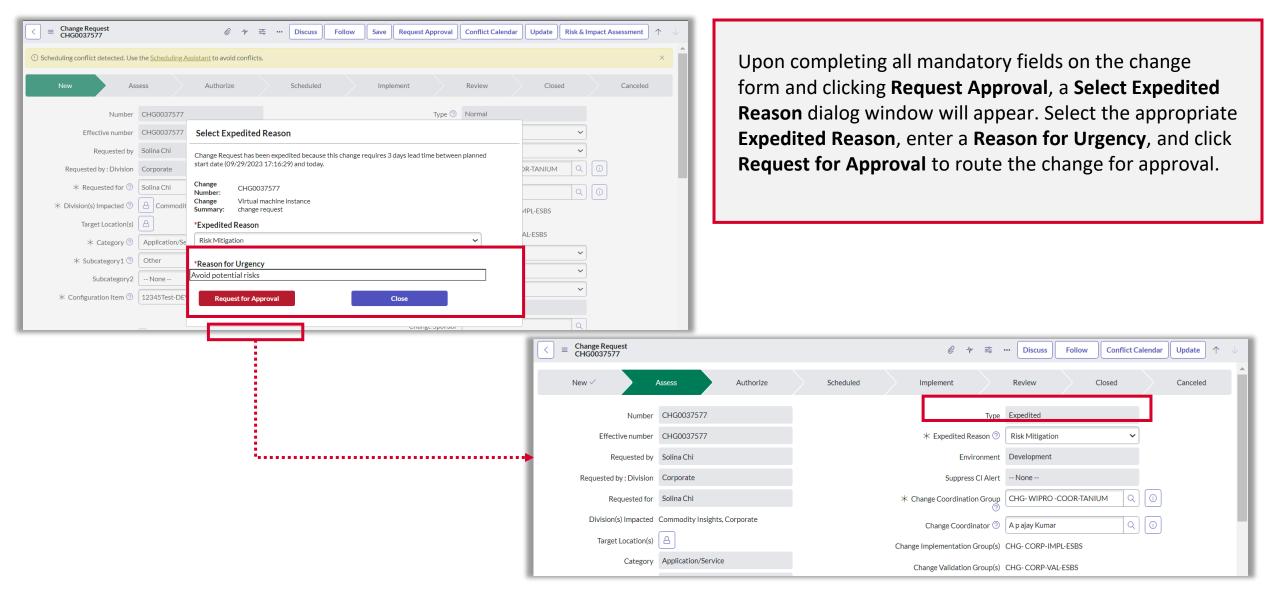
Creating Expedited Change:-

The Expedited and Emergency Change forms are slightly different from the Normal Change form. The **Type** field will indicate what type of change is being raised.



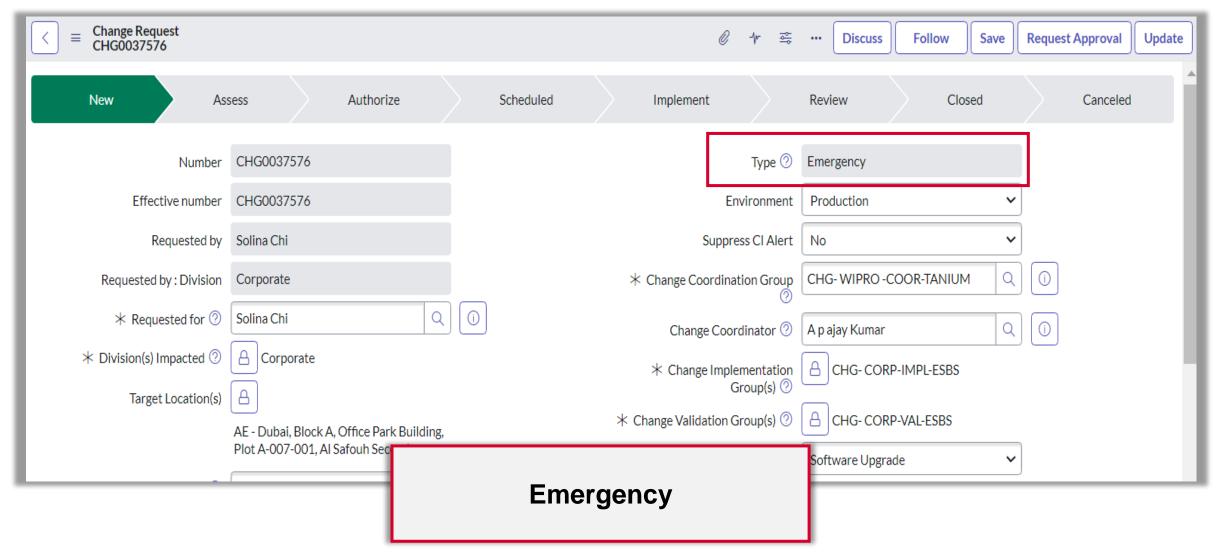
Deep Dive | Expedited Change Request :-

Expedited changes are not directly created from the **Create New** module. They are automatically triggered when normal changes are created with a **Planned start date** that falls outside the configured lead time for Normal Changes.



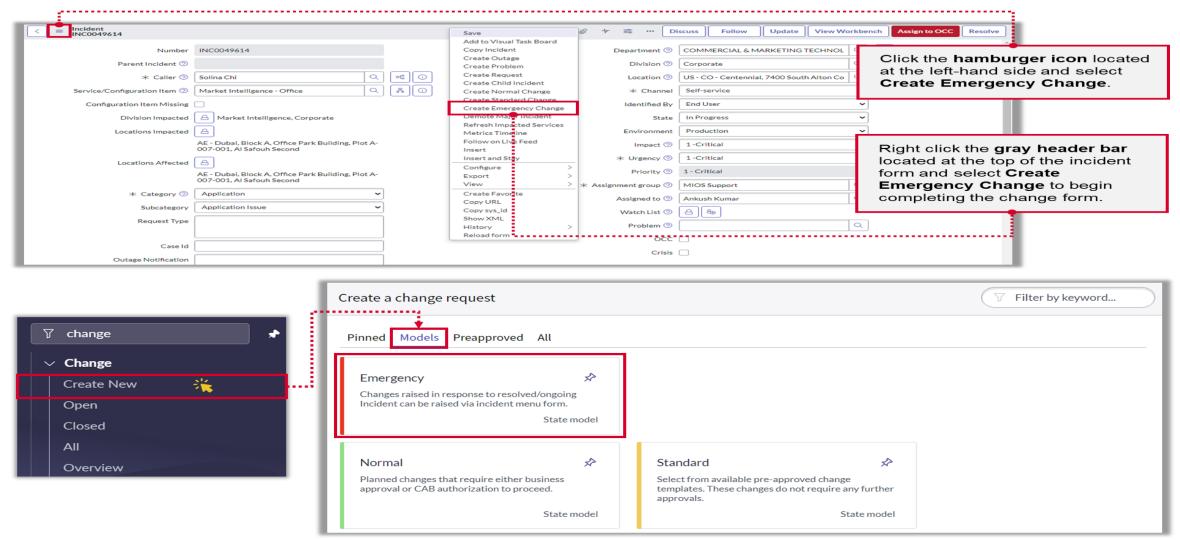
Creating Emergency Change:-

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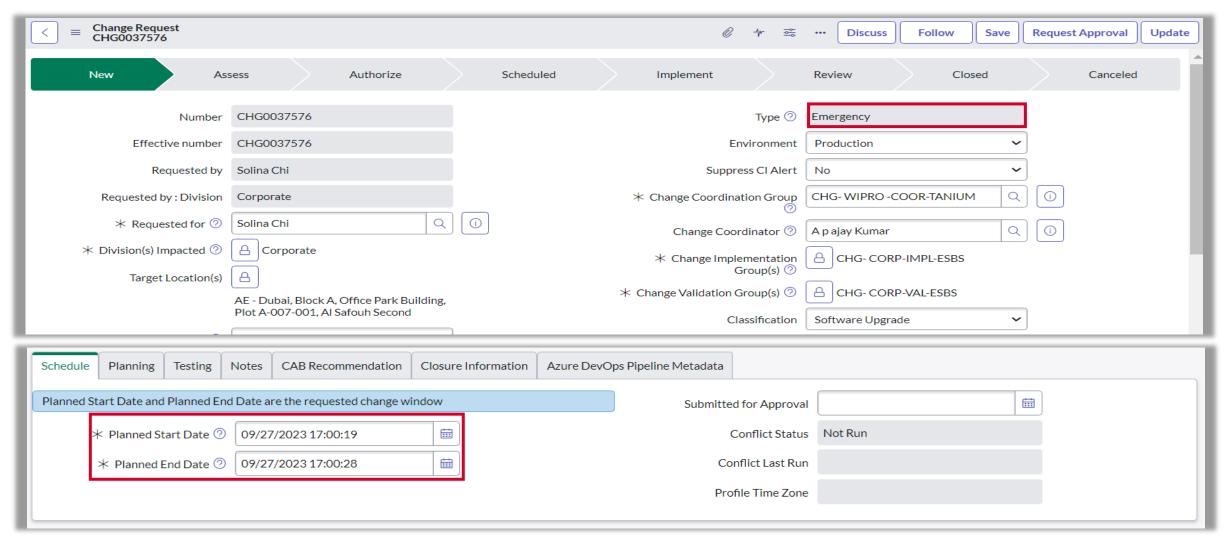
Deep Dive | Emergency Change Request :-

Emergency changes can be created in two different ways. Depending on the Divisional change process, they will either be created directly from an incident record or the **Create New** module, using the **Models** tab.



Deep Dive | Emergency Change Request :-

Emergency changes can be created retrospectively whereby the change request is created after its implementation. This is done by backdating the **Planned Start Date** and **Planned End Date** in the **Schedule** tab.



Deep Dive | Emergency Change Request from an Incident :-

If the cause of an incident requires a change to an infrastructure or business service, emergency change requests can also be created directly from the existing incident record.

