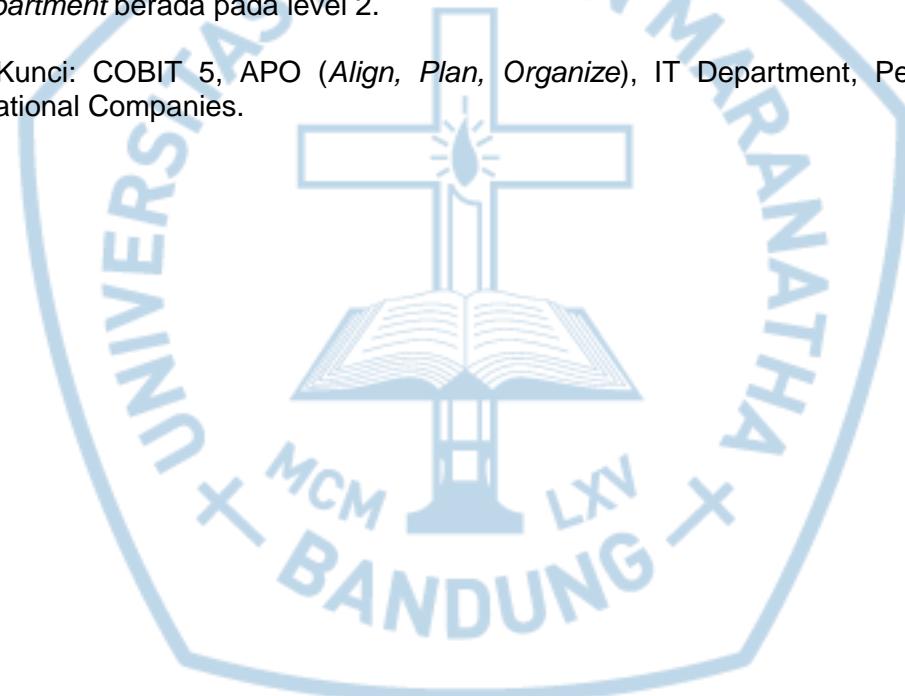


## ABSTRAK

Petrochina International Companies in Indonesia adalah perusahaan yang bergerak dibidang distributor minyak dan gas dan merupakan salah satu perusahaan minyak terbesar di dunia. Departemen IT telah berperan dalam menerapkan teknologi informasi untuk mendukung operasional dan proses bisnis perusahaan dalam kegiatan sehari-hari, departemen IT juga mendukung seluruh satuan kerja dan karyawan di Petrochina International Companies. Dalam hal ini, terdapat salah satu prosedur IT yang diterapkan di dalam departemen IT ini. Namun, beberapa masalah yang terjadi di dalam sistem atau aplikasi, laporan kinerja TI, infrastruktur, maupun dari sumber daya TI lainnya, belum memiliki ukuran secara kualitas untuk menyelesaikan masalah-masalah yang mendasar dalam meningkatkan kualitas manajemennya saat ini. Berangkat dari permasalahan di atas, maka diperlukan adanya proses pengukuran tingkat kematangan kualitas manajemen di departemen IT. Oleh karena itu, diperlukan audit dengan standar COBIT 5 yang berfokus pada Domain APO11 (*Manage Quality*) untuk menilai sejauh mana proses peningkatan kualitas manajemen yang selama ini berjalan di *IT Department* Petrochina International Companies in Indonesia. Dari hasil analisis APO11 (*Manage Quality*) *IT Department* berada pada level 2.

Kata Kunci: COBIT 5, APO (*Align, Plan, Organize*), IT Department, Petrochina International Companies.



## ABSTRACT

*Petrochina International Companies in Indonesia is a company that related to oil and gas distributor and it is one of the biggest oil company in the world. IT department has contributed in applying information technology to support company operational activites and business processes, it also supported all of unit works and the employees at Petrochina International Companies. In this case, there is one of IT procedure which has been applied in this IT department. However, some of problems which are occurred in the system or application, IT performance report, infrastructure, although another IT source have no any measurement yet to solve this basic problems to improve management quality. Based on these problems, it is necessary to measure management quality level in IT department. COBIT 5 standard audit which is focused on APO11 about manage quality is necessary to evaluate improvement process of management quality in Petrochina International Companies IT department. From APO11 (Manage Quality) analysis, IT department is being at second level.*

**Keywords:** COBIT 5, APO (Align, Plan, Organize), IT Department, Petrochina International Companies.

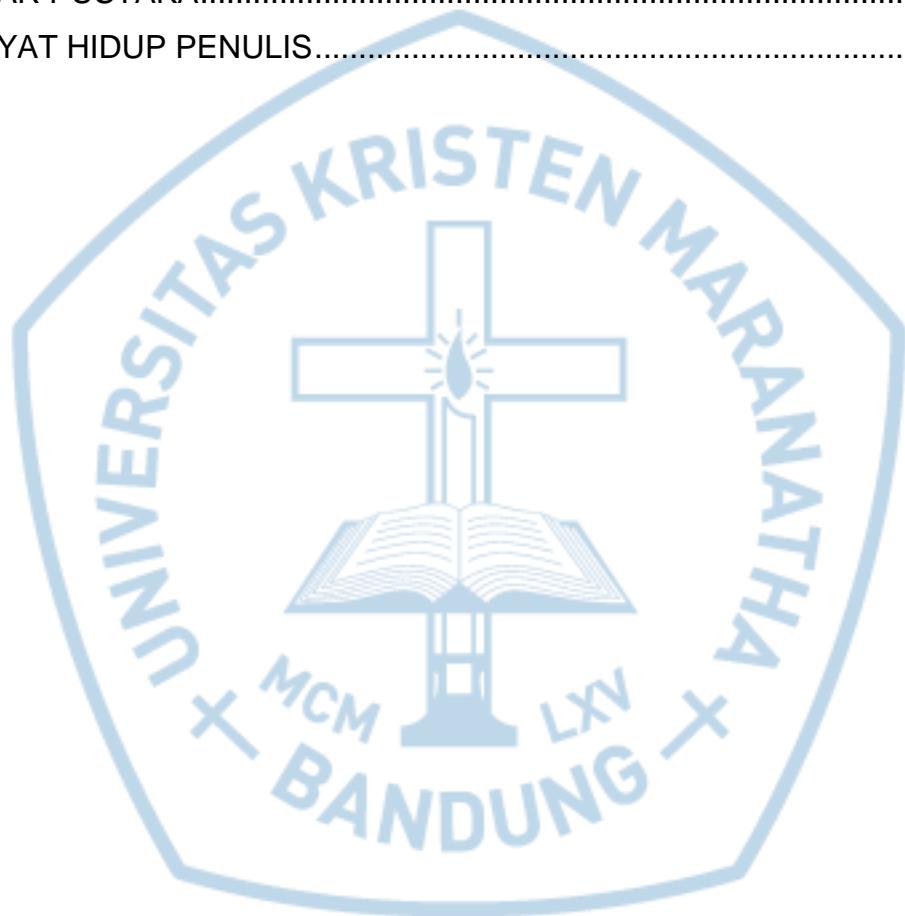


## DAFTAR ISI

LEMBAR PENGESAHAN .....	i
PERNYATAAN ORISINALITAS LAPORAN PENELITIAN .....	ii
PERNYATAAN PUBLIKASI LAPORAN PENELITIAN .....	iii
PRAKATA .....	iv
ABSTRAK .....	vi
ABSTRACT .....	vii
DAFTAR ISI .....	viii
DAFTAR GAMBAR .....	xi
DAFTAR TABEL .....	xii
DAFTAR LAMPIRAN .....	xiii
DAFTAR SINGKATAN .....	xiv
DAFTAR ISTILAH .....	xvi
BAB 1. PENDAHULUAN .....	1
1.1 Latar Belakang Masalah .....	1
1.2 Rumusan Masalah .....	2
1.3 Tujuan Pembahasan .....	2
1.4 Ruang Lingkup Kajian .....	3
1.5 Sumber Data .....	3
1.6 Sistematika Penyajian .....	4
BAB 2. KAJIAN TEORI .....	7
2.1 Audit .....	7
2.2 Sistem .....	7
2.3 Informasi .....	7
2.4 Sistem Informasi .....	8
2.5 Audit Sistem Informasi .....	8
2.5.1 Tujuan audit sistem informasi .....	9
2.5.2 Faktor-faktor yang mendorong pentingnya kontrol dan audit sistem informasi .....	10
2.6 COBIT .....	11
2.7 COBIT 5 .....	11

2.7.1	<i>Capability Dimension</i> .....	14
2.7.2	<i>Assesment Indicators</i> .....	16
2.7.3	<i>Rating Scales</i> .....	17
2.7.4	<i>RACI Chart</i> .....	18
2.7.5	<i>Work Product</i> .....	20
2.8	Proses APO11 – <i>Manage Quality</i> .....	21
2.8.1	<i>APO11.01 Establish a Quality Management System (QMS)</i> ....	22
2.8.2	<i>APO11.02 Define and Manage Quality Standards, Practices and Procedures</i> .....	23
2.8.3	<i>APO11.03 Focus Quality Management On Customers</i> .....	23
2.8.4	<i>APO11.04 Perform Quality Monitoring, Control and Reviews</i> ... 24	24
2.8.5	<i>APO11.05 Intergrate Quality Management Into Solutions For Development and Service Delivery</i> .....	25
2.8.6	<i>APO11.06 Maintain Continuous Improvement</i> .....	26
BAB 3.	ANALISIS .....	28
3.1	Tahap Perencanaan.....	28
3.2	Tahap Kajian Objek.....	29
3.2.1	<i>Profil Petrochina International Companies</i> .....	29
3.2.2	<i>Visi dan Misi Perusahaan</i> .....	30
3.2.3	<i>Struktur Organisasi IT Department</i> .....	31
3.2.4	<i>Job Description IT Department</i> .....	32
3.3	Tahap Analisis.....	47
3.3.1	<i>Manage Quality (APO11)</i> .....	47
1.	<i>APO11.01 Establish a quality management system</i> .....	48
2.	<i>APO11.02 Define and manage quality standards, practices and procedures</i> .....	52
3.	<i>APO11.03 Focus quality management on customers</i> .....	54
4.	<i>APO11.04 Perform quality monitoring, control and review</i> .....	58
5.	<i>APO11.05 Integrate quality management into solutions for development and service delivery</i> .....	61
6.	<i>APO11.06 Maintain continuous improvement</i> .....	63

3.3.2	Rekapitulasi Hasil Penilaian <i>Capability Level APO11 (Manage Quality)</i> .....	68
3.3.3	Analisis GAP APO11 ( <i>Manage Quality</i> ) .....	75
3.3.4	RACI Chart.....	78
BAB 4.	KESIMPULAN DAN SARAN.....	80
4.1	Kesimpulan.....	80
4.2	Saran .....	80
DAFTAR PUSTAKA.....		82
RIWAYAT HIDUP PENULIS.....		171



## DAFTAR GAMBAR

Gambar 2.1 COBIT 5 <i>Process Reference Model</i> .....	13
Gambar 2.2 <i>Capability Levels and Process Attributes</i> .....	15
Gambar 2.3 <i>Assessment Indicators</i> .....	17
Gambar 2.4 <i>Rating Levels</i> .....	17
Gambar 2.5 RACI Chart APO11.....	19
Gambar 3.1 <i>Organization Structure</i> .....	31
Gambar 3.2 <i>Capability Levels APO11 Manage Quality</i> .....	70
Gambar 3.3 RACI Chart APO11 pada COBIT 5 .....	78



## DAFTAR TABEL

Tabel 2.1 APO11 <i>Work Product</i> .....	21
Tabel 3.1 APO11.01 <i>Establish a quality management system</i> .....	48
Tabel 3.2 APO11.02 <i>Define and manage quality standards, practices and procedures</i> .....	52
Tabel 3.3 APO11.03 <i>Focus quality management on customers</i> .....	54
Tabel 3.4 APO11.04 <i>Perform quality monitoring, control and review</i> .....	58
Tabel 3.5 APO11.05 <i>Integrate quality management into solutions for development and service delivery</i> .....	61
Tabel 3.6 APO11.06 <i>Maintain continuous improvement</i> .....	63
Tabel 3.7 Perhitungan rating analisis APO11 .....	75
Tabel 3.8 Analisis GAP pada APO11 .....	76
Tabel 3.9 <i>Process Attribute Rating</i> .....	77
Tabel 3.10 RACI Chart hasil analisis di IT Department.....	79

## DAFTAR LAMPIRAN

LAMPIRAN A.	HASIL WAWANCARA APO11 .....	83
LAMPIRAN B.	<i>IT DEPARTMENT OBJECTIVE</i> .....	90
LAMPIRAN C.	<i>MONITOR &amp; PERFORM HEALTH CHECK</i> .....	93
LAMPIRAN D.	<i>IT PROCEDURE PABX</i> .....	99
LAMPIRAN E.	<i>MINUTE OF MEETING (MOM)</i> .....	100
LAMPIRAN F.	<i>SYSTEM INVESTIGATION REQUEST</i> .....	104
LAMPIRAN G.	<i>WORK PRODUCT</i> .....	110
LAMPIRAN H.	<i>IT PROCEDURE HANDPHONE REQUISITION PROCEDURE</i> .....	111
LAMPIRAN I.	<i>HANDPHONE REQUISITION FORM</i> .....	112
LAMPIRAN J.	<i>IT PROCEDURE NEW LOGON</i> .....	117
LAMPIRAN K.	<i>USER AUTHORITY REQUEST</i> .....	120
LAMPIRAN L.	<i>IT PROCEDURE AWARENESS</i> .....	121
LAMPIRAN M.	<i>USER SECURITY</i> .....	124
LAMPIRAN N.	<i>PEDOMAN TATA KERJA SKK MIGAS</i> .....	126
LAMPIRAN O.	<i>REQUEST FOR TRAINING COURSE FORM</i> .....	130
LAMPIRAN P.	<i>TRAINING PLAN &amp; BUDGET</i> .....	132
LAMPIRAN Q.	<i>EMAIL REQUEST</i> .....	134
LAMPIRAN R.	<i>USER ACCEPTANCE TEST DOCUMENT SIGN OFF</i> ....	138
LAMPIRAN S.	<i>WEEKLY ACTIVITY REPORT</i> .....	148
LAMPIRAN T.	<i>ORGANIZATION STRUCTURE IT DEPARTMENT</i> .....	150
LAMPIRAN U.	<i>JOB DESCRIPTION IT DEPARTMENT</i> .....	151

## DAFTAR SINGKATAN

APO	<i>Align, Plan and Organize</i>
COBIT	<i>Control Objective For Information &amp; Related Technology</i>
RACI	<i>Responsibility, Accountable, Consuland Inform</i>
IT	<i>Information Technology</i>
TI	Teknologi Informasi
PC	<i>Personal Computer</i>
ITGI	<i>Information Governance Institute</i>
ISACA	<i>Information Systems Audit and Control Association</i>
Sr	Senior
ITIL	<i>Information Technology Infrastructure Library</i>
ISO	<i>International Organization for Standardization</i>
IEC	<i>International Electronic Commission</i>
SCADA	<i>Supervisory Control and Data Acquisition</i>
SLAs	<i>Service Level Agreement</i>
USA	<i>United State of America</i>
Ltd	<i>Limited Company</i>
VP	<i>Vice President</i>
BP Migas	Badan Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi
SOP	<i>Standard Operating Procedure</i>
LAN	<i>Local Area Network</i>
WAN	<i>Wide Area Network</i>
CCTV	<i>Closed Circuit Television</i>
PABX	<i>Private Automatic Branch eXchange</i>
MIS	<i>Management Information System</i>
FAX	<i>Faximile</i>
SOTK	Struktur Organisasi Tata Kerja
RKM	Rencana Kerja Manajemen
SKPL	Spesifikasi Kebutuhan Perangkat Lunak

UAT	<i>User Acceptance Test</i>
QMS	<i>Quality Management System</i>



## DAFTAR ISTILAH

Audit	Pemeriksaan dengan seksama pada sebuah organisasi dengan pencarian bukti nyata berupa dokumen fisik atau elektronik untuk pembuktianya.
<i>Framework</i>	Kumpulan dari fungsi-fungsi/prosedur dan kelas-kelas untuk tujuan tertentu yang sudah siap digunakan.
<i>Stakeholder</i>	Pihak-pihak yang terkait dengan lembaga mulai dari tanggung jawab kegiatan, proses kegiatan, serta hasil kegiatan.
<i>Work Product</i>	Diartikan sebagai sebuah hasil produk yang terkait dengan pelaksanaan proses (ISO/IEC 15504: 1, 3.55).