



**novo nordisk<sup>®</sup>**  
memoirs of FLIT

Samiya Yesmin

BRAC Business School



Inspiring Excellence

BUS 400: Internship

“Memoirs of F.L.I.T.”

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NNPPL

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Subject: Submission of Internship Report

Dear Ma'am:

With due respect, I would like to submit my internship report on "Memoirs of F.L.I.T." prepared as a requirement of the completion of my internship program at Novo Nordisk Pharma Private Limited (NNPPL). This report reflects the valuable learning I have gathered during my internship. In this report, I have sought to analyze NNPPL's current methods of finance and supply chain management. I have worked with these processes described during my internship period.

I sincerely hope that this report fulfils the objectives and requirements of my internship and meets your expectations.

Thank you.

Yours Sincerely,

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Samiya Yesmin  
ID 11304043  
Summer 2011 batch  
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## a. Acknowledgements

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Firstly, I would like to thank the organization, Novo Nordisk Private Limited, for the learning opportunity I was given.

Under the tutelage of Ms. Wahida Sharmin (Senior Finance Executive), Mr. Md. Jillur Rahman Khan (Finance Executive), Mr. Nasir Mahmud (Senior Executive- Logistics) and Mr. Muntasir Rashid Khan (Financial Advisor), I was guided to an absolutely new field of life-work life.

Besides being extremely supportive colleagues, they have been marvellous mentors. My curiosity had no limit, nor did their patience. Nothing was taught theoretically, rather I feel parts of every day conversation working as an advice, helping me at my new job. Thank you so much, every bit of knowledge imparted, it and you shall forever be remembered.

I would like to thank every single person of NNPPPL for creating a work environment that was always inviting, professional and yet so friendly. My experience would be incomplete without naming Dr. Aparajita Das Keya, Ms. Sufia Akter and Mr. H.M Ferdous Kabir Tusher, thank you for being who you were to me.

Lastly, my sir- teacher, mentor – Md. Tamzidul Islam, I would like to thank you for inspiring me during Fall2014, during “MSC301- Production-Operations Management”. Most students find this course insipid, but under you sir I learnt so much that I wanted to make it a part of my internship learning. Mr. Nasir Mahmud was pleasantly surprised that I had such in-depth knowledge of Supply Chain from studying only one course, that too a beginning level course. I will forever be grateful that you took the initiative to teach us almost all important aspects of Supply Chain to get a holistic view of everything it entails.

And my advisor- Ms. Tanjina Shahjahan ma'am for her unwavering support.

Thank you, all.

## b. Summary

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Some transitions in life stay with you forever.

Some first are new beginning to a whole new life and a whole new you—be it first day of school, first tooth loss, first day of high school, first graduation, first major exam-IGCSEs, first day at University etc. — experiences that teach you to grow, to be more.

This is a memoir of one such first— my first job experience.

Doing my internship in the F.L.IT department of Novo Nordisk, has not only exposed me to the financial aspects of a MNC affiliation, but has also taught me the logistics behind NN's effective supply chain process.

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## I. Effects of Sugar High

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Diabetes, is described as a group of metabolic diseases in which the person has high blood glucose (blood sugar), either because insulin production is inadequate, or because the body's cells do not respond properly to insulin, or both.

Patients with high blood sugar will typically experience polyuria (frequent urination), they will become increasingly thirsty (polydipsia) and hungry (polyphagia). (Diabetes, 2016). If left untreated, diabetes can cause many complications. Acute complications can include diabetic ketoacidosis, nonketotic hyperosmolar coma, or death. Serious long-term complications include heart disease, stroke, chronic kidney failure, foot ulcers, and damage to the eyes. Thus not as sweet as it sounds (pun intended).

In 2013 it was estimated that over 382 million people throughout the world had diabetes (Williams textbook of endocrinology).

There are two types of diabetes:

Type 1 Diabetes - characterized by loss of the insulin-producing beta cells in the pancreas, leading to insulin deficiency. The body does not produce insulin. Approximately 10% of all diabetes cases are type 1.

Type 2 Diabetes - characterized by insulin resistance and/or reduced insulin secretion. The body does not produce enough insulin for proper function. Approximately 90% of all cases of diabetes worldwide are of this type.

Diabetes can cause Hypoglycemia (low blood glucose) or Hyperglycemia (when blood glucose is too high) – both of which can have a bad effect on the patient. Thus by following a healthy eating plan, doing adequate exercise, and taking insulin (to control blood glucose levels), a diabetic patient can lead a normal life. As the risk of cardiovascular disease is much higher for a diabetic, it is crucial that blood pressure, sugar levels and cholesterol levels are monitored regularly.

Novo Nordisk is the world leader in diabetic care, producing 4 of the Top 10 diabetic medication (Palmer, 2014).

Novo Nordisk is working globally to raise awareness, improve access to care and address psychosocial aspects of diabetes to improve people's lives through a program named, 'Changing Diabetes®'. Changing Diabetes® is also about working at the frontiers of research and development to improve treatments and create more opportunities for people with diabetes. This includes going beyond medicine to advocate for better education and support, helping people better manage their diabetes and live life on their own terms.

## II. Novo Nordisk A/S

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Novo Nordisk (NN) is a global healthcare company with 90 years of innovation and leadership in diabetes care. It began with the two small Danish companies Nordisk Insulinlaboratorium and Novo Terapeutisk Laboratorium founded in 1923 and 1925, respectively. The two companies started the production of the revolutionary new drug insulin that had just been discovered by two Canadian scientists, (Novo Nordisk History, 2016).

Since the earliest days, the focus has been on the development of products to benefit people with diabetes. Merged in 1989, they created Novo Nordisk, a company that has been expanding rapidly ever since with leading positions within diabetes care, haemophilia care, growth hormone therapy and hormone replacement therapy.

Headquartered in Denmark, Novo Nordisk (NN) has international production facilities in 8 countries and affiliates or offices in 75 countries. NN employs approximately 42,300 people world-wide, (facts-and-figures, 2016) and markets its products in more than 180 countries to 26,800,000 people, (novo-nordisk-background, 2016).



*Figure 1: NN Logo*

The Novo Nordisk logo- The Apis bull- identifies NN instantly and represents the sum of all NN's values in one symbol. The Apis bull has been Novo's logo since the year after the foundation of Novo Terapeutisk Laboratorium in 1925. The choice of the logo follows a European chemist tradition of identifying pharmacies through an animal symbol.

The logo is a stylised reproduction of an Egyptian statuette dating from circa 664–323 BC. It is richly ornamented with symbols representing among other things, the eternal dualities of life, day and night, life and death.



### III. Novo Nordisk Pharma (Private) Ltd. (NNPPL)

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To meet the growing requirement of insulin in Bangladesh, the world's largest insulin manufacturer Novo Nordisk set-up house in Bangladesh in 1993 and became a fully-fledged affiliate in 2007 as “Novo Nordisk Pharma (Private) Ltd.”, NNPPL.

In 2012, NNPPL set-up local manufacturing with their local partner Eskayef Bangladesh Ltd, establishing a high-tech dedicated formulation, filling, inspection and packaging exclusively for Novo Nordisk's insulin, manufacturing plant in Tongi. (Stock & Corporate, 2012)

The plant, the third set up by the company in Asia after China and India, as a venture between the Novo Nordisk and Eskayef Bangladesh Ltd, a leading local pharmaceutical company. The Nordisk-Eskayef plant will manufacture over 5 million vials a year, maintaining the high-quality standards followed by Novo Nordisk across the world. Novo Nordisk enjoys more than 80 percent share in the insulin segment of diabetic care market in Bangladesh.

NNPPL, headquarter in Dhaka, has approx. 200 direct employees (2015) and a total of 850 (Pasolini, 2012) indirect employees in Bangladesh, to which they aim to add another many more.

In developing countries, rising diabetes rates present enormous challenges to poverty eradication and economic development. In Bangladesh, Novo Nordisk works with local partners to improve health for millions of people. 40% of all people with diabetes in least developed countries live in Bangladesh.

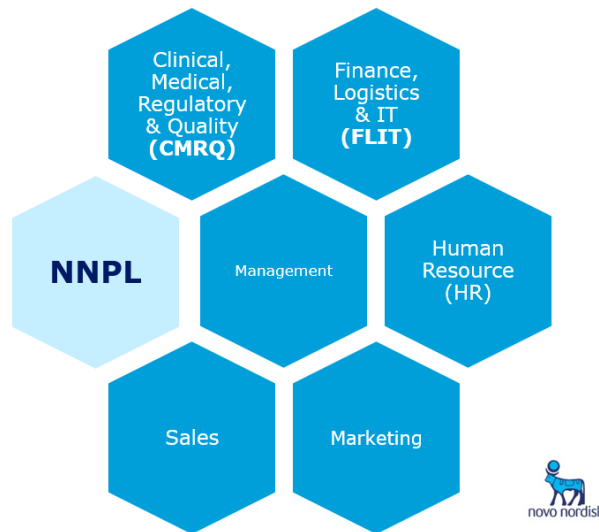
Thus NN aims to reach these people through local partners to improve health for millions of people. As a result of efforts to strengthen healthcare quality, diagnosis and treatment rates are improving. These efforts create value both for the Bangladeshi society and for Novo Nordisk.

Shared value grows out of partnerships. By working with local organisations to strengthen the healthcare infrastructure, NN aims to help build sustainable communities. The quality-of-life and economic improvements that follow are critical for the longterm success. In other words, “what’s good for our customers is good for us”. It’s part of NN’s Triple Bottom Line (TBL) principle. In Bangladesh, NN brings about its Triple Bottom Line (TBL) principle by:

- identifying and addressing barriers to appropriate diabetes care. Historically, complex issues involving awareness, accessibility, affordability and availability have prevented millions of people who live with diabetes from receiving high-quality care
- establishing partnerships with non-governmental organisations and local businesses
- building sustainable business models with our partners Improvements in community health status stimulate the economy and create jobs – resulting in significant value to society
- Through these improvements, we expand our market, strengthen stakeholder relationships and generate employee engagement – resulting in significant value to Novo Nordisk, (Changing Diabetes in Bangladesh, 2012).

NNPPL has 5 departments:

Figure 2: NNPPL Organogram

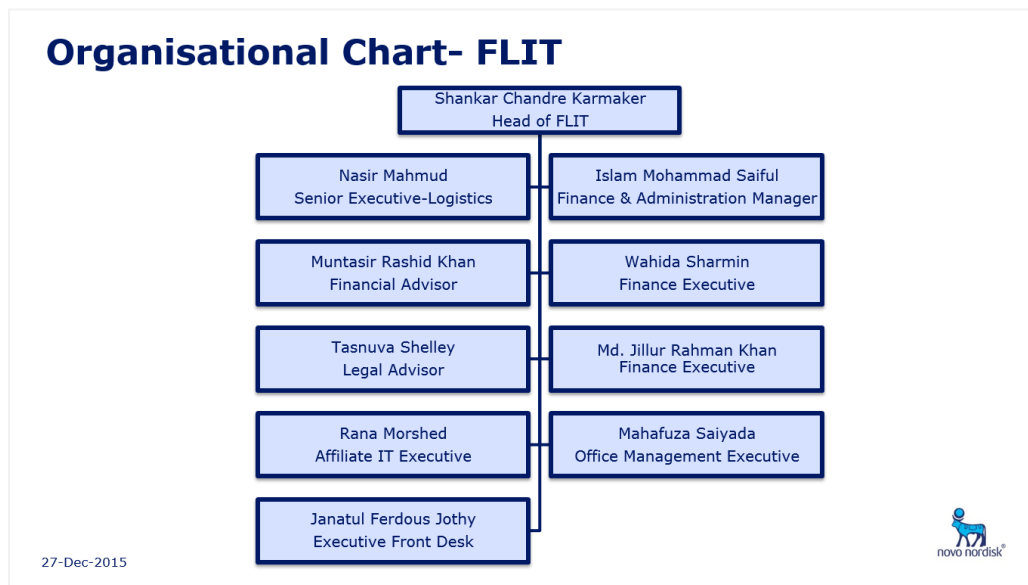


I interned in “F.L.IT” department of NNPPL.

FLIT stands for Finance, Logistics and Information Tech.

It consists of 10 members, of whom I closely worked with four- Ms. Sharmin, Mr. Rahman, Mr. Rashid and Mr. Mahmud.

Figure 3: NNPPL-F.L.IT organogram



## IV. Novo Nordisk Way

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The Novo Nordisk business is based on a clear vision, a strong set of core values and a consistent corporate governance model– The Novo Nordisk Way.

In 1923, NN’s Danish founders began a journey to change diabetes. Today, thousands of employees across the world with the passion, skills and commitment to continue this journey; not only to prevent, treat and ultimately cure diabetes, but also to improve the lives of those living with other serious chronic conditions: haemophilia, growth disorders and obesity.

- *“Our ambition is to strengthen our leadership in diabetes*
- *Our key contribution is to discover and develop innovative biological medicines and make them accessible to patients throughout the world.*
- *We aspire to change possibilities in haemophilia and other serious chronic conditions where we can make a difference.*
- *Growing our business and delivering competitive financial results is what allows us to help patients live better lives, offer an attractive return to our shareholders and contribute to our communities.*
- *We never compromise on quality and business ethics.*
- *Our business philosophy is one of balancing financial, social and environmental considerations - we call it 'The Triple Bottom Line'. To ensure we continue helping people affected by serious chronic conditions, our business needs to grow both profitably and responsibly. We call this approach the Triple Bottom Line. It means Novo Nordisk is committed to considering the financial, social and environmental impacts of every decision as we work to create value for individuals, society and investors*
- *We are open and honest, ambitious and accountable, and treat everyone with respect.*
- *We offer opportunities for our people to realise their potential.*

*Every day, we must make difficult choices, always keeping in mind, what is best for patients, our employees and our shareholders in the long run.*

*It's our way. It's the Novo Nordisk Way.”*

(Novo Nordisk Way, 2016)

Today the Novo Nordisk Way shows responsibility to patients, employees, communities and investors. It has earned Novo Nordisk **No. 1 ranking**, among the pharmaceuticals, and No. 19 in all sectors, in World Economic Forum’s “**2016 Global List of 100 Most Sustainable Corporations**” (2016 Global 100, 2016)

## V. Products/Services

An over view of the 23 products of NNPL:

| Product        | Type  | Names  |
|----------------|---|--|
| Insulin        | Vials   | 1.Actrapid 40 IU<br>2.Insulatard 40 IU<br>3.Mixtard 30, 40 IU<br>4.Actrapid 100 IU **<br>5.Insulatard 100 IU **<br>6.Mixtard 30, 100 IU ** |
|                | Human Insulin Penfills  | 7.Actrapid 100 IU Penfill<br>8.Insulatard 100 IU Penfill<br>9.Mixtard 30, 100 IU Penfill<br>10.Mixtard 50, 100 IU Penfill                  |
|                | Modern Insulin  | 11.Novo-Mix 30 Flexpen<br>12.Novo Rapid Flexpen<br>13.Novomix Penfill<br>14.Novorpaid penfill<br>15.Levemir Flexpen                        |
|                | Device  | 16.Novopen-4<br>17.Novofine Needle   |
|                | New Generation Insulin  | 18.Tresiba<br>19.NovoSeven<br>20.Ryzodec   |
| Bio-Pharma     | For treating Hemophilia<br>(a rare bleeding disorder in which<br>the blood doesn't clot normally) | 21.Victoza<br>22.Novo Seven RT 1 mg  |
| Growth Hormone | to treat growth failure in children   | 23.Norditropin Simplexx 5mg  |

Of these 23 products, 3 of the Vial insulins are produced in Bangladesh, (4. Actrapid 100 IU, 5.Insulatard 100 IU, 6.Mixtard 30, 100 IU).

## VI. NN Finance

As Novo Nordisk is a Private limited in Bangladesh, I cannot include their financial analysis in my report.

Thus I would like to share the Concur process that I learnt during my internship, which helps make the finance department of such a company be run by only 5 people. Also, being a finance intern during year closing, opens your eyes to more aspects of finance that are astounding.

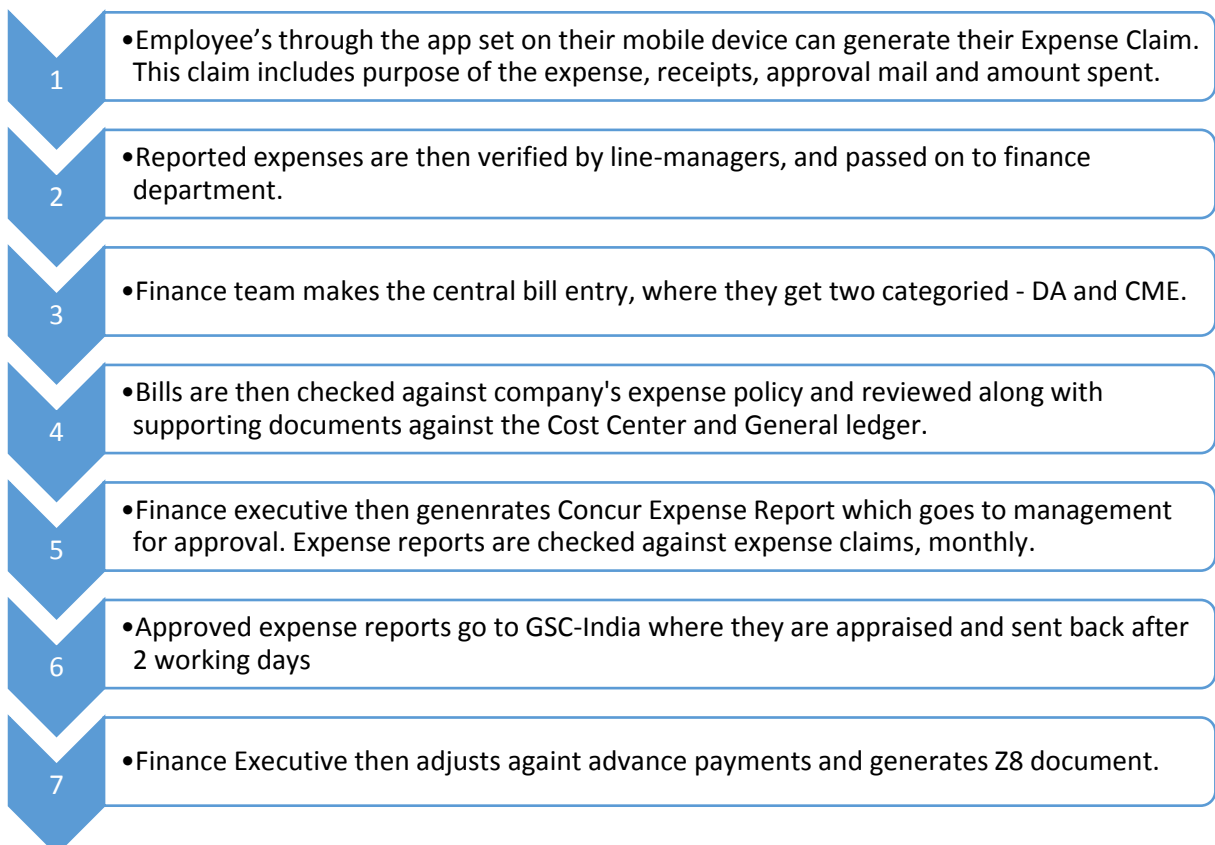
### Concur Expense Management System:

Concur is a global web-based solution for integrated travel and expense management. It helps create, track and process expense, mainly used for settling employees' "Personal Claims".

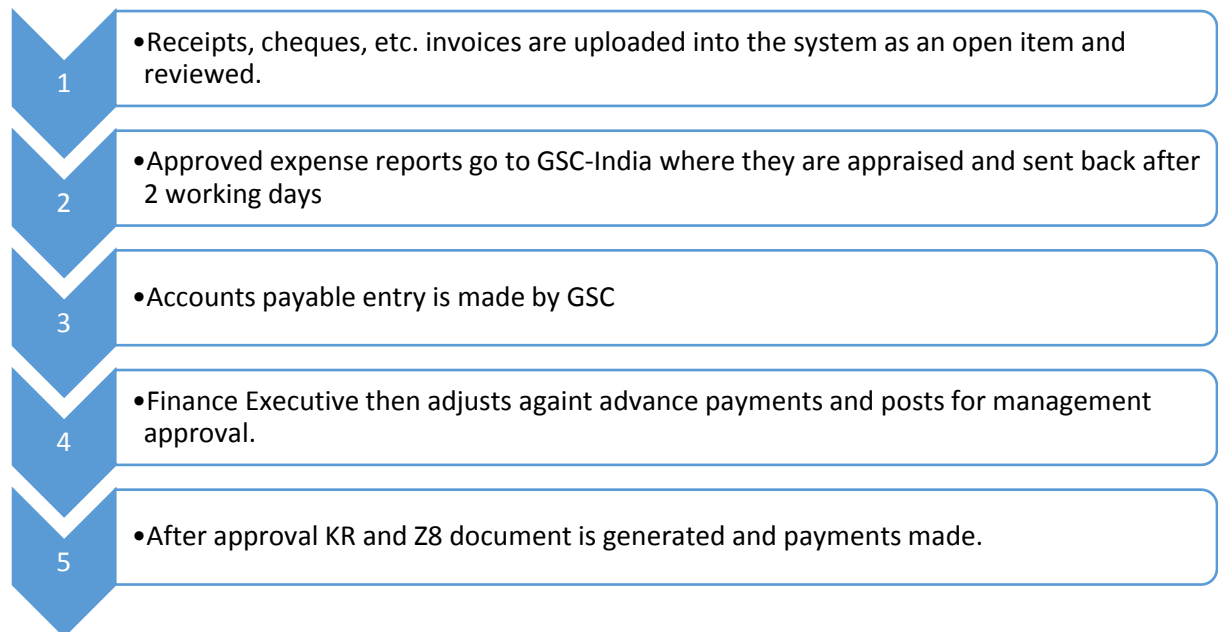
Hearing about such a program, I was wondering, what is so complex about settling travel expense that it needs a special software? Then I learnt that pharmaceuticals are not like any other companies, their entire sales force is distributed all over the country and according to designation, assignment, product and various other factors, every single person gets different types of travel and other expense claims. Such expense claims are part of their everyday work and getting them approved physically would be impossible and hilarious.

Thus comes in Concur. This system allows every employee, no matter where in the world they are, generate their expense claims. I wish it were as simple as only that.

### Concur Expense Management System's Process Steps:



### Dice Payment Process Steps:



Both processes are similar but done on different platforms, a NN method.

This SAP/Concur/Dice processes generates three types of documents:

1. KY: an accounting credit entry, in the company's accounts database, for an expense payment made to employee, a manual payment.
2. KR: is an accounting credit entry, in the company's accounts database, for external expenses made, against which cheque payments are made.
3. The Z8 document is an accounting debit entry, means the account is open for transactions, and payments are made. It is made against both KR and KY documents.

At year closing, all these separate documents KY and Z8 need to match up during auditing. This is also reviewed against the company's general ledger as well as against approved expense budget, aka Cost Centre.

## VII. NN Supply Chain

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NNPPL manufactures 3 of 23 products, locally, in partnership with Eskayef Bangladesh. The three locally manufactured products are the three vial insulin:

1. Actrapid 100 IU
2. Insulatard 100 IU
3. Mixtard 30, 100 IU

The production of these 3 insulins require 12 types of raw materials ingredients and 7 types of packaging materials, they are:

Raw Materials:

Insulin Crystal.  
 Protamine Sulphate.  
 Metacresol  
 Phenol Crystal  
 Glycerol  
 Disodium Phosphate Dehydrate.  
 Zinc Oxide.  
 HCL.  
 Sodium Hydroxide  
 PPD11  
 Ascorbic Acid  
 Heparin

Packing Material:

Snap of Cap  
 Glass Vial.  
 Media Fill Black Cap.  
 Inner box of all product.  
 Shipper Box  
 Leaflet.  
 Vial Sticker Label.

### Supply Chain Strategy at NNPPL:

1. The logistics process is maintained solely by Mr. Nasir Mahmud. He uses SAP and other tools to forecast, plan, manage inventory and track the entire production line, to ensure reliable supply.
2. At NNPPL taking historical trends are taken into account along with the market growth rate, and forecasts are made. Translating market requirements into assets and optimizing production requirement is a duty of the production management.
3. Forecasting requires accurate order & demand management, to ensure appropriate supply at low cost.
4. When forecasting, API (active pharmaceutical ingredients) shelf life is a very crucial factor. All Raw material must have >75% shelf life in order to be acceptable for production. And APIs can only be sourced in fixed sized lots. And as these ingredients tend to be very sensitive and expensive, it is very crucial to order the right amount of ingredients at the right time. As some of these APIs are also inter-dependent, validity dates are a very perplexing issue.
5. Mr. Nasir Mahmud uses SAP and other tools for MRP (material resource planning)-- forecast, plan, manage inventory and track the entire production line. Interlinking

dependent ingredients’ quantity, production time and shelf life is intense mental labour. Following a periodic order quantity, NNPPL maintains 3 months of stock in inventory.

- Also, as sourcing is done internationally, thus is a factor of currency conversion and dependency of currency price on sourcing.

(Figure 4 below shows a partial record format for the finished goods, as maintained outside the many softwares used, is shown below)

Note: As NN is a Danish company our revenue booking and expense records are all done in Danish Kroner DKK, while international purchases are done in USD and products are sold in BDT. Thus currency valuation places quite a major role.

Figure 4: Planning Sheet snapshot

| Sales Plan 2015 PVT        |           | 1 DKK = 13.33 BDT |         | 1 USD = 5.3 DKK |        |         |             |        |        |         |             |        |         |         |             |
|----------------------------|-----------|-------------------|---------|-----------------|--------|---------|-------------|--------|--------|---------|-------------|--------|---------|---------|-------------|
| TDCL                       | Price BDT | Price USD         | January |                 |        |         | February    |        |        |         | March       |        |         |         |             |
|                            |           |                   | CLOSING | SALE            | IMPORT | CLOSING | MONTH STOCK | SALE   | IMPORT | CLOSING | MONTH STOCK | SALE   | IMPORT  | CLOSING | MONTH STOCK |
| Actrapid 40 IU             | 2.03      |                   | 49,508  | 17,446          |        | 32,060  | 1.0         | 45,696 | 30,000 | 40,274  | 3.0         | 17,045 |         | 23,523  | 1.7         |
| Insulatard 40 IU           | 2.03      |                   | 50,531  | 5,212           |        | 45,319  | 0.7         | 4,699  |        | 40,681  | 8.8         | 4,643  |         | 36,652  | 7.0         |
| Mistard 30, 40 IU          | 2.03      |                   | 40,316  | 6,616           |        | 39,536  |             |        | 10,000 | 72,422  | 11.2        | 1,758  |         | 64,205  | 7.5         |
| <b>TOTAL 40IU VIALS</b>    |           |                   | 140,355 | 29,274          |        | 116,815 | 1.7         | 50,395 | 40,000 | 153,377 | 13.0        | 23,446 |         | 124,480 | 22.2        |
| Actrapid 100 IU            | 3.22      |                   | 166,356 | 37,517          |        | 128,839 | 3.9         | 67,321 | 30,000 | 131,121 | 2.2         | 1,000  |         | 129,921 | 3.1         |
| Insulatard 100 IU          | 3.22      |                   | 43,561  |                 |        | 30,535  | 2.3         |        |        | 30,535  | 2.2         | 1,000  |         | 29,100  | 45,146      |
| Mistard 30, 100 IU         | 3.22      |                   | 255,720 | 97,459          |        | 177,754 | 296,219     | 3      | 30,000 | 300,321 | 303,166     | 3.1    | 114,169 | 112,452 | 301,111     |
| <b>TOTAL 100 IU VIALS</b>  |           |                   | 465,637 | 144,986         |        | 337,128 | 296,219     | 6      | 60,000 | 630,977 | 420,679     | 2.7    | 106,169 | 224,562 | 477,358     |
| Actrapid 100 IU Penfill    | 16.5      |                   | 4,576   | 3,319           |        | 4,000   |             | 2,168  | 4,000  | 5,155   | 3.9         | 2,502  |         | 3,500   | 3,500       |
| Insulatard 100 IU Penfill  | 16.5      |                   | 1,000   | 1,311           |        | 2,000   |             | 3,573  |        | 1,000   | 1.2         | 635    |         | 1,000   | 1,000       |
| Mistard 30, 100 IU Penfill | 16.5      |                   | 37,282  | 15,392          |        | 51,870  |             | 70,000 | 57,392 | 4.0     | 15,630      |        | 11,520  | 53,892  | 1.1         |
| Mistard 50, 100 IU Penfill | 16.5      |                   | 3,091   | 2,363           |        | 3,000   |             | 1,400  |        | 2,827   | 1.0         | 2,827  |         | 2,000   | 5,305       |
| <b>TOTAL PENFILLS</b>      |           |                   | 53,949  | 21,385          |        | 41,000  |             | 2,365  | 24,000 | 72,422  | 3.2         | 23,954 |         | 16,398  | 16,398      |
| Novo-Mix 30 Flexpen        | 42.4      |                   | 12,382  | 4,152           |        | 6,000   | 11,439.5    | 3,759  | 4,000  | 1,132.0 | 4.0         | 4,277  |         | 5,000   | 15,141.6    |
| Novo Rapid Flexpen         | 42.4      |                   | 7,280   | 1,883           |        | 5,396.2 | 2.9         | 1,012  | 3,000  | 6,124.0 | 3.0         | 2,309  |         | 4,120.0 | 2.4         |
| Novomix Penfill            | 30        |                   | 6,000   | 3,330           |        | 6,000   | 6,671       | 2.2    |        |         |             |        |         | 1,500   | 1.0         |
| Novorapid penfill          | 30        |                   | 2,290   | 1,583           |        | 3,000   | 3,101       | 2.3    | 1,500  |         |             |        |         | 1,500   | 3,122       |
| Levemir Flexpen            | 64.1      |                   | 2,446   | 836             |        | 2,000   | 5,222       | 1,000  |        | 4,531.0 | 9.8         | 929    |         | 3,601.0 | 2.4         |
| <b>TOTAL ANALOGUES</b>     |           |                   | 31,987  | 12,452          |        | 17,000  | 37,834      | 12,129 | 10,000 | 24,986  | 24.8        | 11,500 |         | 37,654  | 25.5        |
| Novopen-4                  | 5         |                   |         |                 |        |         |             |        |        | 3,773   | 2.2         | 2,000  |         |         | 3.1         |
| Novofine Needle            | 9         |                   |         |                 |        |         |             |        |        |         |             |        |         |         |             |
| Victoza                    | 63.2      |                   | 2,057   | 741             |        | 1,200   | 2,536       | 3.5    | 710    |         |             |        |         | 1,886   | 2.7         |
| Norditropin Simplex 5mg    | 94.4      |                   | 292     | 350             |        | 300     | 300         | 2.2    |        |         |             |        |         | 163     | 1.0         |
| Tresiba                    | 115       |                   | 2,511   | 923             |        | 1,500   | 3,067.4     | 3.3    | 1,000  | 1,500   | 3,451.2     | 3.5    | 1,013   | 1,344   | 3,736.20    |
| Novoseven                  | 680       |                   | 23      |                 |        |         | 23          | 40100  | 2      |         | 21          | 10.5   |         |         | 21          |

- Raw Material and Packaging is sourced directly from France, China and Denmark, sometimes Japan. They are imported and directly taken to Contract manufacturer- Eskayef’s Manufacturing plant, and not into NNPPL’s warehouse.
- And like any import/export transaction, sourcing materials and finished goods transactions requires LC “Letter of Credit”
  - Finished goods are bought from NN through LC by NNPPL and sold directly to our major distributors
  - The raw materials we source are not bought into our ware house, rather are sold directly to our local contract Manufacturer- Eskayef. After the finished good is ready, NNPPL buys the vials from the local manufacturers and sells it.

Of the 23 products of NNPPL, they only sell the vials directly. The rest of the products are sold through distributors.



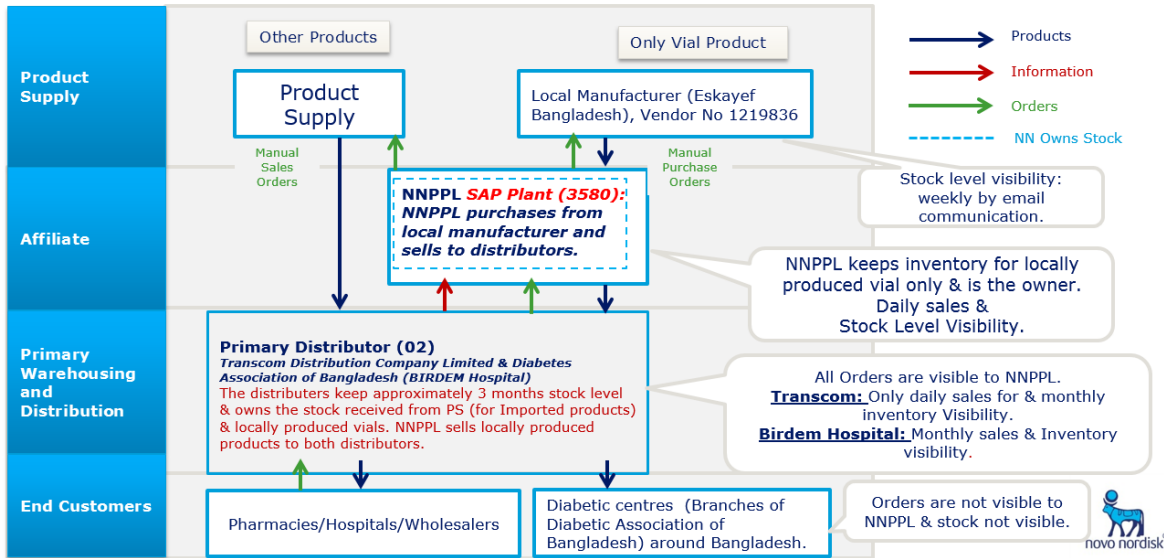
Stock Level & Distribution:

Figure 5 shows the entire SCM process set up in Bangladesh.

Figure 5: Supply Chain management Set Up in Bangladesh

SCM Set Up- Bangladesh-

Two primary distributors, SAP Plant, Local Manufacturer and currently on manual ordering



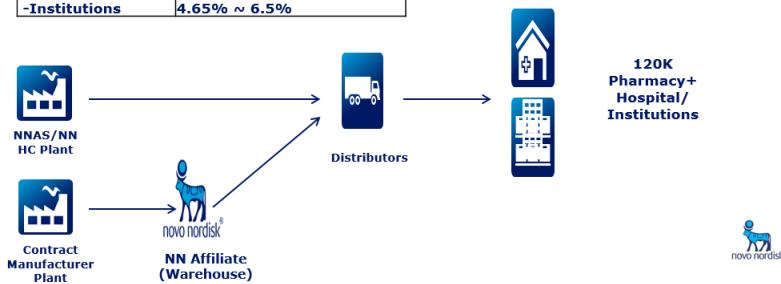
1. Finished products are imported by NNPPL and sold distributors and institutes.
  - a. BIRDEM, Bangladesh Bank and Bangladesh Army are the only institutes NNPPL provides to directly.
2. NNPPL has two distributors:
  - a. Transcom Distribution Company Limited
  - b. Diabetes Association of Bangladesh (BIRDEM Hospital)
3. Both distributors are to maintain 3 months stock in inventory. NNPPL has visibility on daily sales and inventory stock, whenever the stock is nearing the red-line re-orders are made or new stock released. This also helps NNPPL track market demand.
4. Distributor channel is a close simple set-up with visibility by NNPPL.

Figure 6: NNPPL's Distributors channel

**Business Set-Up: Bangladesh**

Distributor channels (from total Distributors sales):

|               |                           |
|---------------|---------------------------|
| -Pharmacies   | 79% ~ 82% (Private Sales) |
| -Hospitals    | 4.65% ~ 6.5%              |
| -Institutions | 4.65% ~ 6.5%              |

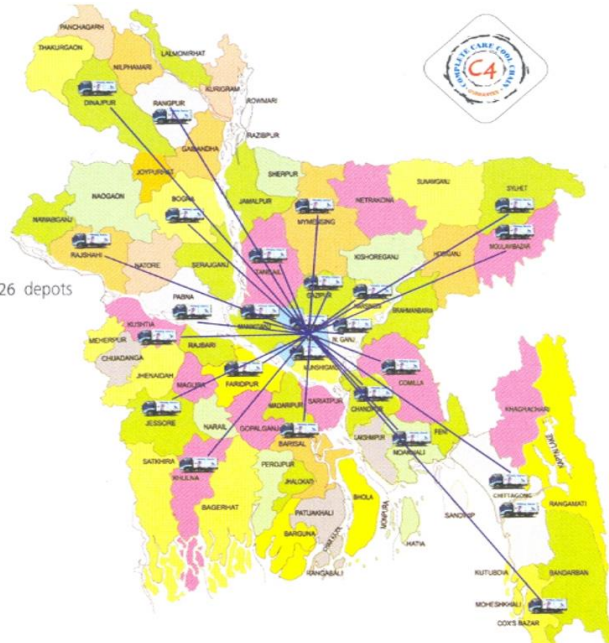


5. NNPPPL’s distribution channel consists of 26 depots all over Bangladesh. They provide to 1,170,000 chemists and also to all the DAB (Diabetic Association of Bangladesh) centres. Since vials need refrigerating, NNPPPL trucks are cooling trucks and NNPPPL maintains refrigeration at the chemists it directly provides to.

Figure 7: NNPPPL's distribution depots

### NN BD Local Distribution

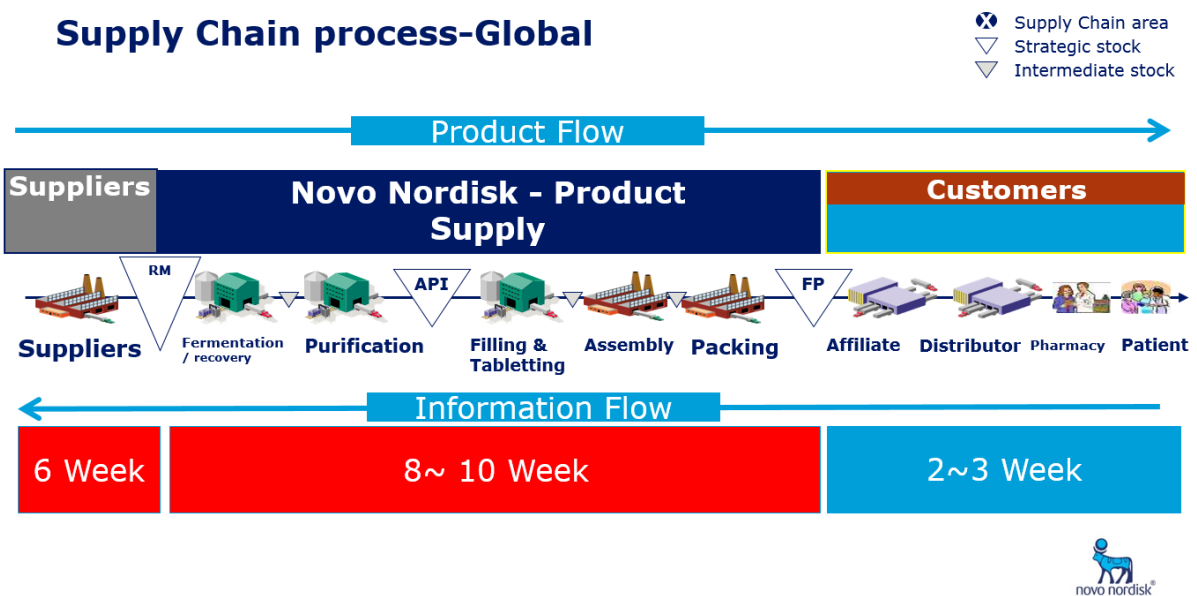
- Bringing Novo Nordisk® products at every doorstep through 26 depots
- Covering 1,17,000 chemists across Bangladesh
- Supplies NN Products to all DAB centers across the country
- Maintains proper cool chain by supplying our insulin. (Only those chemists who have quality refrigerator\*)



6. NNPPPL has also started providing refrigeration for need-based cases, to doctors/clincs etc.

This entire process, from supplies coming into the country till reaching the patients, takes a total of 16-19 weeks. This is a major lead time requirement, 4-5 months. Thus it is crucial to be attentive to all the minute details of the planning process

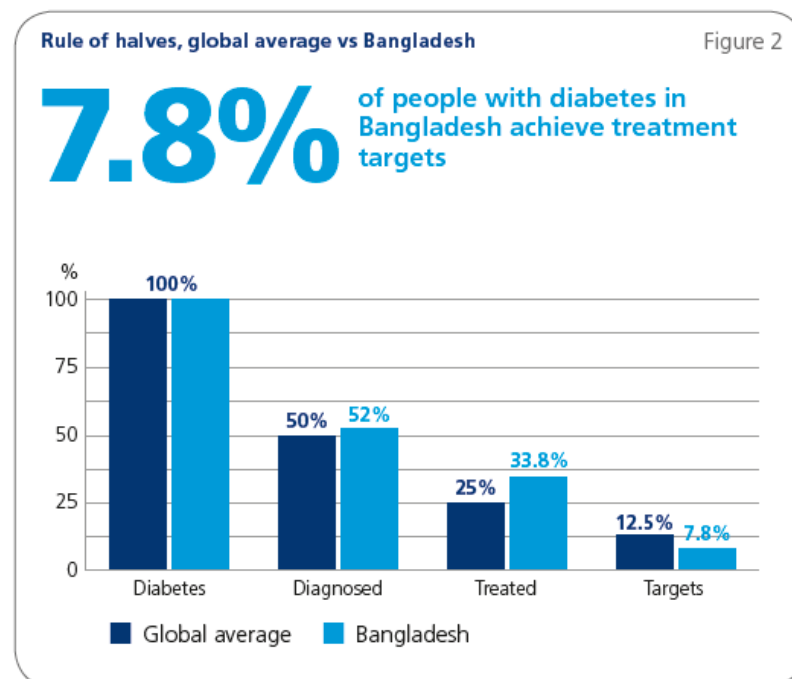
### Supply Chain process-Global



### Issues faced by NNPPL SCM:

1. The local production line at Eskayef is unstable the produced usable finished goods are not always of the same amount, hence making lot-size predictions and distributions is always tricky.
2. As Bangladesh is a major growing market, NNPPL does intensive work with DAB and Doctors of Bangladesh to increase awareness of diabetics and its treatment. In 2012, it was found that in Bangladesh, more than 12% of the adult population affected by diabetes or prediabetes, with nearly half that population undiagnosed and only 7.8% of all diabetic patients had achieve treatment. (Changing Diabetes in Bangladesh, 2012)

Figure 8: Diabetic treatment status



Thus predicting demand and ensuring supply for such a vast market is tricky. The growth rate of insulin industry has been 30% for the last 5 years. Ensuring the right amount of products are sourced, produced and distributed to the right areas on-time, is a magic that Mr. Mahmud performs. And so far he has been quite on-point.

## VIII. Recommendation & Conclusion

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In conclusion, my learnings and recommendations of both operations, in brief, were:

### 1. Finance:

- a. It requires a close check on the bottom line with regards to standard rules and regulation.  
*By putting restrictions on input according to designation, the finance team would not need to fine-comb each and every claim made against regulations. Thus reducing redundant work-lead and speeding up the process.*
- b. Ensuring all payments are synced to disbursements and record keeping, makes auditing at the end of the year very easy.  
*Year-end auditing could be done faster if every month end auditing is done. Thus less chances of paper-displacement and loss of documentation.*
- c. The policy of collecting receivables early and making payables late is only a bookish dream that mostly is not as possible in reality, unless imposed as a rule.  
*If this policy is put-in place as a rule, it would effectively allow more liquid asset to be utilized within the allowance time-period, thus optimizing resources.*
- d. The amount of paper required, even after using extensive software tools, is still quite high.  
*I think by doing monthly audit and storing paper once electronically and using that ONLY, could possibly reduce high quantity of physical paper in use.*
- e. From NNPPL I have learnt that making all tax payments the month the expense is made makes life much easier. It ensures that no paper work is missed. And regularly updating the tax files results in total transparency and no complication during tax filing.

### 2. SCM:

- a. The supply chain management has taught me that intensive planning is a crucial factor. As one product can use up 10-20 ingredients, at different quantities and different expiration dates, keeping all these in-line to result in a product with greater than 6 month validity, is magical to me.
- b. Even with the various amazing software in place, most planning and inventory records should also be kept manually, with BD's unstable electricity and internet lines, keeping it all online and taking that risk it is not wise.
- c. Patience plays a major role, when keeping track of Letter of Credit status, Material Resource Planning and Inventory Resource planning.

The extra manual labour that goes into SCM here is integrating all the software work to form a holistic status report. This process can be speed-up if data from the software could be extracted to excel and then interlinked. As all data from the software need to be manually input into excel to interlink with counter parts, it becomes an excruciatingly lengthy, time consuming and mentally draining a process. Making extraction possible would optimize time-utilized and data accuracy to pleasurable levels.

Overall, I would like to conclude by highlighting other factors about NNPPL. As a multi-national affiliate, it practices international work environment policy. This makes NNPPL such a great place to work, professional etiquettes are maintained, work-timings are respected and followed. Also, they are investing a lot in talent developments continuously, which is an asset for the individual, as well as the company and the country.

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