DISSERTATION REPORT
ON

STUDY OF EXISTING PROCESS AND PROJECTS PERTINENT TO ONGOING PROJECTS IN PHILIPS HEALTHCARE

UNDER

PHILIPS ELECTRONIC LIMITED

BY
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ORGANISATION'S PROFILE

- The foundations of Philips were laid in 1891 when Anton and Gerard Philips established Philips & Co. in Eindhoven, the Netherlands.
- The company begun manufacturing carbon-filament lamps and by the turn of the century, had become one of the largest producers in Europe.
- Stimulated by the industrial revolution in Europe, Philips' first research laboratory was established in 1914 and the company started introducing its first innovations in the x-ray and radio technology.
- 1915 – 1925 Innovation and Diversification: X-rays and Radio Reception.
- In 1918, Philips introduced a medical X-ray tube. This marked the beginning of the diversification of the company's product range and the moment when it began to protect its innovations with patents in areas stretching from X-ray radiation to radio reception.

ORGANISATION'S OBJECTIVE

- Royal Philips Electronics of the Netherlands is a diversified Health and Well-being company, focused on improving people's lives through timely innovations.

- Philips integrates technologies and design into people-centric solutions, based on fundamental customer insights and the brand promise of "sense and simplicity".

- For the past 120 years our meaningful innovations have improved the quality of life for millions, creating a strong and trusted Philips brand with market access all over the world.

MISSION AND VISION OF THE ORGANISATION

- MISSION:

Improving people's lives through meaningful innovation.

- VISION:

At Philips, we strive to make the world healthier and more sustainable through innovation. Its goal is to improve the lives of 3 billion people a year by 2025. We will be the best place to work for people who share our passion. Together we will deliver superior value for our customers and shareholders.

BUSINESS AREAS OF PHILIPS

Philips electronic limited primarily constitutes three areas in business.

- Lighting
- Consumer life style
- Health care

PHILIPS HEALTH CARE

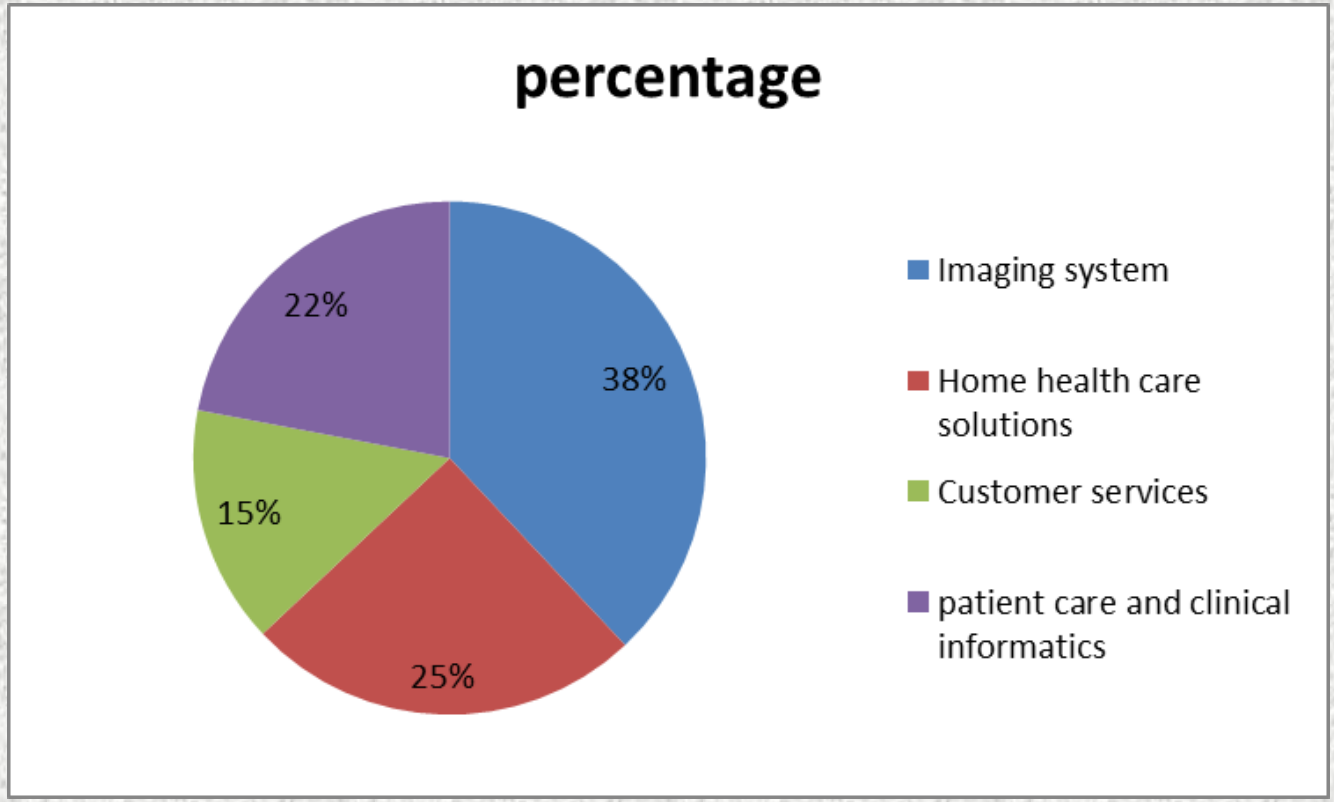
People Focused :

“At Philips Healthcare, we combine our unique clinical expertise with human insights to develop solutions that deliver value throughout the care cycle: from disease prevention to screening and diagnosis, through to treatment, monitoring and health management – wherever care is given: in the hospital or at home.”

Philips health care mainly constitutes four strategic business areas

- Home health care solutions(HH)
- Imaging system(IS)
- Customer services(CS)
- Patient care and clinical informatics(PCCI)

PHILIPS HEALTH CARE



GENERAL AND SPECIFIC OBJECTIVES

General objective:

- The study about the ongoing projects in Philips healthcare constitutes projects being implemented at various levels.

Specific objectives:

- To study the tracking of demo assets by using a data base application.
- To study the MRI application support log process in order to enhance the service delivery.
- To study about the e-ICU program of Philips healthcare.
- To develop a framework on data management policies for clinical informatics products.

INTRODUCTION

- Philips healthcare is a mammoth organization and there are many upcoming projects in order to develop business areas. Hence, the study elucidates about the various projects that have been assigned.

- To study the tracking of demo assets by using a data base application.

Demo tracking application has been adopted in logistics and supply chain management, in order to track the various demo assets that are being used by the customer all across the country. Hence, it is a part of logistics and supply chain management.

Data base mainly entails:

Stock transport notes (STN):

- Stock delivery note (STN) is a form of receipt, issued by the suppliers, which accompanies a delivery of goods, specifying their type and quantity.
- It keeps a track on demo assets being transported from Philips office.

STN format contains:

TRANSFER DATE

FROM LOCATION

TO LOCATION

MATERIAL UNIT

All the options pertinent to data already exist and they are aligned to specific codes in numbers, clicking the options do reflect the specific numbers and the data is filled.

- Delivery Note (DN):

It keeps a track on when the demo assets are being transported to customers.

DN format constitutes:

FROM LOCATION

TO LOCATION

- Conform the PNDT certificate copy

- Demo asset request letter

- Return Delivery Note (RDN):

It is made in reference to delivery note (DN) after the demo assets are being transported to customers.

RDN format contains:

TRANSFER DATE

REFERENCE -DN

- Limitation of the data base application:

The data base application is not flexible to enter the entries umpteen times depending on the requirement. Once it is entered there is no other alternative way to modify it as per the requirement.

TO STUDY THE MRI APPLICATION SUPPORT LOG PROCESS IN ORDER TO ENHANCE THE SERVICE DELIVERY.

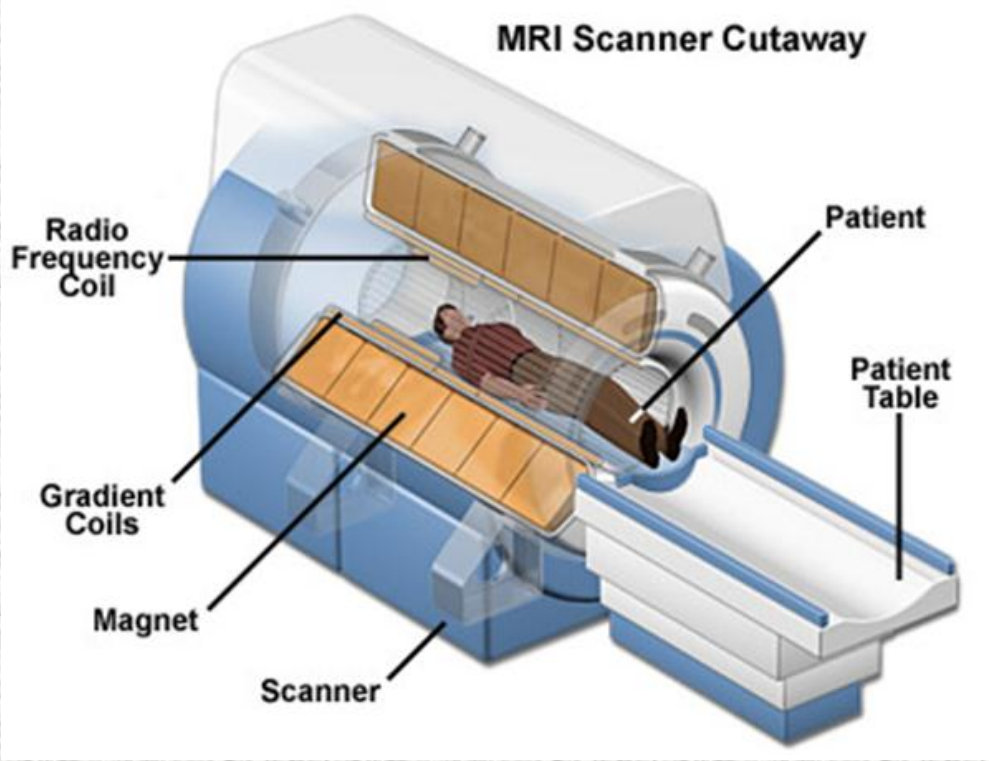
What is MRI?

MRI is an acronym for Magnetic Resonance Imaging. It is a procedure used in hospitals to scan patients and determine the severity of certain injuries. An MRI machine uses a magnetic field and radio waves to create detailed images of the body.

How does MRI work?

A strong magnetic field is created by passing an electric current through the wire loops. In the meanwhile, other coils in the magnet send and receive radio waves. This triggers protons in the body to align in the direction of radio waves. Once aligned, radio waves are absorbed by the protons, which stimulate spinning. Energy is released after "exciting" the molecules, which in turn emits energy signals that are picked up by the coil.

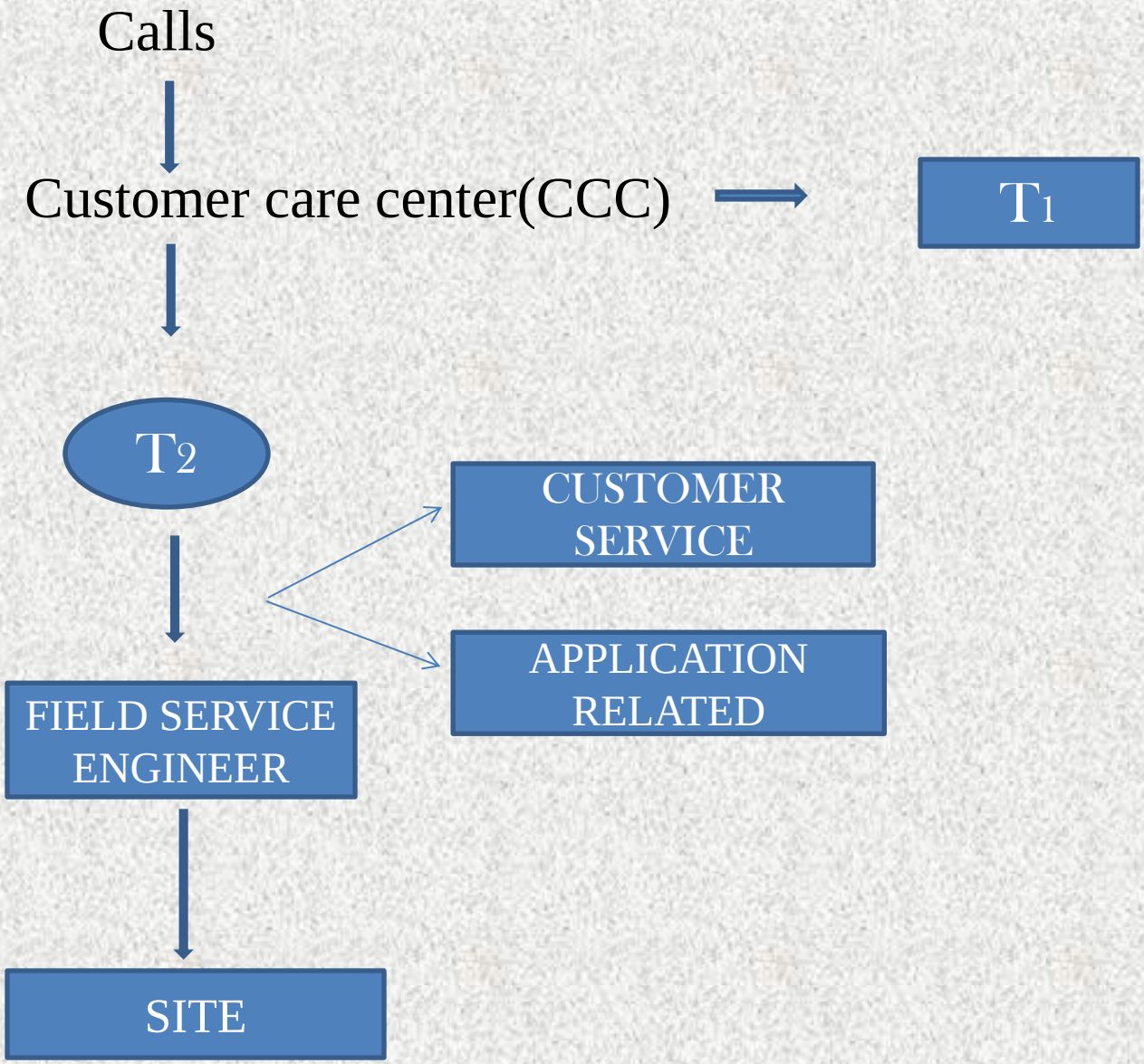
DIFFERENT PARTS OF MRI

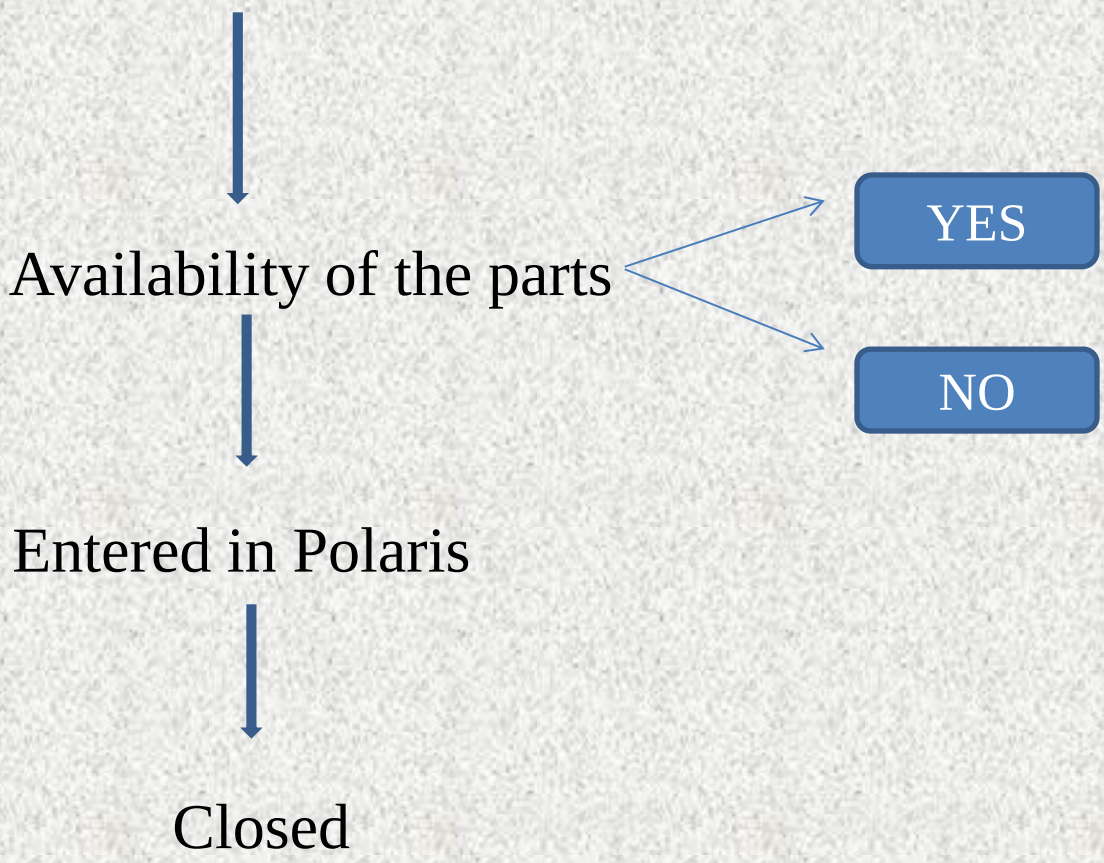


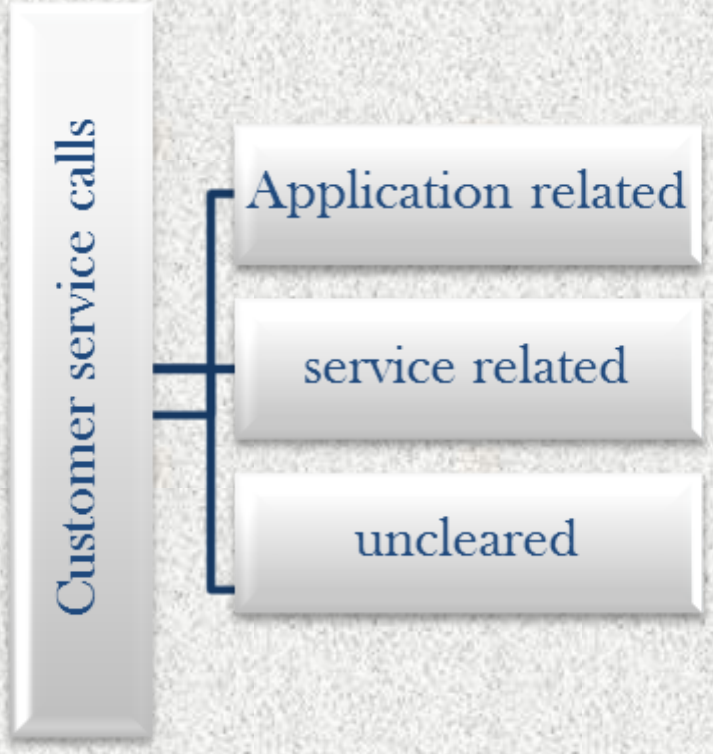
TYPES OF MRI,PHILIPS HEALTHCARE OFFER

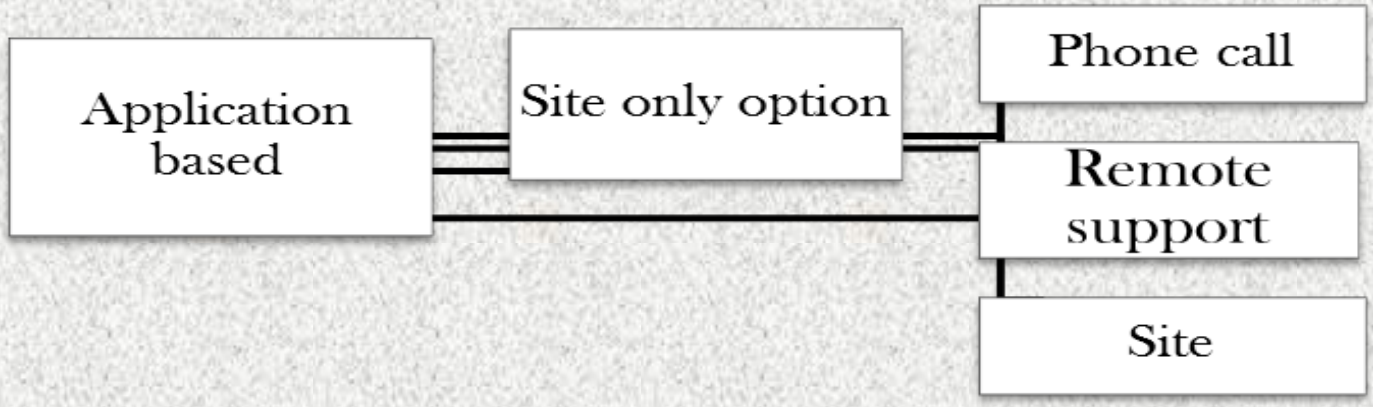
- Ingenia 3T
- Ingenia 1.5 T
- Acheiva 3 T
- Panaroma HFO
- Panoroma HFO oncology configuration
- Sonalleve MR-HIFU
- Ingenia MR-OR

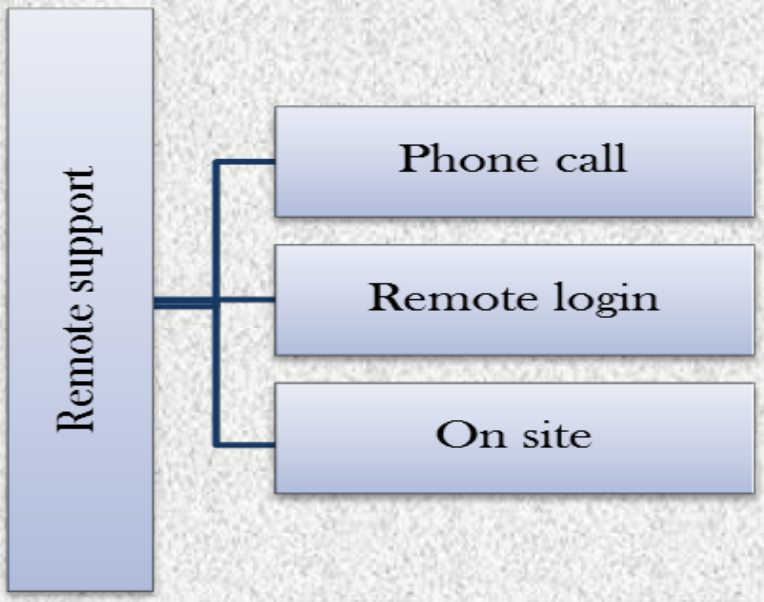
MRI SUPPORT LOG PROCESS:




Availability of the parts
YES
NO
Entered in Polaris
Closed


Customer service calls
Application related
service related
uncleared


Application based
Site only option
Phone call
Remote support
Site


Remote support
Phone call
Remote login
On site

SUBTITLE-3: TO STUDY THE TELE-ICU PROGRAM OF PHILIPS HEALTHCARE:

What is tele-ICU?

Tele-ICUs are networks of audio-visual communication and computer systems that link critical care doctors and nurses (intensivists) to intensive care units (ICUs) in other, remote hospitals. The intensivists in the “command center” can communicate by voice with the remote ICU personnel and can receive televised pictures and clinical data about the patients.

- Direct patient care is provided by the doctors and nurses in the remote ICU who do not have to be intensivists themselves.

- How can Tele-ICUs help?

Telemedicine offers a means of leveraging intensivist coverage over more ICU beds. One physician and four nurses in one command center can oversee the care of up to 75 patients in distant ICUs. These clinicians are aided by “smart” databases that track patients’ clinical values and give an alert when signs indicate a negative trend or when a change in treatment is scheduled according to protocol programs.

PHILIPS e-ICU PROGRAM

Improving ICU clinical and financial outcomes:

- The e-ICU Program enables health systems to transform critical care with an integrated, system-wide approach that leverages scarce critical care resources, integrates clinical decision support, and standardizes evidence-based care across the enterprise.
- The e-ICU Program establishes a remote, 24x7, intensivist-led care model. This approach helps health systems leverage their scarce intensivist resources by expanding their reach across the entire system.
- Run by a centralized, intensivist-led team of critical care specialists treating or co-treating ICU patients, the e-ICU Program has been proven to reduce severity adjusted ICU mortality and length of stay.

SUBTITLE-4: TO DEVELOP A FRAMEWORK ON DATA MANAGEMENT POLICIES FOR CLINICAL INFORMATICS PRODUCTS OFFER BY PHILIPS HEALTHCARE.

STUDY PURPOSE:

Philips healthcare as a vendor offer wide range of clinical informatics products. Therefore, as a vendor they need to provide robust data management policies for their respective products and solutions.

STUDY DESIGN: Designing the structured “control list” for data management policies in order to provide secured configuration for protecting data.

	POLICY/PROCEDURE	CONTROL
1.Data management, security and integrity	Data management policy	a)Data frame work committee
		b)Principles of data management
		c)consistent data security at different levels such as
		d)public data, general administrative data,
		Protected data and restricted data.
		e)Efforts to maintain the integration of data
		f) Architectural tools for constantly developing information architecture.
	Data security	g)Access control list
		h)Record opening
		i)control
		J)Attribution
		K)Consent/Notification
		l)Attribution
		m)Information flow

		n)Aggregation control
		o)Trusted computing base
		p)computer security mechanisms
	Data integrity	q) Network based/host based intrusion detection system
		r) IT vendors release fixes to address known bugs or problems.
		s)Expulsion of strong magnetic fields
		t) Prevention of poor data integration between different computer
		System.
2.Risk analysis	uniform security policy	a) Risk assessment constitutes system inventory
		b)Identification of workforce members and information owners
		c) Security control analysis/changes
		d) Determine vulnerability impact

3.Audit control	Audit procedure	a) Log content specification
		b) Sharing logs/logs reporting
		c)Failed logins/logins at inappropriate hours
		d)Investigation/mitigation, control for inappropriate use and disclosure
		e) Capability to change audit criteria and what it is tracked
	Audit policy	f)Log in monitoring
		g)Information system review
		h)Security audit practice
		i) Audit Trail and Node Authentication (ATNA)
	Periodic internal compliance Audits	j)Audit controls

4. Authorization and access control	Authorization policy	a)License or credential checking
		b)Use of digital certificates
		c)System certification
		d)Automatic checks for changes
		e)Role management
		f)User management configuration
		g)Reconciliation management
		h)functional management
	Access control	I)Role definition
		j)Web, intranet, or closed network
		k)Create amendments
		l)Modify system software file
		m)Modify system configuration file
		n)Create system reports
		o)Modify user profile

5.Authentication of data	Authentication policy	a)Agreement usage
		b)Registration identity
		c)Role based access
		d)User Authentication
		e)System authentication
		f)organization authentication
		g)Restricted Data Sharing and Data Integrity
	Encryption	h)Encryption key
		I)Installation of authentication and encryption
		Certificates
		j)Use of WinZip encrypted and zipped e-mail
		K)secured File transfer protocol (sftp)

6.Hardware maintenance	Hardware security protection	a)Virus protection
		b)VPN and firewall use
		c)security locks and locking screens
		d)Emergency Remote Support
		e)Non-Emergency Remote Support - Response Time
		f)Update and Upgrade Coverage

7. Regulatory compliance	HIPPA right to access	a)Request for access
		b)timely action
		c)Provision of access
		d)Designated record set
	Denial of access	e)unreviewable grounds for denial
		f)Reviewable grounds for denial
		g)Implementation of denial
	Openness and transparency and HIPPA	a)HIPPA Notice of privacy practices
	privacy rules	b) HIO-X(Legal entity).
	safeguards and the HIPPA privacy rules	a)Administrative, technical and physical safeguards
		b)Ensuring its confidentiality, integrity and availability
		c)Prevention of unauthorized or inappropriate access use or disclosure
	Accountability and HIPPA privacy rules	a)Administrative requirements
		b)workforce and training sanctions
		c)compliant process
		d)mitigation

RECOMMENDATIONS

Recommendations are provided at various depending upon the nature of the objectives being attained.

- There should be flexibility for entering the data in database application for tracking the demo assets pertaining to material management.
- For MR application support log, the applicability of the same software should have been provided for remote log in for resolving the problem through it.
- There should be more robust data management policies for the wide range of products and solutions pertinent to Clinical Informatics.

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Thank You