1 EP CIO Status Update

1.1 Background

EP CIO, working together with OUs, has made significant progress in delivering the business results outlined in its plan. However, it is important to note that these achievements have been delivered against the background of a very challenging operating environment for IT in EP:

- Only limited business planning or processes were in place for the EP IT function before this work began eight months ago.
- There was significant confusion over roles and responsibilities in EP IT and Group IT following multiple reorganisations in recent years.
- IT4Shell was being established to create a new IT community.
- There was widespread dissatisfaction with GI-D resulting from overspend and serious delays in the implementation timetable.
- A cost-cutting culture had resulted in a serious lack of investment in underlying local and global IT infrastructure, which has in turn resulted in poor system performance and reliability.
- Basic IT service delivery was considered poor in some (but not all) EP OUs and service companies.
- Senior management had relatively little knowledge of IT or its contribution to the business.
- Not surprisingly, IT staff morale was among the lowest in the EP business.

Although there is no 'quick fix' to these very serious issues, the EP IT team is working hard to directly address each of them to ensure that continuous improvements are made in each area. EPLF can help improve both the perception and performance of IT through more active support for IT.

EPLF Request

Commit to providing more active support for IT by:

- Incorporating IT topics into presentations to build awareness and endorsement for this important business enabler.
- Communicating to staff on Leadership Team decisions taken on IT policy, budgets and standards. This provides clarity on what end-users will receive from the IT service delivery team.
- Participating in local workshops with leadership teams on how IT can enhance OU performance. This provides insights for both the management and EP CIO on how IT can more effectively be integrated into the business.

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1.2 EP IT Results Delivered

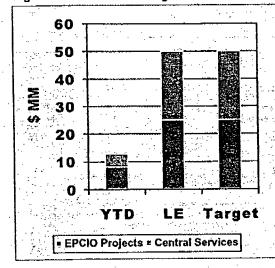
EP CIO, working closely with OUs, has made significant progress in achieving the deliverables detailed in its Business Plan submitted in December. Actual KPIs delivered on cost savings, project delivery and GI-D implementation are all ahead of target (see Figure 1). The team is also confident of delivering the end-of-year and 2003 targets. The introduction of more rigorous performance tracking systems as shown in Section 2 of this document will enable more detailed KPIs to be established for all EP IT projects.

Figure 1: EP IT Deliverables - Actuals vs Targets

KPI	Q1/01 Q2/01 Q3/01 Q4/01 2003
Cost savings (USD million) Target	10 25 30 50 50 125 25 125
Cost savings (USD million) Actuals	13 tbd tbd tbd tbd
Project Milestones (%) Target	16 30 50 65 100
Project Milestones (%) Actuals	27 tbd tbd tbd tbd tbd
GI-D (PCs delivered %) Target	35 45 60 80 100
GI-D (PCs delivered %) Actuals *40% as at end April 2002	35* tbd tbd tbd tbd %

The sources of the cost savings delivered are shown in Figure 2 and include the results of joint EP CIO/OU work on procurement, infrastructure and investment discipline. Although the team is focused on delivering savings where more efficient management can reduce expenditure, it is also working with OUs to make the required financial investment in IT projects which need improvement. For example, additional investment is planned to improve IT system reliability on a global basis (see Section 3.1).

Figure 2: EP IT Cost Savings Delivered



	المُركين المُولِين بِهِلُ الرهور و تَشِيرُ و هو ا
EP IT Projects	€ Achieved
Global EP IT Infrastructure	1.6
EP IT Procurement	1.1
EP Down the Wire	ું કે ઉડ્ડ . 0.5
Knowledge Management	1.3
Investment Discipline	2.4
Build Global EP IT Community	0.4
Learning and Development	0.6
EP Global Connect	7.3 € 20.2
Central Services	4., 4.9
Total	13.0
The second secon	The state of the s

The actual projects which are delivering these results cover a range of areas, including Business Fundamentals, infrastructure, Business Models and People. A selection of the results delivered from these projects in Q1 are shown in Figure 3. (See Appendix 1 for a summary of EP IT Global Business Plan projects).

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Figure 3: EP IT Results Highlights Q1 ...62

Business Fundamentals

- Further development of the EP IT Strategy, including an external challenge session.
- Planning of all EP global IT spend is now integrated with the EP Planning Cycle:
 - 2001 expenditure was appraised via Volume 1, providing essential data to provide a global overview.
 - All project investment for 2002 was scrutinised at an IT Planners' Workshop in January that identified synergy and deferment savings."
 - Savings and cost avoidance of \$13 million achieved to date, with deferments of \$33 million identified from global 2002 expenditure plans.
- Project management and tracking introduced for global EP CIO/OU projects.
- New communications introduced, including monthly IT Managers' teleconference, monthly news updates' and Talking IT email customer bulletin.
- *In excess of 80% of IT staff now have access to online networking facility to utilise and share global IT expertise. More than 200 issues have already been debated on this global forum by 500 staff across 30 countries which has resulted in improved problem-solving valued by those involved at more than \$0.5 million to date.
- TTBC and ITLT fully functional and driving IT4Shell agenda globally across the businesses.

- GI-D Implementation 40% complete as at end April 2002 (35% at end Q1 2002) (see Appendix 2) Bandwidth upgrades are being commissioned for 10 OUs and are being progressed now for a further four to deliver a 20-fold overall capacity increase by the end of 2002 (see page 9 for further details). Significant progress has been made on the Unlock Nigeria programme including
- - Nigeria satellite bandwidth upgraded by 10 times (more to come)
- = 90 voice circuits for Shell traffic made available
 Standardised environment for GEC-compliant application testing provided in Rijswijk (ensures that EP remain compliant whilst supporting applicable OUs)

- EP Global Connect communication and global working service will be live in May
 - New, easy-to-use multi-party video-conferencing service is being implemented for EP globally.
 - New online conferencing tool (Centra) introduced with pilots completed for Shell Open University and Geophysical Conference.
 - Support and communications material prepared to facilitate introduction of EP Global Connect
- Core infrastructure for Geoportal (EP Down the Wire' for subsurface) has been installed:
 - Most OUs now have access to SIPMAP, MORES, CES and CAP\$COST applications without owning or managing the computers locally."
 - Additional applications such as Fastrack, Xtrap and Promise will be available by mid-2002.
- Agreement with Production Management community to consider EP 'Down the Wire' approach for Hydrocarbon Accounting and associated applications to avoid duplication of activities.
- North Sea Exploration Portal has been adopted for common information access.
- Web-based portal and information sharing facility has been developed to facilitate joint working with third-parties (eg. JV partners, suppliers).

- Global EP, IT staff, Talent Review and Round Table projects completed
- Project Management career, ladder defined
- PC Passport (PC skill training for all staff) has been developed for use in all OUs. Implementation wo
- has begun in PDO and will be extended to other OUs in the coming months
 IT staff competency framework and gap analysis tool completed for OUs to apply initially in PDO and BSI
 IT training curriculum has been published by Shell Open University with the first course now available

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2. Business Planning in a dywar

EP CIO has introduced rigour to strategy development, business planning and implementation of EP's IT function. One of the most significant achievements is the establishment of a joint EP CIO/OU global IT planning team to identify and implement cost and business synergies across EP (see Business Fundamentals on page 4). The team is working with IT Managers in OUs to implement the following activities:

- Global workshop in May to optimise global expenditure for 2003.
- Formal project monitoring system to ensure that delivery milestones are achieved. All projects are included in the newly-created dashboard for more effective management tracking of all IT activity (see Figure 4 below).
- First ever Volume 1 and 2 reporting of a range of key metrics and data.
- Development of a single global standard for IT billing to reduce bureaucracy and overdues.
- Increased transparency in IT billing in key areas where cost savings can be achieved by EP eg. mobile telephone charges.
- Aggregation of expenditure to leverage EP's global investment in IT.
- Matching IT demand and Central Services supply to ensure the right level of resourcing is delivered and to avoid under-recovery of expenditure.
- Working towards a global SLA framework and delivery metrics.

Figure 4: EP IT Project Dashboard (example of four projects)

Project	Description	Confidence	Project Schedule/ Dashboard	Business Case	Resourcing	Expected benefits on larget for 2002	Expected benefits allocated by OU Expected costs on	Bigal for 2002	Issues. Risks	200 15 Benel	its YTD	2002 Costs
Global Connect	Enabling Shell EP staff to communicate and collaborate more via electronic means.	9	•	•	8	•		•	•	3 500	0	1200
t.earning and Development	Increase quality of IT training and rationalise training products and suppliers.	•			63		a	•	•	4 100	0 611	125
EP 'Down the Wire'	Enables the delivery of data: applications, expertise and computing power anywhere.		•	•			• (4 > 500	0 450	200
Production Dashboard	Build the capability for Management to review data at several levels.	**	•	(•	-				2 800	0 0	1500
		High Medium Low	Clear Vague Weak	Detailed High- level Vegue	Full Pertial Undefined		Highly Defined Defined		Actively in Manager			

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In addition in the OU will teams, EP CIO is the making closely with a new period and external stakeholders to insure faster and more effective believery of IT to the business:

- EP's eBusiness team has been merged with IT so that these two interdependent functions deliver more effectively as a single unit with the business.
- Stronger relationships with IT4Shell to upgrade IT delivery and tackle immediate security and reliability issues.
- EP CIO is also working closely with other central EP teams, including T&OE, Project Excellence, SEPTAR (Smart Fields and PMI) and EP Finance.
- External IT and business infrastructure experts, including Cisco, IBM, Accenture, Cap Gemini and KPMG, are also working on selected projects to ensure that global market place best practices are incorporated into the business.
- External energy sector contractors such as Schlumberger and Halliburton are also providing support on specific projects.
- EP CIO is now in a position to build relationships with JV government partners to demonstrate the competitive advantage of partnering with Shell.
- EP CIO also closely monitors competitor IT activity. This includes a formal competitive intelligence study which has been conducted on eBusiness issues.

3 Core IT Infrastructure and Service Improvement

3.1 IT reliability, security and service standards

Reliability and security are key EP IT business priorities, with almost 50% of resources allocated to these vital areas. The increasing demands on the global EP IT infrastructure and under-investment in recent years has resulted in a number of reliability and security issues which require – and are receiving – urgent attention:

Local IT Infrastructure — Although Group IT infrastructure design and configuration standards exist, they are not always applied in EP OUs. EP CIO is working on an intensive programme of activity to ensure that a thorough risk assessment on network reliability is undertaken of all OUs and that a global action plan is undertaken to raise standards. Key activities include:

SIEP – EP CIO commissioned IBM and Cisco to conduct an independent audit of IT systems at the Rijswijk site. The audit revealed specific vulnerabilities in the areas of network design and management, and identified where 'single points of failure' posed a risk to reliability. EP CIO also prepared a business case for the required additional investment to remedy the vulnerabilities and put in place action plans for immediate implementation.

Expro – Cisco and IBM were also commissioned to conduct a similar network review in Aberdeen. The review again highlighted areas where the application of existing best-practice design and configuration standards could enhance reliability.

The positive findings from these reviews have led to an IT infrastructure audit schedule being developed for all OUs. By the end of November 2002 all major OU and ServCo sites will have been reviewed against a standard best-practice template.

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Clobal IT infrastructure - CimProy, IT 17 and the result of the external specific his and network providers to review the global IT intrastructure, which not only connects OUs, but is effectively the backbone of EP's global IT system. EP's increasing reliance on global business applications eg. SAP, Galaxy, Atlas and Livelink, together with the growing potential of globally delivered strategic technical applications, means that the business needs a more robust network. Formal reviews will be completed in August to quantify the network implications of current and potential business needs. When combined with the OU-level work, the global reviews will provide a complete picture of EP IT's network requirements over the 0-3 year timeframe. This in turn will provide a coherent roadmap for the future investment required to ensure reliability of performance.

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Service Delivery - EP CIO is working with IT4Shell to upgrade IT service delivery to EP globally. This has become particularly important as EP adapts to the new GI-D environment. Although IT service in some OUs and service companies is effective, several others are not meeting agreed service level agreements. In SIEP, a joint SEPTAR, EP CIO and Central Services team conducted a 'work-out programme' over the period October - January to identify areas of greatest customer needs and implement actual solutions. Key issues identified by the team included:

- Help-desk response time.
- IT order fulfilment.
- Application scripting.
- Cost management systems.
- End-user communications.

The resulting service improvement programme in SIEP has achieved positive results, including:

- Customer-approved SLAs and KPIs now in place.
- Help-desk and order request performance now meet SLAs.
- More transparent billing systems have been introduced.
- An end-user communications campaign, including monthly hints and tips bulletins, "lunch and learn" sessions, posters and customer brochure.

A similar programme of activities has been undertaken in Expro and work is ongoing to consolidate SLAs/KPIs in the North Sea region, Learnings and best practices from the region will also be shared with other OUs.

Security and Business Continuity Planning - IT security at both local and Group level continues to be a key focus for both EP CIO and IT4Shell. Recent independent audits have identified that not all OUs are in compliance with Group standards and that the Group itself must take more action to improve IT security standards at a global level. Specific vulnerabilities were also identified on SAP.

Action plans have been developed to remedy both local and Group issues. Specific activities undertaken by EP CIO in Q1 include:

- Two EP CIO IT security staff have been appointed and are implementing plans to ensure compliance with Group standards.
- Programme to increase awareness of standards among SIEP staff.
- Trust Domain Audit.

EPLF Request

IT performance standards are lacking in some important aspects of EP's IT service. The EPLE is requested to promote the application of a series of minimum performance standards which will be developed jointly with OU IMs, covering infrastructure design, service reliability and security, knowledge and skills, and performance reporting.

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3.2 Progress on GI-D

Global GI-D implementation in EP has gained significant momentum in the past six months with more than 40% of the project complete as at end April 2002 (35% at end Q1 2002). Two dedicated GI-D experts from the EP CIO team have been working since December to implement standard processes, assist in resolving OU issues and reporting global progress using standard metrics. This work has ensured that GI-D has been delivered in EP in accordance with agreed plans. (GI-D April 2002 status update update by country is included in Appendix 2 of this document.)

EP CIO is currently working with relevant OUs to resolve the following GI-D issues:

- Discussions on cost with JV partners have resulted in delays to the timetable, which now needs to be recovered.
- Cancellation of GI Lite and full implementation of GI-D.
- · Reworking site design for remote/small locations.
- More experienced resources are required to achieve GI-D in challenging locations, eg. Nigeria and Sakhalin, to deliver the EP plan.

EPLF Request

The EPLF is asked to endorse the principle of global sharing of resources. Further delays can be avoided if EP can transfer GI-D resources from OUs which have completed their implementations to those who are yet to do so. The specialist knowledge gained during implementation will then expedite completion in geographies where GI-D expertise is not available. Proposals for the exact scope and timing of GI-D resource transfers are being submitted to the OUs in question.

3.3 Bandwidth

EP's business performance is increasingly reliant on a global IT infrastructure. Increased speed and volume of data transmission are needed to enable faster and more efficient communication and access to the right expertise regardless of its location.

In September 2001, EP CIO initiated the Global Bandwidth Study to ensure that core business activities are not constrained by the limitations of the IT systems that maintain the free flow of knowledge, data and information. The EP CIO team has been the interface to the Shell Telecomms Organisation (STO). The team has also been working with individual OUs to develop business cases to manage the process. Intense competition among global telecommunications providers has driven costs down and procurement through on-line auctions has resulted in the best prices being achieved.

By the end of 2002, EP staff around the world will, on average, have access to 20 times more data capacity than before. The tables below demonstrate the progress made to date on the bandwidth upgrades.

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Figure 5: How Much Bandwidth Co 1/2 Ab. 17

Category	Capacity	Enables
'Fully resilient'	Fibre-connected at 155mbps	Full sharing of computer processing; Virtual operations; eLearning, voice, video – no geographical constraints, capable of service to a large number of users. Multiple circuits are networked to provide protection against loss of service.
'Fully Connected'	Fibre-connected at 155mbps where available (Fibre is needed to avoid satellite delay for highly interactive work)	Full sharing of computer processing; Virtual operations; eLearning, voice, video – no geographical constraints, capable of service to a large number of incompletes. Limited resilience for critical services
'Advanced Networking'	Fibre-connected at up to 34mbps where available	Remote access to complex applications including graphics; high volume. Limited resilience for critical services.
'Basic networking'	Fibre or satellite connection at up to 2mbps	Remote access to simple applications; limited usage volume
'Web'	Fibre or satellite connection at up to 512kbps	Email and Shell-wide-web access but limited data capacity.
'eMail'	Fibre or satellite connection at 64kbps	eMail only

Figure 6: Progress on Bandwidth Update

Aiready upgraded	Status 1Q 2001	4Q 2002 Target	Eventual Goal
USA USA	Basic Networking	Fully-Connected	Fully-Resilient
Canada	Web	Basic Networking	Fully-Resilient
Philippines	Web	Basic Networking	Fully-Resillent
Norway	Web	Fully-Connected	Fully-Resilient
Netherlands	Advanced Network	Fully-Connected	Fully-Resilient
Nigeria Gabon	Basic Networking Web	Fully-Connected Basic Networking	Fully-Resilient
Saudi	EMail (normal NVO startup)	Basic Networking	Fully-Resilient
Venezuela	Web	Basic Networking	Fully-Resilient
- Brazil	Web	Basic Networking	Fully-Resilient
in progress UK Syria Russia (Sakhalin) Malaysia	Basic Networking eMail Web Web	Fully-Connected Basic Networking Basic Networking Basic Networking	Fully-Resillent Fully-Resilient Fully-Resilient Fully-Resilient
Planning Australia	Basic Networking		Fully-Resilient
Dubai	Web	本"文字系"建设设定。	Fully-Resillent Fully-Resillent
Argentina Thailand	Web Web		Fully-Resilient
New Zealand	Web		Fully-Resilient
China	Web		Fully-Resilient
Egypt	Web		Fully-Resilient
Cameroun	Web		Fully-Resilient
Pakistan	Web		Fully-Resilient
Oman	Basic Networking		Fully-Resilient
* Brunel	Web	The Country of the Section of the Se	Fully-Resilient

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1. Strategic IT Projects to Reliver Competitive Advantage

In addition to its focus on core IT infrastructure and service delivery, EP CIO has prioritised a series of six forward-looking eBusiness initiatives to deliver against EP profitability objectives and help build competitive advantage.

EP CIO is working with OUs and T&OE, Project Excellence, SEPTAR (Smart Fields and PMI), EPF etc to raise the momentum and ensure that IT is effectively integrated into the business.

Figure 6: EP IT Strategic Projects - Description, Benefits and Status

Strategic IT	Description/Business	Project Status				
Project	Benefit	Concept/ Pilot	Business Case	Single OU	Global	
EP Global Connect (see EPLF request overleaf)	Communications and global working model to reduce unnecessary travel, thereby improving work-life balance, increase productivity and reduce costs (see Section 4.1)	•	•	0	•	
Remote Application Delivery	Delivery of data, applications, expertise and computer power anywhere, at any time.			•	•	
Production Dashboard	Visualisation of production data, deferments, volumes, sales against forecasts to improve speed and quality of decision making.	•		•		
Virtual Operations	Monitoring and control of facilities using the best experts, regardless of location.	•	•	•		
Knowledge Gateways	Portals for immediate access to relevant data to maximise productivity and improve decision-making.	•	•	6		
Project Engineering Hub	Globally accessible collaboration hub to expedite engineering projects.	•				

Complete

Work in progress

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EPLF Request

To expedite the delivery of these important Strategic IT initiatives, EPLF is requested to align eBusiness and IT resources within each OU. The eBusiness and IT functions are interdependent and can deliver more effective results when pursuing shared objectives and programmes.

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4.1 EP Global Connect

While there are many communication tools available in EP, there is poor usage because of a lack of knowledge/willingness, poor infrastructure and access, and the persistence of a 'must travel' culture. Alternatives to travel are rarely considered, despite personal and business benefits which include savings on unnecessary travel costs and productivity, an improved work/life balance for staff, and HSE considerations.

EP currently spends in excess of \$100MM annually on travel costs which includes 40,000 international airline tickets. This excludes internal travel in OUs. The introduction of best practice communication methods in other companies has demonstrated that travel costs can be reduced by 35%, with some achieving savings of up to 70%. If EP were to achieve a saving of only 20%, this would represent a \$20MM reduction on total travel costs and, more importantly, up to 60 man years in productivity savings.

EP Global Connect is a standardised communications framework which has been developed by EP CIO to reduce unnecessary travel and improve the way we work globally. This framework includes:

- 1. Increased use of existing communication methods and the introduction of new standard tools across EP. EP Global Connect includes teleconferencing, video-conferencing, Outlook, Live-link, Net meeting, Centra (a new Web-enabled conferencing tool) and video streaming.
- 2. End-user communications to change behaviours, encourage use and assist in resolving issues.
- 3. Core EP Global Connect web site featuring information and advice on:
 - When and how to use key communications tools for maximum impact.
 - Security issues.
 - Access information tailored per market.

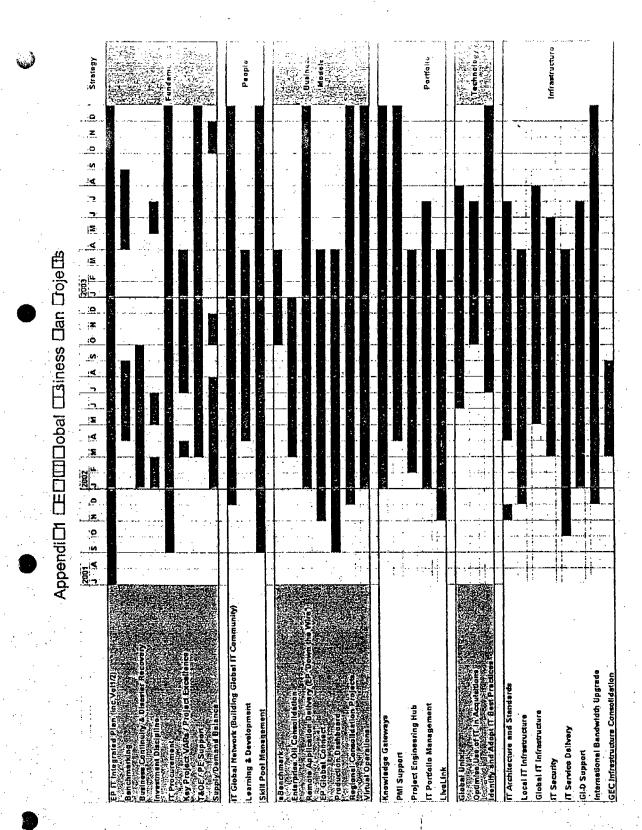
EPLF Request

EPLF is requested to support the implementation of EP Global Connect as the standard EP communications and global working model using globally standardised tools and equipment.

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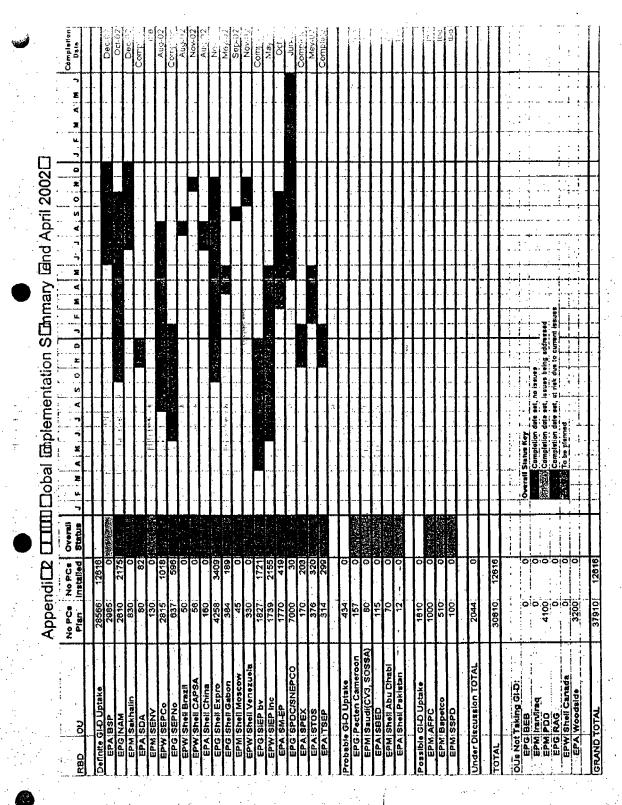
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