



REPUBLIC OF LEBANON
MINISTRY OF PUBLIC HEALTH

Track & Trace E-Health Solutions



Lina Abou Mrad MBA, PMP

Health Insight 6 -June 2016

LE ROYAL BEIRUT HOTEL- DBAYEH

- Background
- Current situation
- Barcode system
- Objectives
- Scope of work
- stakeholders
- functionalities
- Requirements
- Plan of action

Background

- The Ministry of Public Health has been working several years ago on the reform of the pharmaceutical sector
- Achievements included:
 - Drugs Registration, Pricing, Marketing Authorization, Good Storage and Distribution Practices, Unified Prescription, Promotion of the Local Production and Generic Drugs ...etc.
 - Facilitating access to information through different digital frameworks: website, Mobile App., 1214
- Positive impact on the quality, safety and efficacy of pharmaceutical products and therefore on the Health Status in Lebanon

Lebanon National Health Accounts 2012

Lebanon National Health Accounts 2012

Financing Agents to functions

Amounts in 000 LL

		Government of Lebanon							Other Public		Private Sector			Total
		MOH	CSC	Amy	ISF	GSF	Customs	SSF	NSSF	Mutual	Private Insurance	HH	Donors	
HC1	Services of Curative care													
HC1.1	Inpatient curative services	432,338,731	127,952,497	162,890,000	50,635,821	9,863,016	2,309,858	3,500,000	317,463,490	78,807,454	282,002,103	409,340,990	1,877,103,959	
	Total Services of Inpatient Curative care	432,338,731	127,952,497	162,890,000	50,635,821	9,863,016	2,309,858	3,500,000	317,463,490	78,807,454	282,002,103	409,340,990	1,877,103,959	
HC1.3	Outpatient curative services													
HC1.3.1	Outpatient services	-	31,424,815	1,179,000	-	1,065,861		625,000	-	28,064,976	100,462,398	149,750,434	312,572,484	
HC1.3.2	Dental		12,292,397	382,000	-	369,446		150,000	-	-	-	74,961,979	88,155,822	
HC1.3.3	Mental Health care													
HC1.3.4	Traditional Healers Services													
HC3	Long Term care			688,000									688,000	
	Total Services of Outpatient Curative care	-	43,717,212	688,000	12,645,932	11,298,323	198,246	775,000	68,484,432	28,064,976	100,462,398	224,712,413	491,046,932	
HC4	Ancillary services to Medical Care													
HC4.1	Diagnostic Services		43,717,212	2,358,000	-	4,202,006		2,325,000	-	-	-	-	52,602,218	
HC4.3	Transportation Costs by Households													
	Total Ancillary Services	-	43,717,212	3,919,000		4,202,006							51,838,218	
HC5	Medical Goods													
HC5.1	Pharmaceuticals	151,784,666	55,316,450	30,851,453	29,528,005	1,332,327	4,838,612	1,945,000	259,541,328	18,417,640	65,928,449	912,557,976	1,531,841,906	
HC5.2	Medical Supplies			4,348,547	3,634,747	136,988						50,842,268	58,962,550	
HC5.3														
	Total Medical Goods	151,784,666	55,316,450	35,000,000	33,162,752	1,469,315	4,838,612	1,945,000	259,541,328	18,417,640	65,928,449	963,400,244	1,590,804,456	

Lebanon Current Pharmaceutical Expenditure: 2011-2019



REPUBLIC OF LEBANON
MINISTRY OF PUBLIC HEALTH

	2011	2012	2013	2014	2015	2016f	2017f	2018f	2019f
Pharmaceutical sales, USDbn	1.301	1.301	1.464	1.586	1.711	1.840	1.975	2.117	2.236
Pharmaceutical sales, USDbn, % y-o-y	12.98	-0.05	12.53	8.34	7.90	7.54	7.32	7.17	5.66
Pharmaceutical sales, LBPbn	1,959.757	1,956.508	2,206.254	2,394.382	2,594.092	2,806.342	3,031.514	3,269.973	3,522.053
Pharmaceutical sales, LBPbn, % y-o-y	13.33	-0.17	12.76	8.53	8.34	8.18	8.02	7.87	7.71
Pharmaceutical sales constant exchange rate, USDbn	1.298	1.296	1.461	1.586	1.718	1.859	2.008	2.166	2.333
Pharmaceutical sales, USD per capita	290.6	279.9	303.5	319.3	338.6	362.6	391.8	425.4	455.2
Pharmaceutical sales, % of GDP	3.24	2.94	3.10	3.23	3.31	3.37	3.39	3.39	3.38
Pharmaceutical sales, % of health expenditure	45.5	42.1	48.1	48.8	48.8	48.7	48.7	48.6	48.6

Source: BMI Lebanon Pharmaceutical and Healthcare Report -2015

Introduction

Using Global & Unified Standards in the healthcare field leads to significant benefits.

provide an opportunity to make the drug supply chain, safer and yet more efficient and accurate.

MOPH believes that a standardized identification system from the manufacturer to the patient is imperative to comply with the increasing need for product integrity and traceability.

Taking advantage of the innovation in the **ICT**(Information and Communication Technology) field and aligning them with **Strategic Goals**, the Ministry of Public Health (MOPH) is going to implement the National Barcode Information System (NBIS) for imported and locally manufactured pharmaceuticals in Lebanon
small size and high information capacity

2D DataMatrix bar code

A standard way for all stakeholders in the supply chain to **Identify**, **Capture** and **Share** information about the product



2D DataMatrix bar code

A GSI DataMatrix Bar Code symbol is a two-dimensional (2D) matrix bar code, consisting of black and white “cells” or modules, that can be arranged in a square or rectangular matrix.

GSI DataMatrix is the preferred two-dimensional (2D) matrix bar code symbology that efficiently meets all of the needs of the pharmaceutical industry



GTIN: (01) 07046261398572
Expiry: (17) 130331
Batch / lot: (10) TEST5632
S/N: (21) 19067811811

How to read it?

To read the GSI DataMatrix symbology, camera-based bar code scanners are required. Laser bar code scanners cannot read data matrix bar codes but camera-based bar code scanners can read both linear and 2D bar codes

Objectives and Benefits



GTIN: (01) 07046261398572
Expiry: (17) 130331
Batch / lot: (10) TEST5632
S/N: (21) 19067811811



will also offer the possibility to hold a URL link pointing to a website that could contain the following information

Enable Traceability of pharmaceuticals in all the supply chain

Increase patient safety.

- Reduce medication errors.
- Counterfeit detection.
- Traceability and fast product recalls or withdrawals.
- Real-time and accurate information flow between stakeholders.

Ensure the reliable supply of drugs to patients

Ensure Compliance

Ensuring patient safety

Reducing medication errors

Increase **T**ransparency and **A**ccountability.

Reduce the frequency of Counterfeited and illegal drugs.

- **Safe**
- **Reliable**
- **Fast**
- **Efficient**

Departments & committees at MOPH affected

1. The Service of Pharmacy
2. The Department of the Import/Export Drugs.
3. The Department of Inspection
4. The Department of Narcotics
5. The Technical committee of Drugs
6. The Pricing committee of Drugs

Stakeholders

1. Pharmaceutical Importers/Local Manufacturers
2. Exporters
3. Drug Warehouses
4. Pharmacies
5. Hospitals/Health Centers
6. Third Party Payers (NSSF, Cooperative of Public Officers, Private Insurance Companies, others...)
7. GSI-Lebanon

Scope of work

- Building a national central database for registered imported and manufactured pharmaceuticals in Lebanon
- Allocating standard and unified Barcodes, according to GSI standards, for all imported and manufactured pharmaceuticals in Lebanon
- Interconnecting with Importers, manufacturers, distributors, pharmacies, hospitals and third party payers to share information related to pharmaceuticals.
- Tracking a specific product or multiple batches at each time point.
- Fast recall of a batch of pharmaceuticals from the Lebanese market.



Basic Concepts

- drugs on the market are traced by notifications in all phases from production to consumption
- The standard Bar Code Label includes the registration #, the Expiry Date and the Batch # and excludes any reference to price.
- A Price Sticker will be stamped at the time of invoicing/delivery to the market.

- 2-D Data Matrix can hold more data and is smaller in size than linear barcodes, it is a highly secured type used by Manufacturers to protect their brands internationally. This is the type that is used worldwide in the healthcare sector and that we will choose for us.



Bar code structure

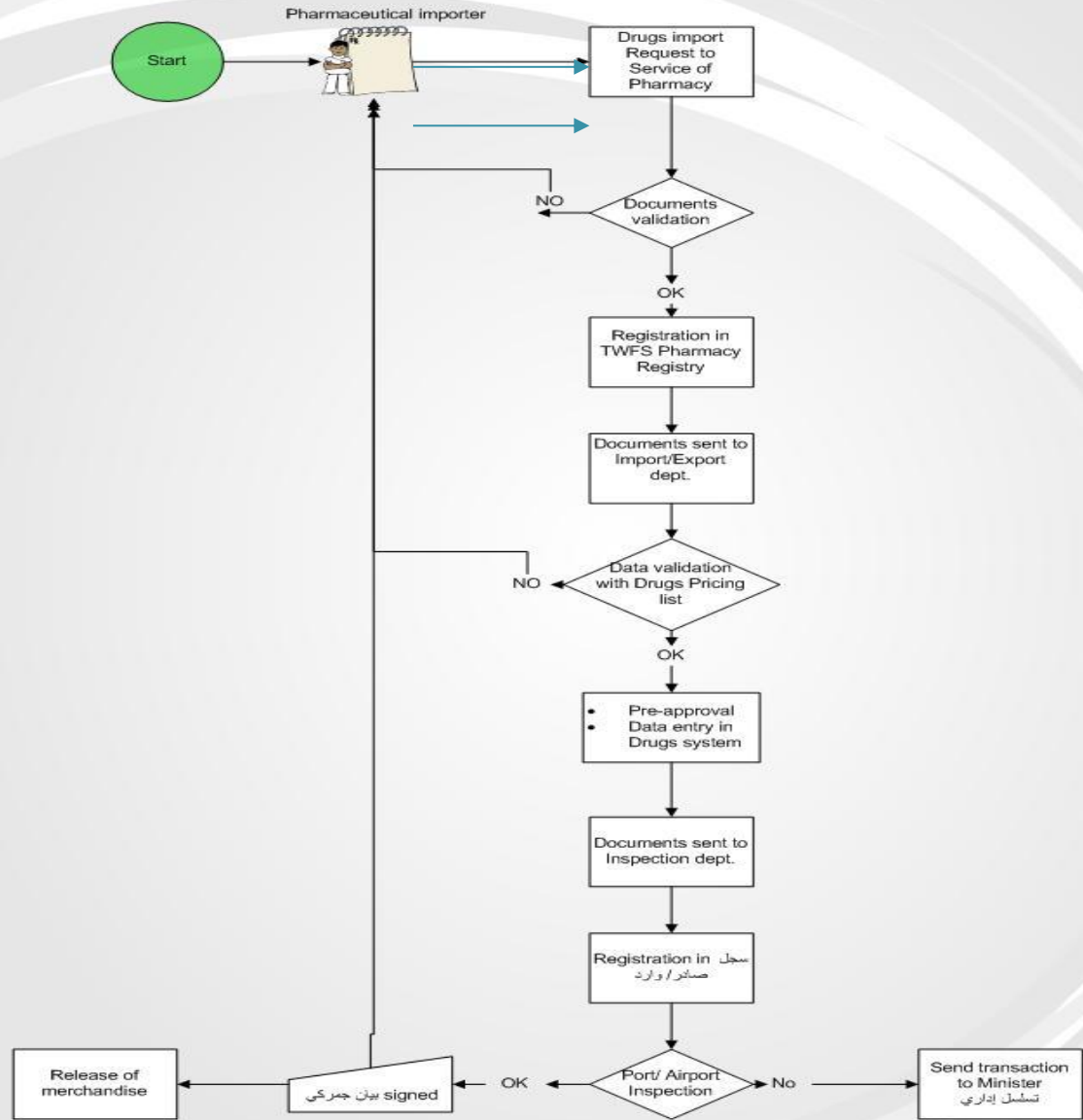
- A GSI DataMatrix EAN 128 (Modular Extension) can contain the following attributes :
- **Manufacturer Product Code (GTIN)** - 14 digits
5 2 8 A A B B E E E E E C
- **Expiry Date** - 6 digits (YYMMDD)
- **Batch / lot Number** - up to 20 alpha-numeric characters
- **Unique Serial Number** (randomized) - up to 20 alpha-numeric characters



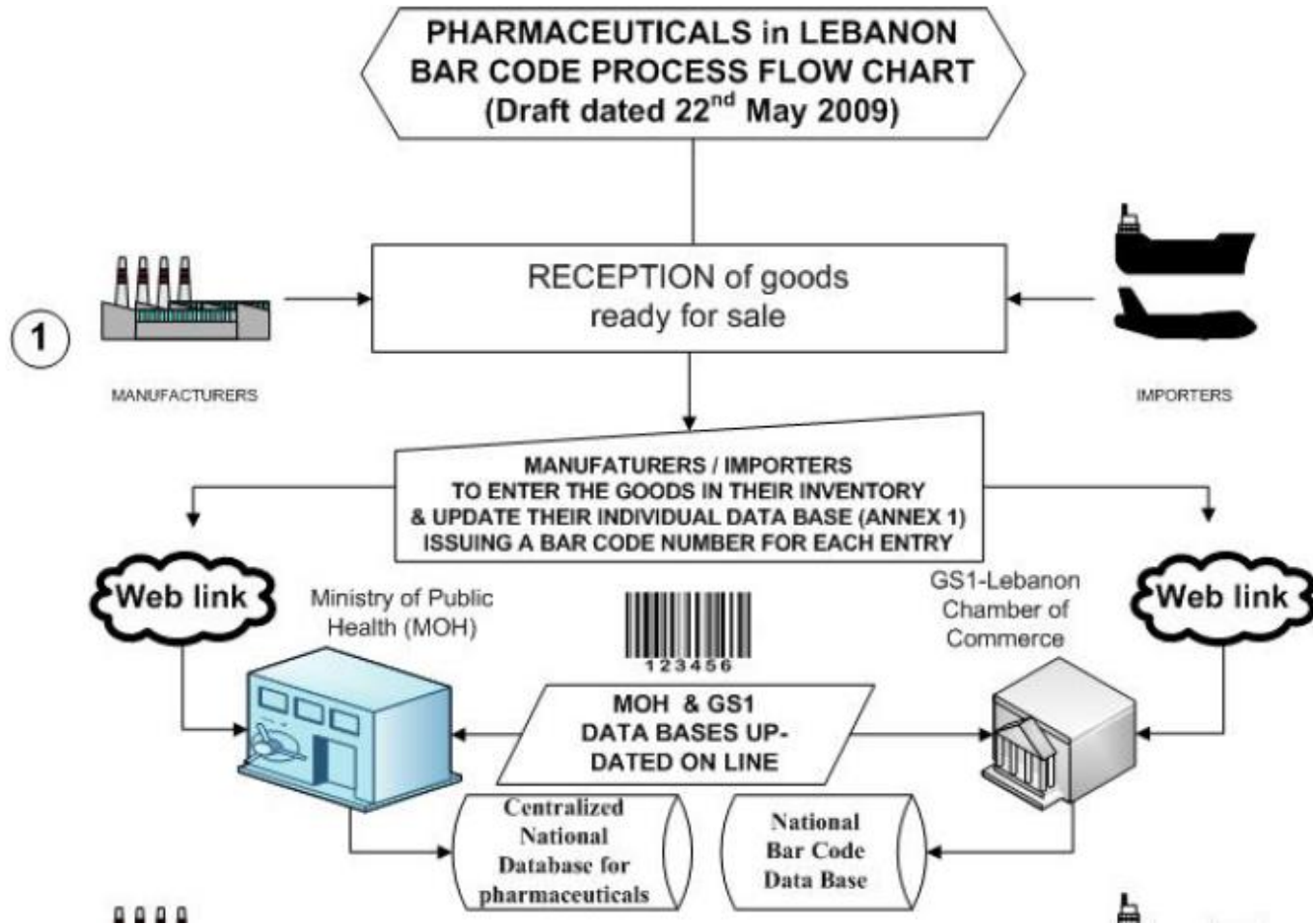
GTIN: (01) 07046261398572
Expiry: (17) 130331
Batch / lot: (10) TEST5632
S/N: (21) 19067811811



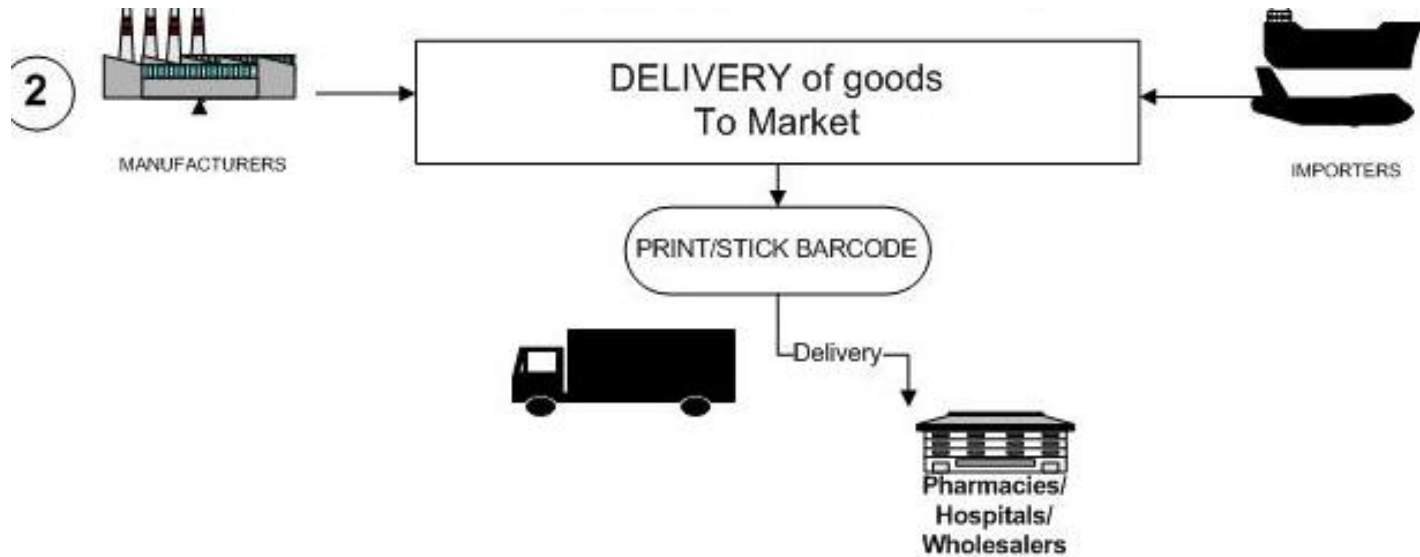
Importation of registered pharmaceuticals @ MOPH Current Situation



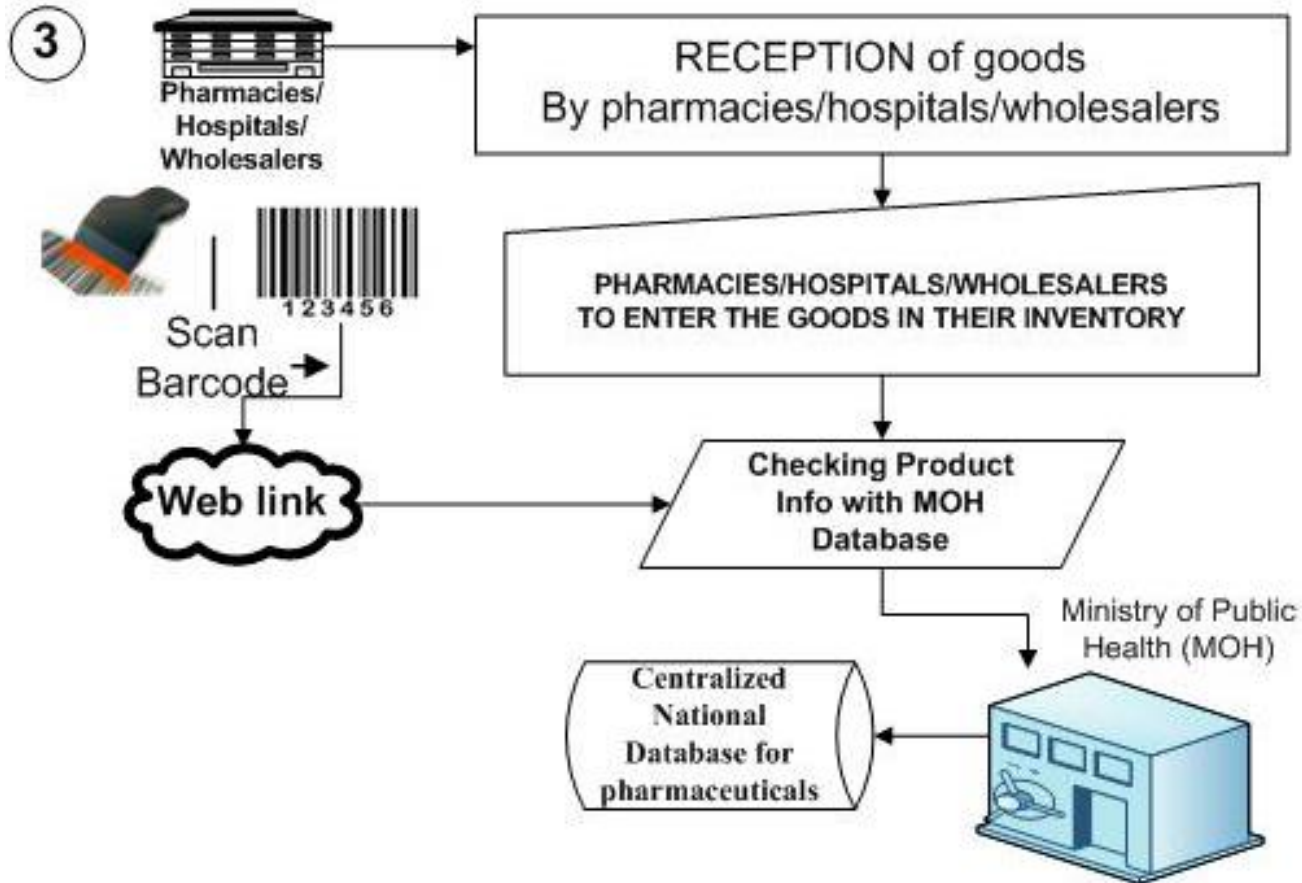
Functionalities of the System



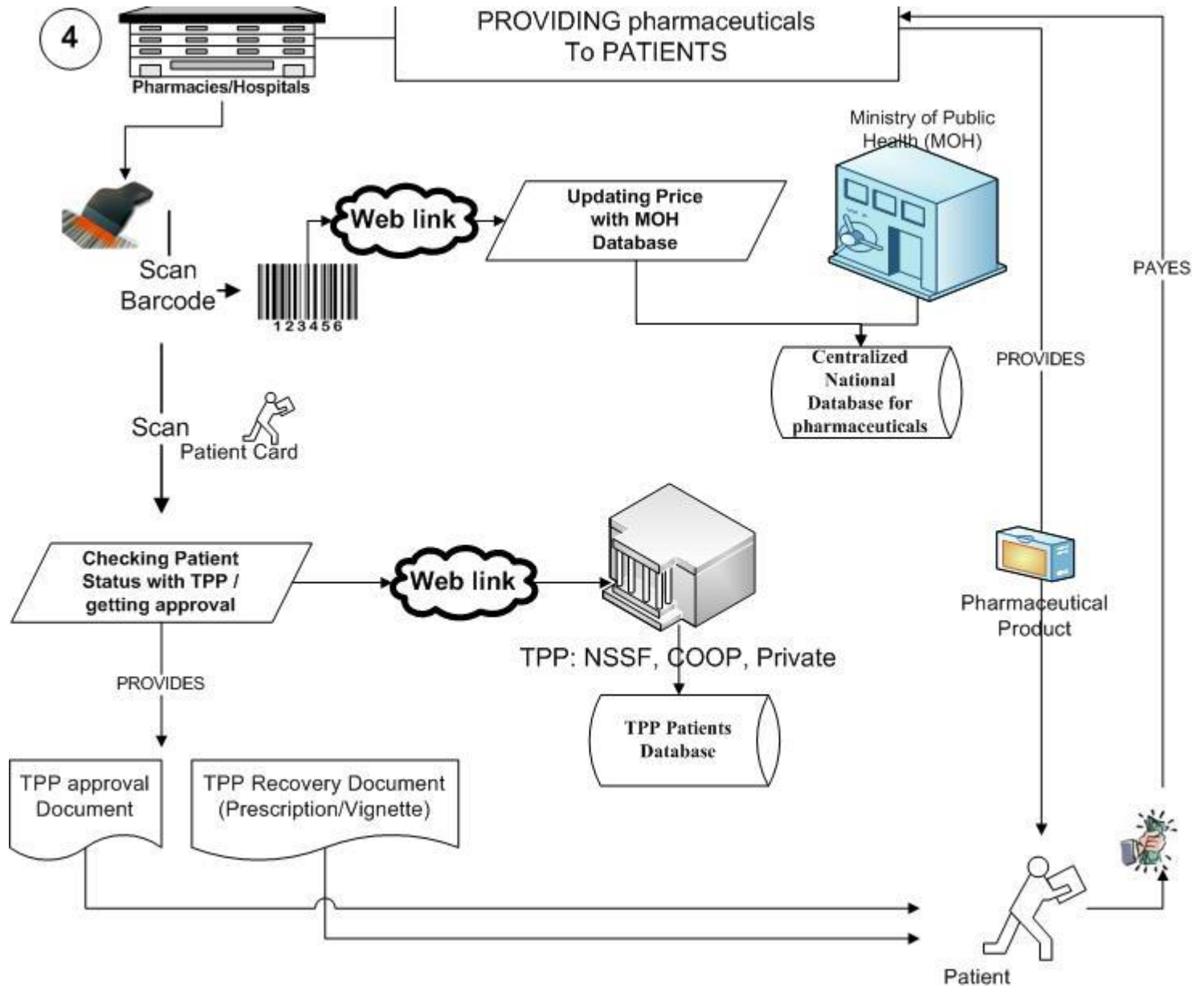
Functionalities of the System



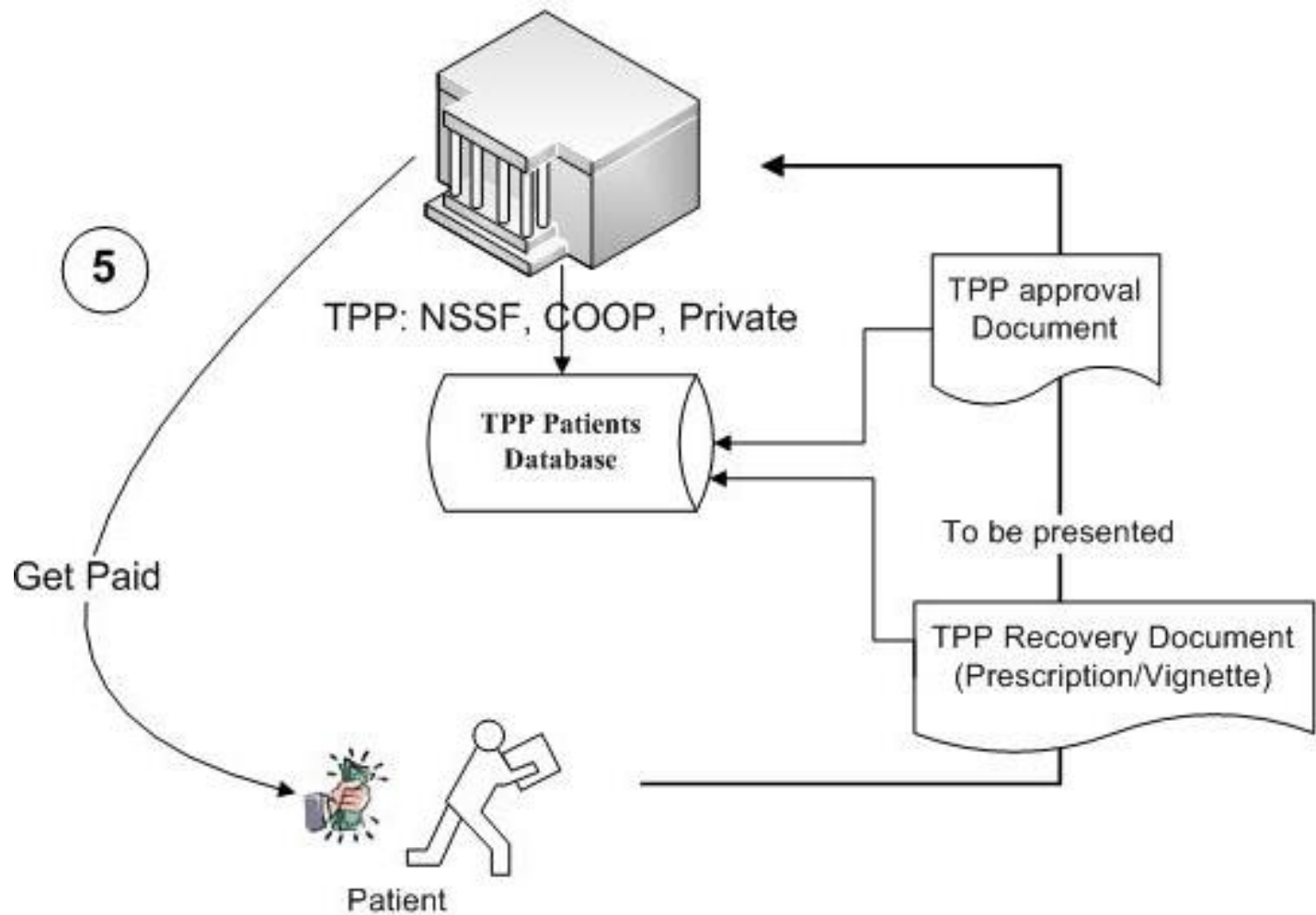
Functionalities of the System



Functionalities of the System



Functionalities of the System



System Integration

The Barcode system will be integrated with:

- The unified prescription system developed by the order of Physicians
- The pharmacies application system
- The TPP reimbursement application (at a later stage)



Plan of action



Thank You

