Operational Continuity Plan – VTI (VicePresident of Technology and Innovation)

Ecopetrol Continuity Cycle

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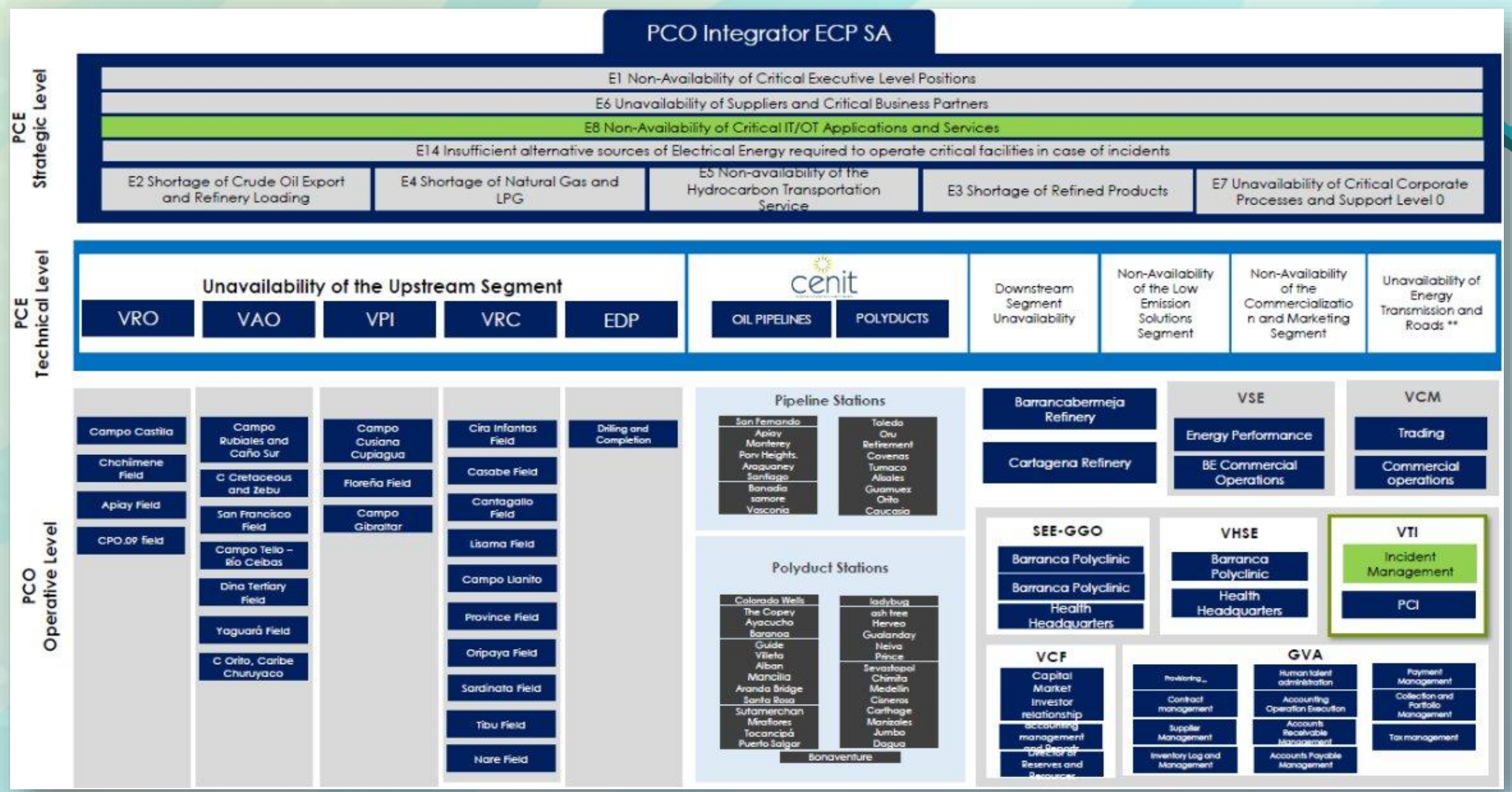

PCO Integrator ECP SA
PCE Strategic Level
E1 Non-Availability of Critical Executive Level Positions
E6 Unavailability of Suppliers and Critical Business Partners
E8 Non-Availability of Critical IT/OT Applications and Services
E14 Insufficient alternative sources of Electrical Energy required to operate critical facilities in case of incidents
E2 Shortage of Crude Oil Export and Refinery Loading
E4 Shortage of Natural Gas and LPG
E5 Non-availability of the Hydrocarbon Transportation Service
E3 Shortage of Refined Products
E7 Unavailability of Critical Corporate Processes and Support Level 0
PCE Technical Level
Unavailability of the Upstream Segment
VRO
VAO
VPI
VRC
EDP
cenit
OIL PIPELINES
POLYDUCTS
Downstream Segment Unavailability
Non-Availability of the Low Emission Solutions Segment
Non-Availability of the Commercializatio n and Marketing Segment
Unavailability of Energy Transmission and Roads **
PCO Operative Level
Campo Castilla
Chichimene Field
Apiay Field
CPO.09 field
Campo Rubiales and Caño Sur
C Cretaceous and Zebu
San Francisco Field
Campo Tello – Río Ceibas
Dina Tertiary Field
Yaguará Field
C Orito, Caribe Churuyaco
Campo Cusiana Cupiagua
Floreña Field
Campo Gibraltar
Cira Infantas Field
Casabe Field
Cantagallo Field
Lisama Field
Campo Llanito
Province Field
Oripaya Field
Sardinata Field
Tibu Field
Nare Field
Drilling and Completion
Pipeline Stations
San Fernando
Apiay
Monterey
Porv Heights.
Araguaney
Santiago
Banadia
samore
Vasconia
Toledo
Oru
Retirement
Covenas
Tumaco
Alsales
Guamuez
Orito
Caucasia
Polyduct Stations
Colorado Wells
The Copey
Ayacucho
Baranoa
Guide
Vileta
Alban
Mancilla
Aranda Bridge
Santa Rosa
Sutamerchan
Miraflores
Tocancipá
Puerto Salgar
ladybug
ash tree
Herveo
Gualanday
Neiva
Prince
Sevastopol
Chimila
Medellin
Cáneros
Carthage
Manizales
Jumbo
Dagua
Bonaventure
Barrancabermeja Refinery
Cartagena Refinery
VSE
Energy Performance
BE Commercial Operations
VCM
Trading
Commercial operations
SEE-GGO
Barranca Polyclinic
Barranca Polyclinic
Health Headquarters
VHSE
Barranca Polyclinic
Health Headquarters
VTI
Incident Management
PCI
VCF
Capital Market
Investor relationship
GVA
Human talent administration
Accounting Operation Execution
Payment Management
Collection and Portfolio Management
Tax management
Contract management
Supplier Management
Inventory Log and Management
Accounts Payable Management

BIA – Business Impact Analysis

- Direct Officials
- Contractors

- Products/services supplied by third parties who: Are sole suppliers, operate a critical process

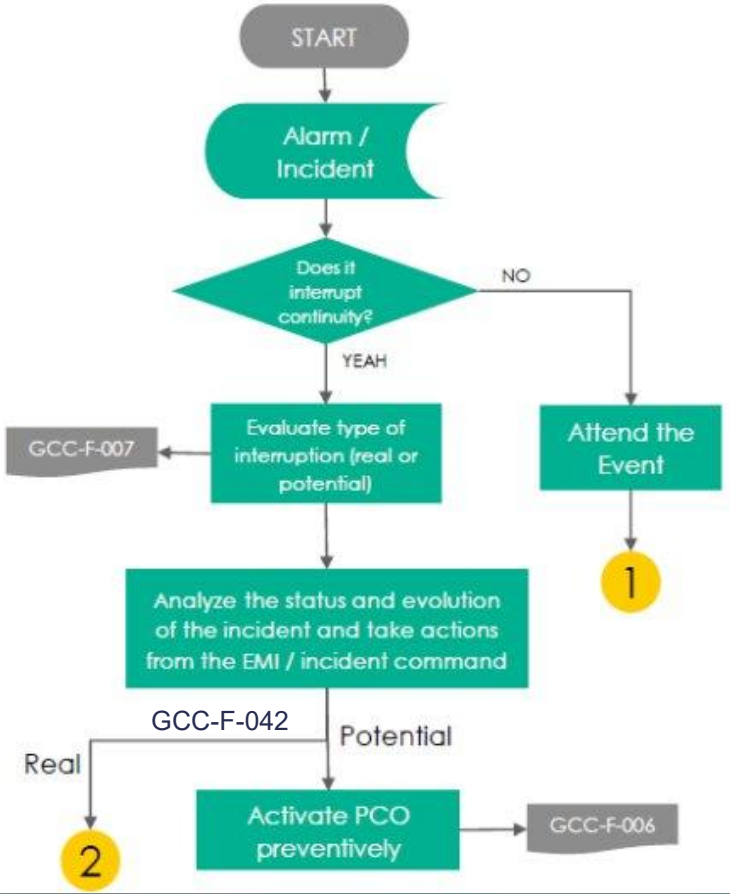
- Petroleum infrastructure, facilities, equipment
- Corporate Buildings

- Critical process characteristics

- Essential to operate the process and ensure the minimum acceptable level of delivery of products and services; IT Operated / Business Operated (Direct/Third Party).

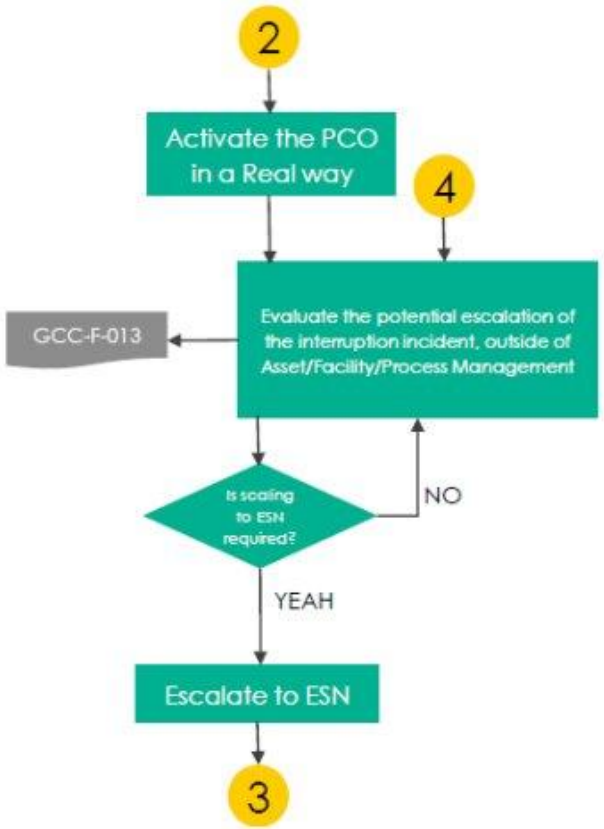
- Information
- Food, Water
- Chemicals, Fuels, Diluent

PCO - Process Operational Continuity Plan
Activation flow



ACTIVITY .	RESPONSIBLE .
Receive alarm or incident information Notify the SD, Department Heads/Process Coordinators	Whoever knows the information about the alarm or incident
Evaluate whether the alarm or incident affects or could affect the continuity of a critical process or function. N1: Activate attention team (**EMI** : Incident Management Team) N2: May require activating the **PCO**	Department Heads/Critical Process Coordinators
YES: Review the level of preparation with the help of the format: GCC-F-007 "PREPARATION CHECKLIST..."	Department Heads/Critical Process Coordinators
To control its cause and prevent its materialization or escalation: emergency plan and contingency plan and/or incident management	Command on scene/Incident commander/Incident management manager
Determine the need to declare the operation of the process/asset in contingency Activate and session the Incident Command (**EMI** : Incident Management Team)	Process manager
Totally or partially activate continuity strategies or solutions (**PCO**) Process manager: activate strategies and solutions	Department Heads/Critical Process Coordinators Process manager

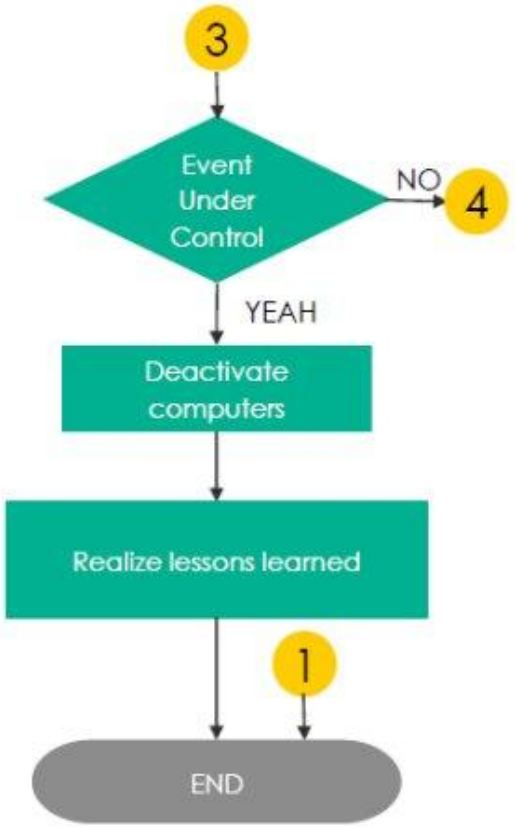
PCO - Process Operational Continuity Plan
Activation flow



ACTIVITY .	RESPONSIBLE .
Activate continuity strategies or solutions, according to their impact (PCO) Process manager: activate strategies and solutions	Process manager
Evaluate potential of the event? Can it overcome the handling and delegation of Management? Establish the need for resources of the VP or Identify consequences that require further escalation	Incident Commander (Report findings)
ESN YES: Escalate to VP ESN	Incident Commander
Greater management capacity, affecting continuity of the VP or business segment or Crisis N5: Escalate to the **CCE** : Business Crisis Committee	Incident Commander

PCO - Process Operational Continuity Plan

Activation flow



ACTIVITY .	RESPONSIBLE .
Managed at the asset/process level Monitor and evaluate the situation. Maintain plans and equipment at each level. Return to the stage of analyzing status and evolution.	Incident command
Disable response teams. Start activities to return to normality Incident closure Carry out post-incident activities	Incident command Delegated team
Perform lessons learned and report them - Of real activations (term 1 month) - Preventive activations (every end of quarter)	Practice Leader and/or Service Coordinators/Leaders VoBo Manager reports delivered

CONTINUITY SCENARIO
Operational Continuity Plan –PCO

Scope and Objectives Test PCO-VTI 2025

Objetivo y sentido de este plan

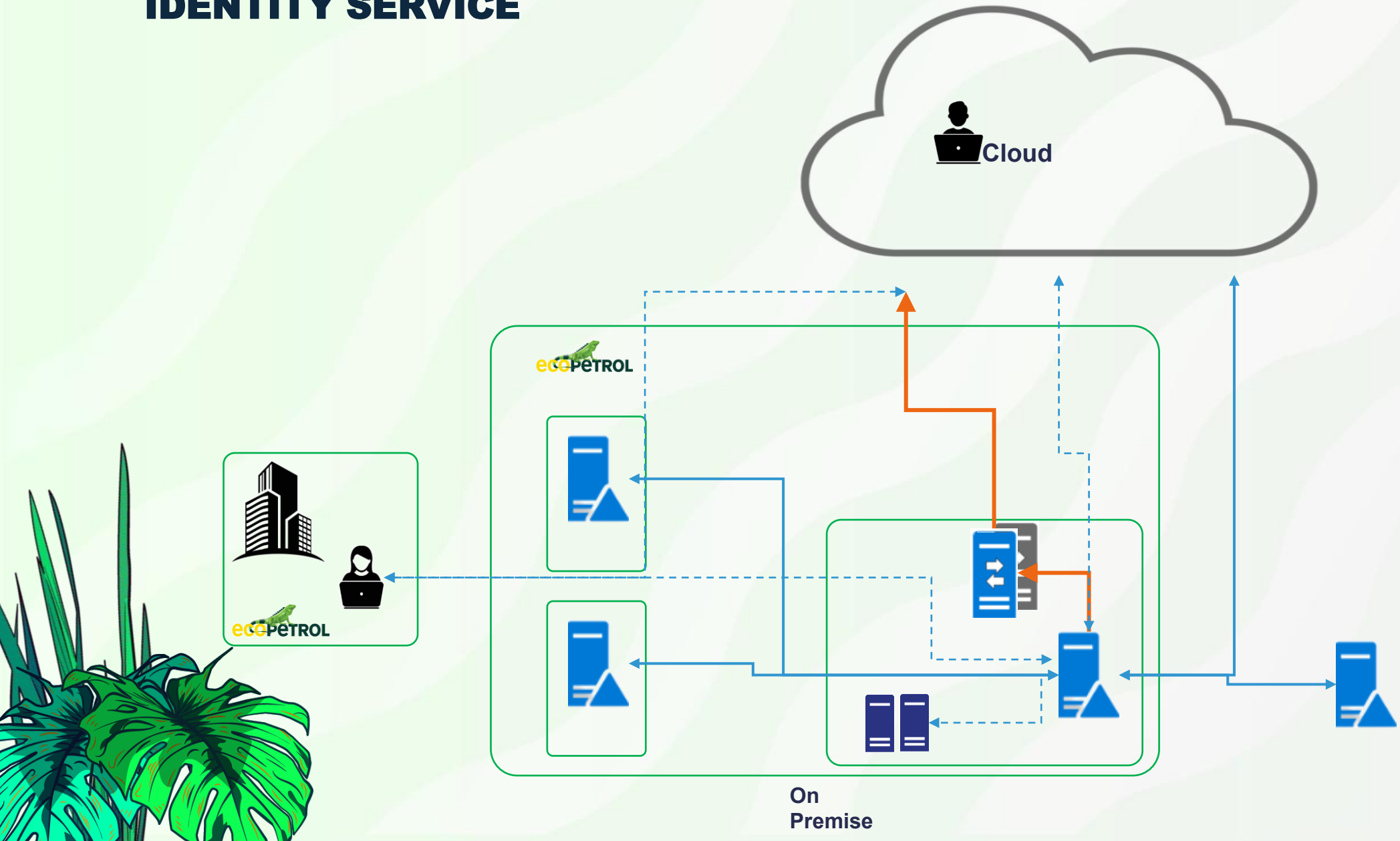
GENERAL OBJECTIVE OF THE TEST:

The main objective of the test is to simulate the activities to be carried out when an incident occurs of the deletion of all network accounts in Onpremise/cloud, in order to increase the capacity of the VTI to anticipate and respond to this type of incident.

SPECIFIC SCOPE

- Event Identification (Detection
- Log incidents arising from monitoring too
- Activation of Response and Notification (Alarm)
- Incident Management
- Team (EMI) Activation
- Activation of the Business Support Team
- Human Resources Enlistme
- Definition and Control of Necessary Resources
- Clarity in Assumed Roles
- Clarity in the activities to be carried out
- Control Response Standard Operating Procedures
- Analysis of Operational Continuity Impacts
- Operational Communications towards Continuity (Business Support)
- Using Documentation and Templates in Incident Command Activation
- Incident
- Command activity logging and tracking
- Ensure service restoration

ARCHITECTURE IDENTITY SERVICE



Scenario to be tested according to PCO VTI

Business Continuity Scenario -GE	PCO Scenario	Sub-stage	Variant
Disruption of critical IT/OT applications and services due to technology disaster	ECO-006 Non-availability of Technology.	SUBECO-006-01 Unavailability of IT applications	Unavailability of access to network accounts that allow access to Microsoft 365 services (Outlook, SharePoint, Teams and other applications linked to Active Directory)

ASPECTS OF THE TEST

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Process continuity loss scenarios - Infrastructure - Applications

AIM: Unavailability ofaccess to networkaccounts that allowaccess to Microsoft365 services(Outlook, SharePoint,Teams and otherapplications linked toActive Directory)

Critical Process: **Process:** Technology and Innovation **Threat:** Human error or a cyberattack that deletes or disables all Active Directory accounts, impacting all solutions that rely on this authentication.**Activity:** Restore the service as quickly as possible.**Procedure:** Activate critical accounts based on priority

Scope: Obtain an email distribution list of all critical solutions to be restored via script; subsequently restore the replication across the entire organization and activate the remaining accounts.

RTO: 8

RPO: 24

Risks (H–VH): Cyberattacks, human errors, technological operational incidents.

Test Topics

Beginning:

Creating temporary accounts

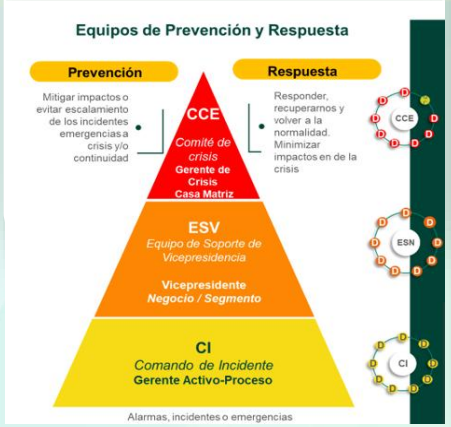
List of Ecopetrol users with critical functions to activate temporary accounts with a script

Incident Resolution

Incident analysis from service status review, incident notification in whatsapp chat for critical/high/massive incidents, creation of crisis room, creation of emergency accounts, Backup Recovery On-premise synchronization to cloud: Service verifications and closure of the incident in service manager and whatsapp chat.

PCO VTI Activation

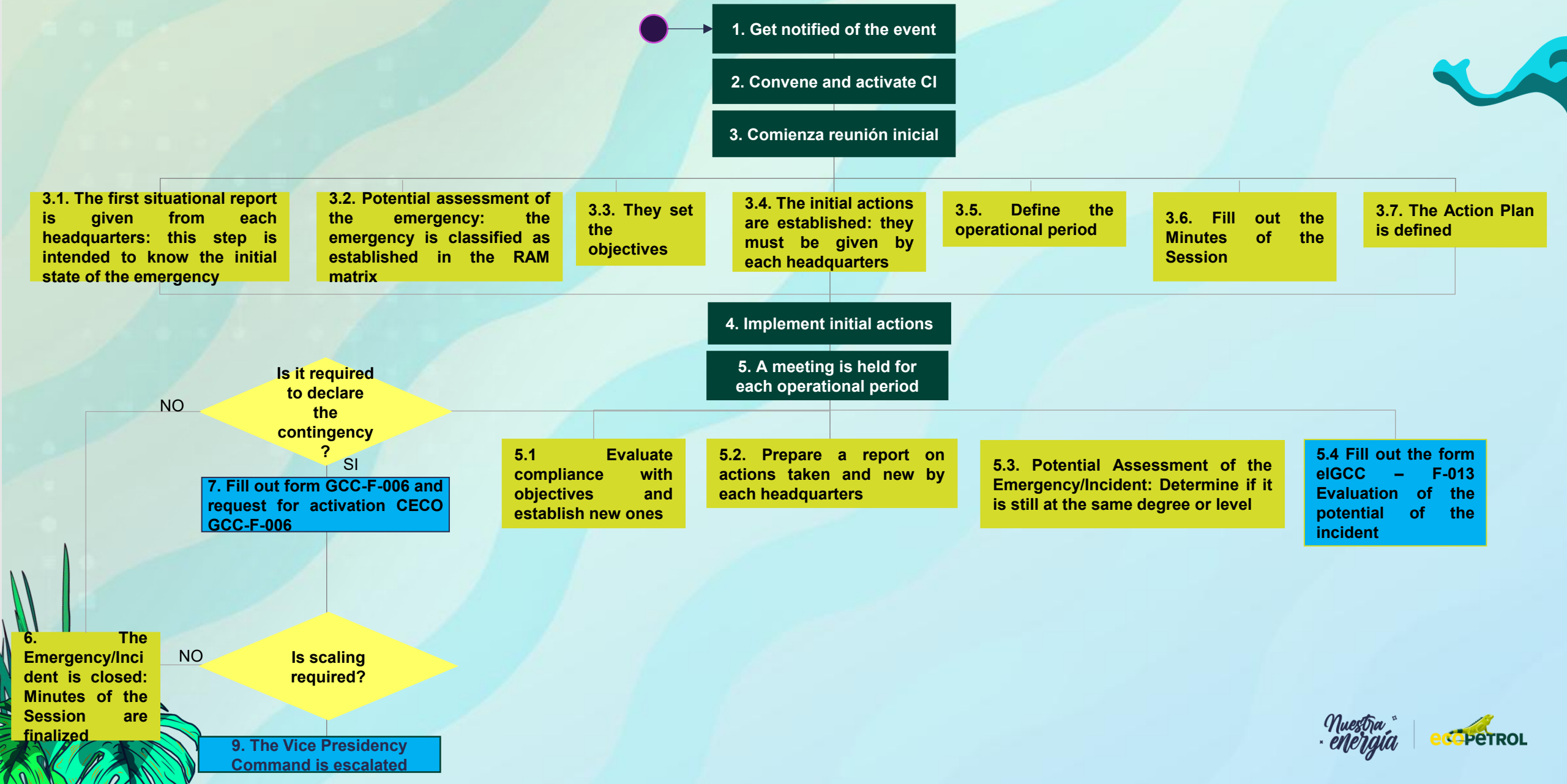
Incident Command



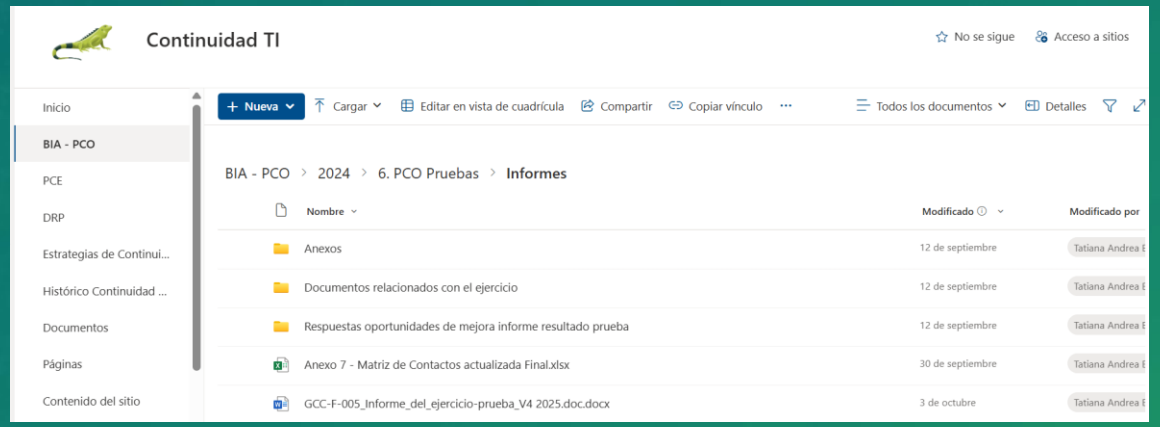
Communications

Communications to keep other PODs and service leaders, affiliates, and other operational areas of VTI informed

PCO - Process Operational Continuity Plan
How the Command Operates



Test Documentation



CONTINUITY SCENARIO
Strategic Continuity Plan -PCE
Scope and Objectives
Test PCE-VTI 2025

Scope PCE

In 2025, the Strategic Continuity Plan (PCE) test was also conducted in conjunction with the business continuity team, using a scenario involving a cyber incident affecting the ROMSS application at the Barrancabermeja refinery. Due to confidentiality requirements, the documentation and results of this test are handled by Ecopetrol's Continuity Governance team, from which the IT continuity practice of the VTI (Vice Presidency of Information Technology) receives its guidelines. Business areas of the refinery were involved in this test, and the delegation protocol was activated to notify the corporate crisis committee.

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_ G R A C I A S _

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