

1 Appendix

1. Table from Wanke & Saliby's paper (2009), p 690.

Whether and how inventories should be pooled.

Major decision		Should inventories be pooled?		
		Yes		No
If yes, how should inventories be pooled?		Inventory Centralization	Regular Transshipments	Independent Systems
Adequacy in terms of product, demand, and operation characteristics for a minimal total cost		High holding costs	Low holding costs	Medium holding costs
		Negative correlation	Moderate positive correlation	High positive correlation
		High and homogeneous lead time means	Possibility of balancing high/low lead time means and std. deviations of demand at different centralized locations	Low lead time means
		High and homogeneous demand std. deviations	Heterogeneous levels of lead time variability	Low demand std. deviations
Type of pooling		Homogeneous levels of lead time variability		Homogeneous levels of lead time variability
Additional benefits		Demand	Lead time demand	None
		One also benefits from the consolidation at the best performance facility in terms of lead time variability	None	One also benefits from the fact that undesirable or unexpected cross-effects in terms of demand peaks (or valleys) and/or lead time delays (or anticipations) are avoided
Underlying demand allocation rule		Tyagi and Das (1998)		Ballou and Burnetas (2003)
Expected rank considering optimal inventory levels for each demand allocation rule	Distribution costs	$DC_K > DC_{IS}$ $DC_T > DC_{IS}$ $DC_T > DC_K$ if $W_p < D_1/(D_1 + D_2)$		
	Inventory costs	$IC_{IS} > IC_K$ $IC_T > IC_K$ $IC_T > IC_{IS}$ if demands are highly, positively correlated, lead time means and standard deviations of demand are both low, and the ratio between lead time standard deviations at different locations is high		
	Service levels	$FR_T > FR_{IS}$ $FR_{IS} > FR_K$		

2. Questionnaire

Centralization and decentralization: what are the main drivers?

This questionnaire has for objectives the collection of data and information regarding the centralization and decentralization in the framework of a master's thesis. All the answers provided will remain confidential if wished by the interviewee. This work is led in order to obtain the master's degree in business engineering at the Louvain School of Management. Five different parts constitute this questionnaire: an introduction, a definition of the topic, the situation of the company, the data collection and analysis and the recommendations of the interviewee. As most questions are open-ended, the interviewee can feel free to add anything he assumes to be relevant for this study.

This work is mainly focused on the inventory consolidation but can also integrate other dimensions: purchasing, human resources, IT ... if the interviewee can link any answer to those.

1. Introduction

- Could you please **introduce yourself**?
 - What is/was your position(s) at Rexel Holdings Australia?
 - For how long?
 - Could you briefly describe your daily tasks/responsibilities?

2. Scope and definition of the topic

- According to your point of view and perspective:
 - What would be an accurate **definition** of a network centralization and decentralization (mainly regarding the inventory)?
 - What would be the main **advantages** and **disadvantages** of these two strategic decisions (mainly regarding the inventory)?
 - What are the **KPIs** (Key Performance Indicator) and/or **key variables** that one should absolutely follow and keep in mind while considering a network centralization or decentralization?

3. The situation of the company

- If you had to determine the current network “**centralization degree**” of your company, from 0% (fully decentralized) to 100% (fully centralized, 1 single facility), where would your company be?
- Over the last years, how has this “**centralization degree**” **evolved at your company?** Towards a centralization or decentralization? **Why** and **who** took that managerial decision?
- What were the **long and short terms expectations** of this change?
- How did you plan to **measure/quantify** the improvements? Did you manage to do it? Yes/no, why? What were the **KPI's followed**?
- What are the **threats/problems** you foresaw to happen?
- Were there any **unexpected issues**?

4. Data gathering and analysis

- Regarding your **inventory**, could you measure/quantity any changes in:
 - cycle stocks?
 - safety stocks?
 - distribution costs?
 - The transportation costs?
 - The delivery times?
 - The service levels?

If yes, could you give the evolution in cost savings based on your data?
Was the evolution expected? If no, why?
- Regarding your **distribution costs** :
 - How have these ones evolved while this “centralization degree” evolved?
 - Were the changes as expected? If no, why?
- Regarding your **service level**:
 - How has this one evolved while this “centralization degree” evolved?
 - Were the changes as expected? If no, why?
- Regarding your **purchasing department**:
 - Is your pricing centralized or local?
 - Is your purchasing centralized or local?
 - Is your distribution centralized or local?
 - What are the reasons of the purchasing strategy you adopted?
- Regarding your **human resources**:
 - How did your employees cope with the centralization?
 - What were the major threats/opportunities with the centralization?
- Overall, did you benefit from any **economies of scale**? If yes, which ones? If no, why?

5. Recommendations

- Based on your experience, what **advice** would you give to other managers considering a centralization/decentralization?
- What **advice** would you give to any young graduates planning to work in the supply chain management? (I.e: skills/knowledge required, career perspective, ...)

Thank you very much for your time and consideration.

3. Interviews

Interview n°1 - Nico Rodenburg – DC manager at Rexel Netherlands

- **Goeiedag Meneer Rodenburg. Gezien uw functie zullen de vragen meer op een strategische niveau zijn. Hier de bedoeling van de werk is een vergelijking tussen theorie en praktijk maken. Ik zal dus met deze vraag beginnen: waarom hebben jullie beslist om van een decentralisatie tot een centralisatie te gaan?**
- Ik kan je niet alles zeggen sinds ik in november heb begonnen te werken. Ik begrijp waarom je kiest centraal of decentraal. In een decentralisatie zal je splitsen. Elke deel zal zij eigen werk hebben. Vroeger hadden we verschillende magazijnen maar we hebben besloten om alles met elkaar samen te voegen. De voordelen zijn dat je van een punt zal sturen, de kosten zijn gemakkelijker voor de klant en minder personeel. Ook nu, in plaats van laden de producten van verschillende gebieden zal alles van een punt vertrekken. Je zal nu alleen maar een kanaal gebruiken.
- **Wat zijn volgens jou de belangrijkste verbeteringen dat jullie met deze centralisatie hebben gemaakt?**
- We werken nu met een computer systeem. We hebben minder mensen: dat is vaak de belangrijkste. Minder mensen bedoelt minder kosten. Jouw voorraad zal ook natuurlijk lager zijn. Uiteindelijk zijn de totale kosten minder. Je moet ook weten dat we meer dan honderd leveranciers hebben die naar een centrale punt gaan. Ze zullen daar de opslagen doen en zullen na naar zeven verschillende hubs die zijn in de hele land verspreid. Als je dat met twee magazijn doet, zal je deze scenario twee keer meer hebben. ... Met centralisatie is het goedkoper voor de kosten en voorraad: je rijdt minder, minder transportkosten.
- **Ok. En om zeker te zijn dat jullie goede resultaten had, welke soort van KPIs hebben jullie gevolgd?**
- Dat weet ik niet. Ze hebben deze keuzes gemaakt in 2012 en 2013 maar ik was nog niet daar. In 2012 hebben ze beslist om een centraal magazijn te hebben. In 2011 hebben ze begonnen om daarover te spreken maar ze hebben op de operationeel niveau in 2012 en 2013 begonnen. Eerst hadden we hier twee systemen als een gevolg van deze centralisatie. In 2014 zijn we naar een systeem gegaan. Dat is een harmonisatie. We hebben een afspraak met het personeel gehad om over de werktijden, vakantie dagen en de voorwaarden te praten. En vorige jaar hebben we 84 mensen ontslagen. Naar de

centralisatie hadden we natuurlijk hier meer. Ik denk dat we van ongeveer 400 to 300 gegaan, dus een vermindering van 25%.

- **Hadden jullie geen probleem met deze centralisatie?**
- Ja. Je moet de goederen op kwaliteit en hoeveelheid naar de klanten zenden. Maar ook het gebruik van een nieuwe systeem maken. Nu de kwaliteit en de KPIs zijn verbeterd. Nu hebben we minder klachten.
- **Ok. In de theorie is het gezegd dat in het algemeen zouden de distributiekosten verhogen na een centralisatie omdat de afstanden langer zijn.**
- Ja maar als je verschillende magazijnen hebt en dat uw leveranciers moeten de goederen naar alle deze magazijnen, moeten uw leveranciers de goederen naar verschillende plaatsen brengen. Het zal meer kosten maken. Maar nu we hebben alleen in een punt. Jouw inkoop wordt dus ook gecentraliseerd.
- **Weet je als jullie konden beter prijzen met de leveranciers krijgen?**
- Dat weet ik niet. Ik ben alleen bezig met de logistieke kant.
- **Wat zijn jullie doelstellingen nu voor de komende jaren?**
- Volgende stap is kijk voor minder mensen en meer doen dus we moeten automatiseren. We willen ook optimaliseren onze picks, dus, een betere pakking hebben om minder tijd met de picking te verliezen. Nu moeten we nog te veel tellen. We moeten dus zien als we kunnen dat met de leveranciers doen, bijvoorbeeld een andere soort van doos hebben. We kunnen ook meer milieuvriendelijk zijn door beter pakking hebben. Als we lukken om minder dozen te hebben, bijvoorbeeld niet een doos in een doos, in een doos, zal het beter zijn voor iedereen. Om dat te doen moet de logistiek afdeling met de inkoop en de leveranciers praten. Ook, sinds we in grotere hoeveelheden bestellen kunnen we meer van de leveranciers eisen. Jacques Boon kan je tellen alles over bestuurlijke beslissingen. Ik zal je zijn nummer geven zodat je hem kan opbellen.
- **Volgens jij, wat zijn de beste performance indicators om de effecten van deze centralisatie te kunnen tonen? Kim zal al veel data aan mij zenden, vanaf 2012 to nu. Kon je me deze soort van informatie zenden? Bijvoorbeeld de evolutie van verschillende kosten, de service level, de kwaliteit verbetering, de verschillende warehouse performance en de werknemers veranderingen over de afgelopen jaren. Ook de voorraad waarde omdat het een grote voordeel van de centralisatie is. De verschillende KPIs die je hebben gevolgd. Aantal personen van afdeling.**
- Ok. Ik zal proberen om dat zo snel mogelijk te zenden. Ook moet je weten dat Hans geen manager meer hier is. Hij is nu verantwoordelijk voor alle data, de performance

van medewerkers en kwaliteit issues. Hij werkt onder mij. Hij doet alle data voor de logistiek.

- **Weet je als jullie zullen blijven met deze 6 hubs structuur voor de volgende jaren or zullen jullie dat veranderen?**
- Ik denk dat het zal toch meerdere jaren blijven omdat we een goed dekking van de land. Ik zal ook je een Excel file zenden. Erop kan je verschillende kleuren zien. Als het in groen is bedoelt het dat we de verwachtingen hebben voldoende. Als het rood is bedoelt het we moeten nog dat verbeteren. Je kan daar distributie, kabel en andere variabelen zien. Je kan ook zien dat heel veel producten zijn verstuurd naar het legbord nu. Ik zal je deze data op maandag proberen te zenden.
- **Ok perfect, dank u wel meneer.**

Interview n° 2 - Rob Vandam – inventory manager at Rexel Netherlands

- **Goeiedag meneer. Dank u well voor uw tijd. Voor de eerste kwestie, kun je een beetje over uw functie spreken?**
- Ja dat kan. Ik ben sinds 1982 in dienst bij Rexel, dat is een hele lange tijd. Ik heb eerst 15 jaar in Almeer gewerkt want ze stonden op een distributie centrum van Rexel. In 2013 zijn we verhuisd naar Bleijswijk met de centralisatie, waar alle onze distributie centrums zijn toe samen gevoegd. Sinds twee jaar doe ik vooral bay en dit jaar is dan ook locatie bay bijgekomen. We hebben zo verruimd ALP plan: artikel locatie plan. Alle goederen die dus binnenkomen die moeten in een bepaald gebied opgeslagen worden: in het legbord gebied, in het pallet gebied, het kabelgebied, het langbord gebied. Dan moet ik bepalen als het een hardloper is, een medium is of langzaam looper is. Dat zijn eigenlijk de hoofdtaken die ik dagelijks doe. Ik ben ook verantwoordelijk voor de voorraad betrouwbaarheid. We moeten ook de items tellen. Voor 2015 moesten minimaal alle items een keer geteld hebben. Dat is de wens van onze managers. Dus we zijn heel bezig met de voorraad. Ik heb 6 mensen in mijn ploeg, 3 part timers en 2 full timers. We moeten ook naar de klanten luisteren. Soms willen de klanten een eigen doos en dus verpakking hebben. We werken met “Astro” in het magazijn en met “M3” als onze ERP systeem. Alles moet in orde in M3 zijn om met Astro te kunnen werken.
- **Een mooie introductie. Nu over het onderwerp: ik zou graag uw mening en uitzicht hebben over een precieze definitie van de centralisatie en decentralisatie van een netwerk, vooral met betrekking tot de voorraad.**

- Als je alles op een plaats hebt zal je minder voorraad hebben. Eerder hadden we vijf magazijnen dus onze voorraad waarde was heel hoger. Nu is alles in Bleijswijk gecentraliseerd. Dankzij deze centralisatie hebben we onze voorraad waarde van 2 of 3 miljoenen verminderd. ... De gevolgen van deze centralisatie is dat de voorraad een aantal lager is maar ok dat de levering naar de klant vlugger en gemakkelijker is sinds alles van een punt nu is. De voorraad betrouwbaarheid is ook hoger. We hebben sommige shops in de land die hebben een kleine voorraad van hardloper artikelen die van de DC uit komt. Dus als klanten naar deze shops of balie gaan, kunnen ze sommige artikelen vinden. Maar in het algemeen leveren we naar de klanten via onze DC. We hebben dus een kleine hoeveelheid van artikelen aan deze shops omdat als er een probleem in de land is, kunnen we nog de producten leveren.
- **Dus wat zijn echt de voordelen en nadelen van deze centralisatie?**
- Over de voordelen: de voorraad is lager sinds eerder hadden we verschillende DC die moeten een bepaald producten assortiment hebben. Nu hebben we leveranciers die meerdere keren per week komen. Over de nadelen, dat is moeilijk. Een van de nadeel is misschien dat je mag storing krijgen in jouw ERP systeem of in jouw VMS systeem. Dan is alles plat en je kan niks leveren. Terwijl als je verschillende DCs hebt kan je nog de artikelen leveren. Naast deze nadeel kan ik niks zeggen.
- **Ok. En wat over de dienst naar jouw klanten? Normaal als je gedecentraliseerd bent, kan je dichterbij de klant zijn. Dus kan deze dienst beter zijn.**
- Ja dat zou waar zijn als we direct van de DC naar de klanten leveren maar we werken met een hubs structuur. Vanuit deze distributiecentrums rijden s' nachts de vrachtwagen naar een hub, daar brengen ze de goederen. En van daaruit gaan ze naar de klant. En in de decentraliseerd systeem was het hetzelfde, werkten we met dezelfde hubs. Ik denk zelfs dat onze dienst naar de klanten is verbeterd nu sinds onze assortiment wel groter is ook, dus uitgebreid. En we hebben ook langer uur tijds wanneer de klant kan iets bestellen. Vroeger was het halfzes en nu is het elf acht of acht uur. Dus de klant kan langer en later een bestelling maken wat beter voor hem is. Zeker voor de kleinere klanten. Dus nu zal de klant zijn product vlugger krijgen als hij een bestelling tussen zes en acht zet in tegenstelling tot vroeger, wanneer we de systeem sluiten op half zes.
- **Dat is interessant. Omdat ik zou graag een vergelijking tussen de theorie en de werkelijkheid maken. En hier in de theorie is het gezegd dat de nadelen van een centralisatie zijn een vermindering in de dienst naar de klanten.**

- Ja. Hier is het tegengestelde, dat is zelfs een voordeel. Dus hier heeft de dienst niveau toegenomen omdat de klant een bestelling later inzetten, het assortiment is groter, de leveringstijd is korter. De levering betrouwbaarheid is ook groter.
- **Ok. En met de leveranciers, zijn de prijzen beter?**
- Dat weet ik niet maar we kopen in grotere hoeveelheden sinds we kunnen grotere hoeveelheden krijgen aan de DC.
- **Ok. En nu met betrekking tot decentralisatie, hebben jullie geen voordeel van deze systeem verloren?**
- Nee. Nu hebben we weinig problemen. Eerder werkten we met verschillende systemen in de distributiecentrums. Nu hebben we maar een VMS systeem waarmee iedereen werkt. We hebben ook maar een ERP systeem. Dat is ook een groot voordeel om met een systeem te werken. Ik vind dat werken met een centraliseerd systeem veel beter is. Als ik de keuze had zou ik altijd voor een centralisatie kiezen.
- **Ok. En met betrekking tot de voorraad wat zouden de KPIs of belangrijkste variabelen zijn?**
- Ik weet dat met de hardloper items moeten we 99,5% zijn met uitleveringsgraad. Voor de andere producten en voor meer gegevens moet je aan Sanders vragen.
- **Ok. En nu over de toestand van het bedrijf, als je moest de centralisatie niveau van Rexel bepalen, wat zou het zijn?**
- Alles is centraliseerd dus bijna 100%, we hebben geen extern opslag meer.
- **Ok. En hoe heeft deze niveau geëvolueerd?**
- In 2010, dus 5 jaar geleden hadden we Venlau en Depot 2 magazijnen, we hadden ook een groot warehouse in Deventer en ook een groot warehouse in Almeer en een DC in Bersehoek. Dus we hadden 5 DCs. Eerst waren Venlau en Depot gesloten, dan Deventer die zijn naar Deventer en Bersehoek verhuisd. In 2012 hebben we Bleijswijk geopend en Bersehoek gesloten. En in 2012 en 2013 hebben we begonnen om alles naar Bleijswijk te verhuizen. In 2013 hadden we dus een enige centraliseerd DC. Er zijn dus twee jaren nu dat we met centralisatie werken maar vorige jaar zijn we van twee tot een systeem gegaan.
- **Ok. En ken jij de redenen dat jullie hebben besloten om deze magazijnen te sluiten?**
- Dus Rexel heeft begonnen met deze magazijnen na zijn overnames. In Bersehoek was het Haagenmeyer. Dus Rexel heeft een aantal elektronische groothandels

opgekocht. In 2010 heeft Rexel zijn naam gezet in plaats van degene van de andere bedrijven.

- **En ken je wie heeft de beslissingen genomen om de warenhuizen te sluiten en waarom?**
- Dat was beslist op een directie niveau. Dat kan ik niet weten. Maar dat was voor een kost reducering met betrekking tot voorraad, personeel, deze soort van factoren. En voor een betere positie voor Rexel in de market te hebben. We kunnen echt een verbetering observeren. Omdat eerder kregen we regelmatig klachten, hadden we slechte leveringen, slechte vervoerbetrouwbaarheid. Maar als we nu kijken staat alles goed op de lijn.
- **Wat zijn de nummers die maken jullie geloven in deze verbetering in performance?**
- Ik kan je vertellen dat we hebben nu minder distributiekosten want vroeger hadden 8 trailers in Almeer, 8 trailers aan Bersehoek, 3 aan Deventer en meer dan twintig trailers s'nachts. Maar nu hebben we alleen maar 8 tot 9 trailers en dat is het. Dat is de helft gereduceerd. Dus de kosten zijn ook gereduceerd. We hebben ook besloten om niet meer onze vervoermiddelen te gebruiken maar om uit te besteden. En in 2010 reden we nog met 40 to 50 vrachtwagen in de Nederlands. Dat was nog meer moeilijk omdat de chauffeurs vrije dagen hadden of ziek waren. Dat was ook kosten.
- **Dus de doelstelling is nu om met deze centralisatie te blijven?**
- Ja. We willen nog de kwaliteit aan de klant verbeteren. Dus de uitlevering verbeteren om alles wat de klant bestelt vandaag kan hij morgen krijgen. In het algemeen is het optreden goed maar we kunnen nog beter doen. Bijvoorbeeld de reden we zullen niet alles op tijd leveren is dat we kunnen niet de item in de DC vinden, dus een nulpick. Dus de volgende dag zullen we proberen om te begrijpen waarom we konden deze lampen niet vinden. Dus we proberen nog om deze problemen te verminderen.
- **Dus jullie hebben geen terugkerende probleem?**
- Nee. Niks dat terug komt. De grootste problemen zijn over. Bijvoorbeeld als grote problemen hadden we de implementatie van de ERP systeem en om alleen een systeem te hebben.
- **Wat waren de korte en lange termijn verwachtingen van deze verandering naar een centralisatie?**
- De voorraad waarde verminderen, een van de belangrijkste (financiële) punt. Dat is gebeurd, de voorraad heeft echt verminderd. We wilden ook de performance naar de klant verbeteren, dat was ook een van de belangrijkste voordeel dat we wilde reiken.

Zelfs als we zijn altijd aan het alles te verbeteren zijn we tevreden met wat we hebben bereikt met deze centralisatie. De grootste veranderingen zijn gelukt. Alles is netjes, mensen zeel weinig ziek, dat is ook een van de gevolg van minder mensen hebben. We hebben bordjes, elke teamleider heeft een teambord waar hij zal tonen verschillende performance indicators en we kunnen zien dat we veel beter doen nu. We meten de dagelijks ziektes, de productiviteit. We kunnen ook zeker zijn dat de performance heeft echt toegenomen en dat niet alleen een gevoel is omdat in het begin van 2015 hebben de teamleiders doelstellingen gekregen dus voor kwartaal 1, 2, 3 en 4. En als we naar de cijfers kijken kunnen we zien dat alles groen is, dus dat alle verwachtingen kon bereikt zijn. In Q1 waren er nog sommige rode variabelen maar nu is bijna alles groen. Deze doelstellingen zijn dus productiviteit, kwaliteit, ziekteverzuim en voorraad betrouwbaarheid.

- **Tijdens jullie naar centralisatie gingen, hebben jullie verwacht en onverwacht problemen gehad? Hadden jullie problemen om jullie doelstellingen te reiken?**
- Als ik hier begonnen heb moest ik de voorraad betrouwbaarheid verhogen. We hebben een betrouwbaarheid van 68% gezet. Dus elke dag hebben we 32% van artikelen die niet goed lagen. Nu zijn we op meer dan 90% van betrouwbaarheid. Een mooie toeneming in alleen twee jaar tijd. En andere doelstelling was om alle items die we op voorraad hadden moesten geteld worden. Dus zeker maken dat de artikel nummer, de tip nummer en de aantal kloppen.
- **Ok. Met betrekking tot de verzameling van de data nu. Eerst over de cyclus en veiligheidsvoorraad. Kunnen jullie het verschil?**
- Nee, geen idee. Dat is een verschil dat ik niet doe. Maar de procurement team heeft een specifiek programma ervoor.
- **Kon je schaalvoordelen observeren na deze centralisatie?**
- Nee. Dat is niet dat gemakkelijk om te observeren.
- **Ok. En in de dagelijks activiteiten van de DC, wat zijn de grootste problemen dat jullie hier hebben?**
- We hebben geen groot probleem meer. Sommige dingen zijn niet ideaal. Bijvoorbeeld de picking die nog een kleine scherm apparaat gebruikt. Maar dat is niet echt een probleem vind ik. Onze dagelijks routine is echt rustig. Nu proberen we om alleen kleine dingen te verbeteren.
- **Wat waren uw grootste problemen dus?**

- De systeem was de echt grootste probleem. Dus, diverse VMS en ERP systemen hebben. Omdat we geen goede analyses konden maken. Nu kunnen we alles naar Excel exporteren om de data te monitoren. Eerder konden we niet de problemen of de oorzaken gemakkelijk ontstaan en begrijpen. We hadden ook een probleem met de distributie na de transitie van decentralisatie tot centralisatie. We hadden kleine klanten voor wie we moesten 20km maken om een pakket te leveren. Dat is ook verbeterd. Nu hebben we geen meer problemen.
- **Ok. En dus als we kijken naar de theorie, de voordelen van een centralisatie zijn “risk pooling effect” en “square root law” die bedoelen een voorraad vermindering. Kon je dat observeren?**
- Maar ik ken niet de cijfers. Maar volgens mijn gevoel ja.
- **Ok. En wat de disruptie betreft, hoe vaak gebeurt het?**
- Elke dag. Bijvoorbeeld als we niks in voorraad hebben zelfs als onze systeem zegt zo. We noemen dat de “voorraad verschil”. Dat gebeurt de hele dag door. We moeten dus naar deze producten kijken om de oorzaken te vinden. Deze disruptie zijn heel variable. De redenen zijn verschillend: verkeerd opgeslagen door inbound, verkeerd binnen geboekt door de inbound, verkeerd gescand worden door de mensen die de locatie scannen. De picker heeft misschien een verkeerd pick gedaan. In plaats van A of B picken heeft hij C gepikt. Wegens deze problemen kan je discrepanties hebben.
- **En hebben jullie een verbetering geobserveerd met betrekking tot deze disrupties? Na de transitie van decentralisatie tot centralisatie?**
- In aantal wel. Bijvoorbeeld nu elke dag moeten we twee uren over deze problemen zoeken. Maar twee jaar geleden, moesten we 2 full timers hebben om naar de disruptie te kijken. Elke keer moeten we voor de disrupties van de dag voor. Dus nu is onze voorwaard beter geworden, de betrouwbaarheid is beter geworden. We hebben dus nu minder voorraad verschillen. We hebben ook minder schade met de voorraad. Ook omdat nu de magazijn netjes is. Iedereen is verantwoordelijk voor een gang en moet zorgen voor dat er geen schade zijn. In het verleden was het dat iedereen was verantwoordelijk voor de DC maar niemand deed als nu.
- **Dus nu, dankzij deze centralisatie konden jullie de verantwoordelijkheden verhogen? En mensen zorgen beter voor de producten? Als gevolg, er zijn minder discrepanties?**

- Ja, precies. We hebben geen andere soort van disruptie gehad die zouden toegenomen hebben wegens deze centralisatie. Dus wat mij betreft was centralisatie altijd beter. Ik zie alleen maar voordelen.
- **Ok perfect. Nu over de aanbevelingen: gebaseerd op uw ervaring, welke soort van aanbevelingen zouden je geven?**
- Altijd de kwaliteit naar de klant verbeteren. Dus onze leveren nog op een hoger niveau zetten. De klanten moeten tevreden blijven. We hadden een periode waar de klanten wegliepen omdat niks goed ging: kwaliteit was slecht, levering was slecht.
- **En wat waren de redenen voor dat?**
- Omdat we met verschillende systemen en vanuit verschillenden punten werkten. Het is ook gemakkelijker voor de klant nu om zijn product te hebben. Hij weet waar hij moet gaan omdat er alleen een verkooppunt is. Hij weet hoe en bij wie hij moet de product vragen. Hij kan het ook vlugger hebben. Eerder wisten de klanten niet waar ze moeten hun producten bestellen. Omdat een product op een plats ligt maar een andere product op een andere plaats was. Ook onze product assortiment was niet zo groot als nu. Dus soms moesten de klanten sommige producten aan een DC kopen maar op een andere DC andere product kopen. Dus ze verloren tijd om alles te kunnen samenvoegen. Nu is alles duidelijk. Nu hebben we sommige verkoopkantoren waar de klanten hun vragen kunnen stellen en de producten bestellen. En de volgende dag zullen ze alles krijgen. Vroeger hadden we vaak klachten van de klanten wie zeggen dat ze de producten kon niet hebben of te laat of te vroeg. Nu zijn alles beter. In het algemeen, als een klant, het is belangrijk dat je betrouwbaarheid kan vinden bij uw verkoper.
- **En om de toestand van het bedrijf beter te kunnen begrijpen: heeft jouw hubs structuur veranderd sinds deze centralisatie?**
- Nee. De hubs structuur is nog hetzelfde. Maar vroeger moesten we vanuit verschillende punten naar de hubs leveren. Dat nam veel tijd omdat soms moesten we producten voor dezelfde klant van een DC en een andere DC samenvoegen. Iemand was dus verantwoordelijk daarvoor en moest tijd nemen om deze samenvoeging te maken. In deze geval is alles gecompliceerd en dus kunnen ook meer fouten maken.
- **Ok hartelijk bedankt.**

Interview n°3 – Kim Meijs – employee from the transport team at Rexel Netherlands

- **Goeiedag. Als je kan zien er is een vragenlijst met verschillende delen. De eerste deel is de introductie (dagelijks taken), twee is de omvang van het onderwerp, dan**

is het over de toestand van het bedrijf, vier is de data verzameling en vijf zijn de aanbevelingen. De doelstelling is om een kwantitatief en kwalitatief werk te doen. Dus als we beginnen met de introductie, kunnen we jullie over uw functie praten en uw verantwoordelijkheden?

- We zijn verantwoordelijk voor alle spullen en goederen die vanuit hier naar de verschillende hubs moeten gaan. Een hub is een gebied voor de levering naar onze klanten. Elke hub is verantwoordelijk voor zijn eigen gebied.
- **Hoeveel hubs hebben jullie?**
- Zes in totaal. We hadden 7 maar nu hebben we met een gestopt en dus staat niet meer.
- **Waar is de reden daarvoor?**
- Onze vestering managers hebben beslist om deze structuur te hebben. We gebruiken niet veel vervoerders.
- **Hoe heeft deze structuur geëvolueerd over de laatste jaren?**
- Deze structuur is hetzelfde voor de twee laatste jaren. Voor dat was het heel anders, we hadden meer hubs. Sinds de huidige structuur goed werkt zal het normaal nog meerdere jaren blijven.
- **Hoelang hebben jullie aan deze positie gewerkt? Aan deze afdeling?**
- Sinds 2013, dus twee jaar.
- **Voor de volgende vraag, hoe zie je een centralisatie of decentralisatie?**
- Eerder werkten we met twee verschillende systemen maar nu werken we met een, M3. Nu dankzij deze systeem kunnen we gemakkelijker de data en informatie monitoren. Wanneer we twee systemen hadden was het heel moeilijk om alles te volgen. Maar nu met M3 is de informatie gemakkelijk te gebruiken. Dus de centralisatie van deze systeem was een goed idee.
- **Ok. Volgens jij, wat zijn de voordelen en nadelen van een centralisatie en decentralisatie?**
- Nu we hebben alleen maar een centraal magazijn. Er zijn heel veel voordelen van een centraliseerde organisatie. Nu is alle goederen in hetzelfde plaats. Eerder, als we verschillende magazijnen hadden moeten we altijd nakijken waar de voorraad was. Ook als je de goederen na de klanten wilde sturen moest je eerst de voorraad van de verschillende magazijnen samenvoegen. Nu kunnen we onmiddellijk onze vervoerders zenden van de DC naar de hubs. We kunnen echt een vermindering in onze distributiekosten observeren. We konden dat meten. We kunnen jullie enkele KPIs of performance indicators zenden zoals de distributiekosten, de voorraad waarde, de

“service level”, de procurement, de warenhuis performance, enzovoort. We hebben alles op een dagelijks basis.

- **Ok, dus denken jullie dat het zou mogelijk zijn om mij deze informatie zenden voor verschillende dagen van het jaar? Zodat ik een evolutie over de afgelopen jaren kan tonen?**
- Ja. Ik kan je niet alles verzenden. Ik zal met mijn manager verifiëren en dan zal ik je deze informatie versturen. We hebben verschillende mensen van verschillende afdelingen en we moeten ze vragen de relevant informatie. Dus na we hebben met deze personen hebben gesproken, zullen we je contacteren.
- **Ok perfect. Jullie moeten ook weten dat alles zal vertrouwelijk blijven. Volgens jullie, wat zijn de belangrijkste KPIs of variabelen dat jullie dagelijks volgen met betrekking tot het vervoer? In andere woorden, wat zijn in uw dagelijks taken de belangrijkste dingen dat jullie volgen?**
- Zeker zijn dat alles was goed opgeleverd en in de goed “venstertijdklanten”. We hebben verschillende routes, met nachtroutes en dag routes. De nacht routes zijn gebruikt s’ nachts in tegenstelling met de dag routes. De vervoerders moeten tussen precieze uren de producten leveren. Met onze systeem kunnen we zien als de producten op tijd of niet waren geleverd. We kunnen zien wanneer de vervoerder was naar de warenhuis gekomen om op te laden. Daar kunnen we zien als hij op tijd of te laat was. Dan kunnen we zien om welke uur hij is vertrokken en om welke uur hij is bij de klant aangekomen. Er zijn verschillende route van de DC tot de hubs en ook routes van de hubs tot de klanten.
- **Ok. Dus jullie kunnen alles monitoren dankzij uw systeem?**
- Ja. Een afspraak is met de klant en de vervoerder gemaakt om de uur van de levering te besluiten. Dan zullen we verifiëren als alles volgens de afspraak was gedaan. Als niet, zullen we zoeken voor de verschillende redenen en veroorzaken. Bijvoorbeeld er kan files zijn of dat mag de schuld van de chauffeur zijn.
- **Ok. Zijn er andere verschillende dingen dat jullie zijn aan het monitoren met betrekking met het vervoer?**
- Welke zijn precies de geleverd spullen of als er waren sommige spullen die aan het warenhuis blijft. Ook de tijdslevering.
- **Ok perfect. We kunnen nu naar de volgende deel gaan. Met betrekking tot de centralisatie niveau van het bedrijf, weet ik dat jullie hadden eerder 5 verschillende magazijnen of DCs. Nu jullie hebben alleen maar een. Wat waren de redenen?**

- Vooral voor kostbesparing en om de voorraad te minimaliseren. Ook voor het transport, de vrachtwagen moeten nu alleen van een punt vertrekken in plaats van 5. Op verschillenden.
- **Jullie konden dus een echt toename in het optreden van het bedrijf?**
- Ja, op verschillende vlakken zoals de voorraad en het transport. Omdat we hebben dezelfde hubs structuur gehouden maar nu hebben we van minder chauffeurs nodig en vrachtwagens.
- **Ok. Ik ben aan het proberen om een vergelijking te maken met de theorie en de werkelijkheid. In de theorie zeggen vaak mensen dat de distributiekosten zijn lager in een decentraliseerde systeem dan in een centraliseerde systeem omdat het bedrijf dicht bij de klant is. In een centralisatie zal jouw voorraad lager zijn maar zullen jullie langer afstanden maken. Maar hier, in jouw toestand, is het verschillend omdat jullie hebben de hubs structuur niet veranderd.**
- Ja dat klopt. Als we moesten direct naar de klanten zenden zou het anders zijn.
- **Ok. En waarom blijven jullie met deze hubs structuur en werken niet direct naar de klanten?**
- Dat weten we niet, de directie zou daarop kunnen antwoorden maar ze geloven dat het goedkoper op deze manier is.
- **Ok. Jullie hebben gezegd dat jullie positieve performance in verschillende vlakken konden zien. Waar is dat gebeurd? Wat waren de andere voordele en nadelen van deze centralisatie?**
- Ik denk dat het ook heeft te maken met personeel. Maar we kunnen niet onmiddellijk een vlak vinden waar de performance heeft verminderd door deze centralisatie.
- **Ok. Omdat bijvoorbeeld in Australië heeft Rexel sommige problemen met de centralisatie gehad. Het was omdat de klanten, de shops van Rexel, kochten niet door de DCs maar direct van de leveranciers omdat ze betere prijzen hadden.**
- Ja maar hier is het anders. De afstanden zijn niet dezelfde, de cultuur is verschillend, onze structuur is ook niet hetzelfde. We zijn altijd beschikbaar voor onze klanten. Dus als een klant van iets dringend heeft, kunnen we een oplossing vinden. Onze verkoopafdeling zal de product naar de klant zenden door een express vervoerder, zonder de hubs gebruiken. De klant kan ook naar de DC komen om zijn product te halen. Maar meestal komen de producten van de DC.
- **Dus jullie zijn tevreden met deze centralisatie?**
- Ja. We willen toch de structuur verbeteren maar we hebben geen grote problemen gehad.

- **En hebben jullie verwacht of onverwacht problemen gehad met de transitie van decentralisatie tot centralisatie?**
- Ja we moesten grotere hoeveelheden leveren. Dus in het begin hadden we sommige problemen met de venstertijd en de s' nachts leveringen maar nu is het ok. De vrachtwagen kunnen nu vol zijn voor naar de hubs te gaan. We werken met grotere volume. We hebben nu standaards en de vrachtwagen moeten vol zijn.
- **Ok. En vanwege deze centralisatie, hebben jullie vaker of meer interruptie of disruptie? Bijvoorbeeld met de vervoer? Omdat in de theorie is het gezegd dat het impact van een ontwrichting op een centraliseerd systeem groter is.**
- We hebben soms problemen met de traffic of dat een vrachtwagen kapot is maar we anticiperen altijd met onze verkoopafdeling. We melden wat er aan de hand is. We zullen ook de klant op de hoogte houden. We monitoren alles hier met onze systeem dus we kunnen alles zien.
- **En observeren jullie meer ontwrichtingen of meer vertragingen vanwege deze centralisatie?**
- Nee absoluut niet. Behalve een ongeluk is maar dit soort nee. Over de laatste twee jaren hebben we geen grote problemen gehad. Ook sinds we hebben chauffeurs die overnacht rijden hebben ze minder file en dus minder problemen sinds er is bijna niemand onderweg.
- **Dat is good als jullie geen problemen had, in tegenstelling tot Australië die moest naar een meer decentraliseerd systeem gaan.**
- Ja maar de Nederlands en Australië zijn echt verschillend, vooral voor de afstanden.
- **Hoe heeft de leveringstijd geevolueert?**
- Nu het is beter als we alles beter met het systeem kunnen controleren en volgen. Omdat eerder moesten we naar verschillende DCs gaan voor de klanten te kunnen leveren. Nu is het direct van de DC naar de klant. Geen meer vertraging. Ook, wanneer een klant iets bestelt moeten we alleen in een DC zoeken in plaats van meerderen. De klant kan dus de producten vlugger krijgen. Ook met deze systeem kunnen we weten als de vervoerder echt te laat was of niet. Soms zal de klant zeggen dat de product te laat kwam maar als we verifiëren kunnen we zien dat het niet waar is. Alles is registreert. We hebben een bewijs en we weten als wat de klant zegt klopt of niet. Je moet ook weten dat alle van onze vervoerders zijn outbesteden maar ze rijden maar de Logo Rexel. Het is goedkoper.
- **Dus, zijn er geen reden voor jullie om terug naar een decentralisatie te gaan?**

- Nee. Het is beter nu. Voor het vervoer maar ook voor andere vlakken zijn we beter met centralisatie.
- **Waarom heeft Rexel begonnen met decentralisatie?**
- De reden is heel duidelijk: Rexel begon met bedrijven overnemen. Elke overgenomen bedrijf had zijn eigen DC. Eerst had elk bedrijf zijn eigen systeem en we moesten dus een harmonisatie maken om alleen maar een systeem te gebruiken.
- **Ok. Perfect. Nu de laatste vraag van de laatste sectie: als jullie adviezen of aanbevelingen konden geven aan andere managers met betrekking van centralisatie en decentralisatie, vooral voor de transport, wat zouden jullie zeggen?**
- Voorzichtig de leveringstijd monitoren omdat er zijn heel vaak producten die te laat aankomen en om de oorzaken beter te begrijpen.
- **Zelfde vraag voor afgestudeerde jongeren die zouden graag in de logistiek gaan werken, wat zijn de beste dingen te doen om succesvol te zijn?**
- Stress bestander. Multi-task zijn. Elke dag is het anders.
- **Ok. Dank u wel voor uw tijd.**
- Geen dank.

Interview n°4 – Sander Hoorweg – Transport manager at Rexel Netherlands

- **Goedendag meneer. Gezien dat jouw collega's al op meeste van mijn vragen hebben antwoord, heb ik alleen maar sommige vragen voor je. Ik wilde weten: waarom hebben jullie 7 hubs en niet min of meer? Wie heeft beslist om deze hubs structuur te hebben? En waarom? Zal deze structuur blijven hetzelfde?**
- We zijn in 2008 samengegaan. We hadden 18 verschillende verkooppunten en nog 21 dag vervoerders en 27 eigen chauffeurs. We zijn nu teruggekomen met 3 vervoerders overdag met 6 hubs.
- **Wat waren de redenen daarvoor?**
- Efficiency. Om de kosten te verminderen.
- **Als jullie aan de nummers kijken kunnen jullie echt een vermindering in distributiekosten zien?**
- Ja. Ik zal je een Excel file zenden met deze evolutie over de afgelopen jaren. In 2006 heeft Rexel besloten om alles uit te besteden. Alle eigen chauffeurs en vrachtwagen zijn naar een externe bedrijf gegaan. In 2012 hebben we onze laatste chauffeurs uitbesteden naar onze vervoerders. Ook we hebben deze hubs structuur sinds de eerst of september vorige jaar. En dat is puur voor efficiency, minder kosten en ook waar je KPIs kan

spreeken. Je kon dus zien als de performance van de vervoerders goed waren of als het was niet onze doel en dus dat de chauffeur nog kon verbeteren.

- **Dus plannen jullie om met deze 7 hubs te blijven?**
- We hebben deze structuur voor een jaar nu. Maar volgens mij is er geen echt reden om deze structuur te veranderen of om onze vervoerders te wisselen.
- **Wat zouden de grootste voordelen en nadelen sinds deze centralisatie?**
- Onze digitaal ontwikkelen. Eerder deden we alles met papieren. We hebben nu nieuwe KPIs dat we kunnen meten. We zijn dus nu niet meer gebaseerde op onze gevoelens maar we hebben duidelijk gegevens. In september 2013 hebben we begonnen om dagelijks alles te meten. Dankzij de ontwikkeling van onze afdeling en sinds we meer met digitaal systemen werken, konden we alles beter monitoren. Ook was het gemakkelijk om alles te doen met minder vervoerders sinds we heel meer chauffeurs hadden vroeger.
- **Ok dank u well meneer voor uw tijd.**
- Geen probleem.

Interview n°5 - Frank Dijkstra – procurement employee at Rexel Netherlands

- **Hi Mr Dijkstra, thanks for your time. Could you please for the introduction, describe a little bit your position at Rexel and how long you have been holding it?**
- I have been at Rexel from the 1st of March this year, so seven months. I am reporting to Jacques Boon, he is Supply Chain director. And I am responsible for the procurement and the availability of stock and then mainly for the items we keep in stock in the central warehouse here in Bleijswijk. Therefore one of the most important KPI for me is the total stock value which is of course related to the fast moving and non-moving items. Other part we do right here is also the items we do not have in stock but that we order from our large supplier portfolio. And the last part which is very important for me, and this is why I am in the supply chain is the inbound process. All items which are coming to the warehouse are handled by Nico (warehouse manager) and his people but all problems with the shipments are reported to my people. And we are also responsible for the invoices to the suppliers.
- **Ok perfect. Congratulations on your new job. For the next section, how would you define a network centralization/decentralization? What are the main advantages/disadvantages? As you are more in charge of purchasing, you can describe it more under that aspect.**

- We have a separate purchasing department which does the contracts and we actually buy within the contracts. These are the responsibilities of my team. That is only being done in our DC. My opinion about central warehouse is that for our business, it might be true worldwide but for the Netherlands, you have to do it because if we centralize we combine the demand for one item, so we aggregate the levels of your demand pattern in the past (how many sales you had in the past), that together makes an item fast moving and really easy to predict. IF you decentralize you don't have that advantage. For instance if you have 18 branches, which means you are decentralized, it would mean that for every single same item, we have safety at each branch and that means by far more investment than what we do right now.
- **As a result, the more safety stocks the higher the value of your stock, right?**
- Exactly. That is not an ideal position for your capital. Next to that, the Netherlands is a country which is quite small compared to other countries such as the UK or Australia. So in our country it is easy to transport the goods. We can easily ship our goods every day to our branches which makes centralization easier since we transport every day. We can keep the stocks very small in our branch and we say to the branch they can have the stock the next day.
- **So, you don't really need to be decentralized since one of the main advantage of this strategy is to be closer to the customer. As the Netherlands is a small country you do not really require this structure?**
- The advantage we have right now is that we are close to our customers. But we don't need stock that close because we can also transport directly to the customer from our warehouse. So they actually use the branch as a sales office. They put in the order, so the contact is local. We have 18 branches in total in the country.
- **Ok. So I learned that regarding the transport, the DC will send the goods to the hubs and then send it to the shops. So when they say the clients, they talk about the branches?**
- Our end-customers are close to the branches. Only 2 or 3 % is direct sales from the branch to the customer. Normally we provide the goods from Bleijswijk to the end-customer. Most of the sales order go directly from the warehouse to the end-customer.
- **That was about the advantages of a centralized structure but if you had to talk about the advantages of a decentralized network, may it be about stock or anything else.**
- The advantage would be that the sales people are close to the customer.

- **Is it still a real advantage? Even if you said it was a small country?**
- Yes and that's the most important part of a decentralized system in my opinion. The sales people, in the east of our small country are completely different from the people of the south and from the north as well. So you have to speak the language of the people over there.
- **Culturally speaking it is better to be closer then.**
- Yes. In Belgium that is the same, even stronger since you have French and Dutch. So to speak the same language and to be close to the customer is really important. Our customers are not always big companies. They might want to do things on the phone, or prefer to go to the branch to pick their items.
- **That is why you have all these branches, to be really close to them. So regarding the inventory and procurement you are kind of centralized. But regarding the sales you are more decentralized.**
- Yes. You can say the representatives who are just in the car and visiting the customers they are all decentralized. Of course you have some people inside, picking up the order and helping customers if they have problems or questions.
- **What are the main jobs of those shops?**
- Contact. But you should rather ask this kind of questions to the commercial guys. In my opinion, the most important reason for the branch is to be a contact for the customer. The sales advisor help them: what do you need? What do you want? Of course a customer can walk in the shop and buy what he needs. In other parts what we also do is that if a customer needs the products quickly but doesn't want to pay for the direct transport then we tell him he can pick the products the day after and we transport the products with our internal transport to the branch. That's also an advantage.
- **How much does the branch carry?**
- Only a little bit.
- **But their role is mainly about contact and providing the orders to the DC, right?**
- Yes. And sometimes some particular customers need particular stocks, then we put these stocks at the branch. Every day we deliver stock to the branches. It a simple process: min and max. When we reach the minimum level, then it gives an advice to the DC. We are trying to automate this procedure as much as possible. Some branches are totally not selling through the sales directly from the shop while the south and the north are doing this quite a lot. Also, sometimes the customers do not directly pay the branch as they know each other and have some tacit agreements.

- **Ok. So internally, the branch is placing an order at the DC?**
- No. It is done automatically.
- **Ok. Because while I was in Australia, the branches are considered as a client. They place an order at the DC which is supplying them. And this caused many issues since the branches had the freedom to buy from the DC or directly from the supplier. What happened is that the DC made forecast that were inaccurate since in the end the branches were not always buying from the DC as they should. Because of this they are switching back to a decentralization.**
- Here in the Netherlands, the branch are not allowed to buy, for their stocks, from the supplier. They can do it only for shipments that are made directly from the supplier to the customer. Then that process is totally in the hand of the sales person at the branch. So we don't do anything to that. Otherwise, for the other goods movements, it has to be done through Bleiswijk. Otherwise it's not going to work. Another very important thing is the way you register your demand from the customers. That's very important. If you look at Australia they have a big DC, they have the branches and they have customers. That's their structure. Actually what they are doing (show graphically) in Australia does not happen here. Branches cannot order from the suppliers to increase their stocks. But what we are actually doing is that the demand from the customers are aggregated in Bleiswijk, at one level. Therefore we have stock at this DC. If you go decentralizing again, branches will go directly to the suppliers, causing extra safety stocks. This will also multiply the number of purchasing departments. Inventory value will go up, but also labour will go up. Maybe you can centralize the purchasing departments. But it would be too costly to do this here. We have a huge competition in this area, we have got smaller companies which are competing with us and which are very well structured, and have also branches and a centralized stock. In the Netherlands, a decentralized system is too expensive and would lead you to bankruptcy. Here the DC does not take into account and in their calculations the deals made between suppliers and the branches in the case of direct shipments in terms of forecasting and safety stocks as it is not going through the DC.
- **According to you, what would be the reasons why this direct shipment is allowed here and not in Australia?**
- The most important reason to that is that we can supply from the DC everyday our branches which allows us to keep our stock levels really low. Also compared to the UK for example, since we are really small and in a very competitive environment, we are

maybe ten years ahead from Australia and the UK in the way we work. Because these branches in the UK and in Australia are very used most of the times as a family owned companies which were taken over by Rexel so they are really used to arrange everything by themselves. Their culture is “we do it ourselves”, we do not want to buy from a DC. In the Netherlands this is by far and for years past, everybody’s mindset is over this. Now they believe this is really normal to buy from a DC as they know the advantages and, very important next to that, is the sales. I don’t know the figures, maybe the commercial guys know or maybe Jacques Boon, how much sales are directly made from a branch. In the Netherlands this is only about 3% go through the direct sales. This means when a customer enters a shop and make a purchase there. On the other hand, 40% of the sales are web based (digital). We also have ICM. This is an electronic ordering for customers based on a certain database for e-business purposes. So this is very important. As we look at the UK and Australia, it would be interesting to compare. I am sure the direct sales from a branch to the customers are higher than our 3%, maybe 30% or more.

- **Ok. So you have 3% as direct sales from the branch, 40% as e-business sales and what about the rest?**
- It is about orders coming by mails, EDI, sent to the DC. The branches may call the DC and make the orders for the customers.
- **Ok. As you mentioned many times, the distance is certainly an important factor to consider.**
- In Australia, I guess they have different DC serving different branches. In the Netherlands is a very suitable strategy for one DC. But why should you do this in the UK when it is 6 times bigger than the Netherlands? Also, the Northern part from the UK have only a few inhabitants and customers. This implies a different structure and strategy in terms of DC and branches. But I think if you look at the most costly parts we are in, it is the stock. We have 28 million euros in stock. In the Netherlands, we have 24% of costs for holding the units a year. So this causes huge costs for keeping stock on a year.
- **As I saw in the literature, they mentioned: “the higher the holding costs, the degree of centralization”.**
- Yes. But don’t forget that in total, these 28 million euros cost of inventory also include the branches. Therefore, if I want to compare this to a decentralized system, I will have safety stocks in the branches even more increased since the delivery time will no longer

be one day as now from the DC but would rather be 2 week delivery time from the supplier. That means more in stock because they have to cover two weeks but also more safety stocks, because of these two weeks. Since you have to cover longer delivery time, the safety stock increases. If you go to a decentralized system then the stocks will increase.

- **Ok. So according to you, Australia, as a big country and long distances, a decentralized system is a good idea?**
- Yes. I think I would do a combination as in the UK. If you go to the Northern part, the central warehouse is totally useless. It is better to make two or three decentralized branches for example. But if you go to a very crowded area like Birmingham or London I would immediately make a central warehouse. Density is very important. There can also be a rule saying that all the branches need to be within a 200km radius from the DC, I don't know. Don't forget in the Netherlands all our suppliers (99%) are in Belgium, Netherlands and Germany. So my lead times are very short, two weeks. Sometimes some of suppliers deliver two or three times a week. But if you go to Australia, it might take longer. If you go to a decentralized structure, your stock will probably increase a lot. Therefore a centralized system is the best solution in the Netherlands, in my opinion.
- **So far, in the Netherlands you were first decentralized since Rexel works by acquisitions. So they took over different businesses. Once they were a bit settled, they started to centralize for inventory and costs purposes. Since they were shipping the goods from the multiple DCs to the hubs, it was in the end easier to ship from a single DC and not different ones to the hubs.**
- Yes but for instance, among these businesses, some of them were already well organized and had a central warehouse with branches. So after the acquisitions, they had different centralized warehouses that they in the end merged into one, Bleijswijk. Two years ago there was a central warehouse 100km from here, there was another one near Rotterdam. Now we have 18 branches while two years ago we had many more.
- **So you basically centralized the branches too?**
- Yes. I believe 18 branches is a good coverage for the Netherlands.
- **So you went from a fully decentralized system, different DC and branches to a centralized system especially in terms of inventory with one DC?**
- We also had different systems but it was not fully decentralized. The centralized companies we had are now pooled together. We centralized the centralized systems.

Also a big advantage was to go to one ERP system and not the system of Rexel in addition to the system of all the taken over businesses. Easier for sales, easier for finance and for the reporting department.

- **Was it not too difficult to switch from these different systems to one?**
- I was not there, so I don't know.
- **Regarding the KPIs, you said inventory value was the most important is that right?**
- Yes, and also availability to customers, that is really important. The service level.
- **Are you tracking the service level to the customers?**
- No. I am really interesting in this availability, that's the most important part, to have a good report from our customers and the service we provide them. The reason is that we have to learn and understand the new system. I asked the director and told him I wanted to track the total service level I have on the different items we sell.
- **Ok. They did such things in Australia, following and tracking the top 100, top 200 and top 500 parts.**
- How was it determined? On money?
- **It was in terms of lines, served in good quantity and time. The more a line was sold per month and also per year, the more it would be considered as a fast moving item, therefore be in the top parts.**
- I think this is not the most relevant way to do. You have to think about this. There are disadvantages to this method. For instance I have one item, I sell the whole year, 100 pieces each month. It would be a R3 item, meaning not important. On the other hand, I tell you that this is one of my most important customer, should I therefore put the product in stock or not? Every single month I sell 100 pieces. What do you think I will sell next month? 100. So, should I put it in stock or not? Yes since you know the chances you will sell 100 pieces again are high. But based on order lines, no. Because I only have 12 order lines, it is a poor item, meaning not important. The reason we are doing order lines here are that if you only have 12 order lines on the year as there is one customer. But it is a matter of risk. If this customer stops, I will 100 pieces in stock I will not sell anymore. But if this is a very important customer to me, I should have it in stock. If instead of having 1 customer buying every time 100 pieces, you had 10 customers buying ten pieces each month, the product will be considered as fast moving and would be more in stock. Of course I prefer 10 customers doing 10 each month, like this if one drops, I still have 90. So I will sell my stock anyway. This is realistic. But in our case, our customers are complaining about this type of items since we consider these

products not moving fast as they are based on order lines. If you are really competing as we are here, we cannot afford to not have these products in stock. I work differently with my forecasting system. I look at frequency and not how many customers. I know it is somehow a risk, but if I can sell it every month, I have a good turnover and it will be better since the customer will be happier, he will buy more etc.

- **According to you, the main advantages of this line system is to spread the risk while the biggest disadvantage is losing the important customers?**
- Yes. I showed this to the board, doing exactly I did with you. They agreed we had to put it in stock as it is a very important client. But in terms of risk it is not that simple.
- **How do you think this line system would impact a centralized or decentralized system?**
- I think whatever the risk you have to look how many items are in total. What is the risk with the money, how money is involved? But eventually, the products availability has to be good.
- **How do you think this line system would impact a centralized or decentralized system?**
- If you centralize, you will combine customers to one demand pattern. I call this a demand pattern, historical demand pattern. This is the advantage of centralizing, combining all customers to one big pile. These items will not be sold as often in my demand pattern if I have decentralized branches because I look at the branches deliveries. In a decentralized system, you are only interesting in these lines for the customer. While if I am in a centralized system, I am not interesting in only this customer but also what this customer is doing. Therefore, together, maybe, I will sell the products more often each month. A centralized system will therefore diminish the problem of this line system.
- **Why exactly?**
- Because in a centralized system, I have a demand for the branch for 100 pieces of the item X, one customer. But in the other branches, they all have 100 pieces of the item X. But if I go to a centralized system, I will combine all these pieces in my demand pattern. In terms of lines, I will have more since I have more than one customer. Think about the slow moving items. If you combine the demand of slow moving items from different branches into one central DC, I have a fast moving item instead of multiple times a slow mover. This makes the demand pattern for this item easier to predict. Since you aggregate different demand patterns into one, it is better. Another thing, even if I cannot

quantify it in terms of money: if a customer X goes into a shop where he sees a certain type of products in large quantities, he knows this product is selling well and might want to keep buying there from Rexel. There is therefore a lifting effect thanks to this centralization which made it possible to gather different demands for a same product in one place, piling up the quantities and making it an attractive product visually speaking. That is a bit soft and therefore it is difficult to quantify it. It is the same when a sales man asks me to put a product in stock, otherwise he won't sell it. That's true but on the other hand I cannot be 100% you will sell it. I might thus have holding costs for nothing...

- **So far you have been mentioning advantages of having a centralized system. But what would be the disadvantages of such system?**
- Nothing. You have to be careful with your products availability and your transportation costs. You need an optimized system to keep these costs as low as possible, you have to compare the stock keeping costs and the labor if you have a decentralized system. But on the other hand, I don't really see the disadvantages of a centralized system. The only advantage I see from a decentralized system is the personal contact, speaking the same language. In the Eastern part, they like drinking a beer on Friday. That's the soft part of doing business. It is really important.
- **According to you, the branches being decentralized is enough decentralization?**
- No. That's for the Netherlands' case. We could potentially reduce our number of branches but we need this exposure to customers. Some customers really appreciate walking in, having a cup of coffee, and then pick up the products they need and leave. It is all related to your way of doing business, and your customers and the size of your country. I think there are many advantages of a centralized system. In the Netherlands this is our only way to be competitive.
- **That's why Australia you would rather consider decentralization for Australia?**
- Yes. But on the other hand, since the country is so big, you can open a central DC on the eastern part of Australia, in the middle and on the western part.
- **That's is what they more or less have, a DC in Victoria, NSW and WA. Do you work with forecasting tools?**
- Here we have Slim4 which is an add-on tool, it pops on the ERP system. It is a really easy interface. It can gather the data in Excel for instance. You can make comparisons. It is important to carefully handle your stock. For instance, we have 6 million euros value which is dead or agonizing.

- **When you say that it is because it is not moving?**
- Yes, no sales over the past 12 months. If you go to a really decentralized system I tell you this is even more. Because you multiply the safety stocks, the employees needed, etc.
- **Then why do people keep decentralizing?**
- Because they want to keep in control. If you go from a decentralized structure to a centralized structure, all people will complain. We can do this or that better on our own. They will give you an example of it. Of course they will have a point at that moment. But I can tell you that for the other 99 items, it is very important to be centralized because now we can deliver in more quantities more different kind of products since we piled up the stocks at one place. We have customers who sometimes ask why we do not have a special type of product in stock. Why? I can tell you. It is a new item and the reason we do not have it in stock is because we made an estimation with the management and with the supplier. We cannot know how much we will sell. The bottom line is if we do not have enough stock, which is because the commercial guy did not warn me or inform me enough. It is a new item, I do not know, I cannot predict the future. He might not predict the future either, but he is aware of the different enquiries for a specific item. So if he knows several customers are interested in this particular item, then inform me so I can have it in stock. Otherwise I will not have it. We are quite centralized but we still have discussions on the item level. We need to promote the discussion and communication, to make people aware. It is not easy, also for sales man. It is a very competitive market because if customers can get the product 1 euro cheaper, they will go somewhere else.
- **Ok. So how would you describe the centralization degree of your company? What could you centralize more to be fully centralized?**
- We could centralize the branches and go from 18 to 12 of them. But then we would get further from what Rexel tries to achieve: be close to the customers. This way, I think 18 branches is a really good coverage of the country.
- **Ok. As far as you know, which performances have positively or negatively evolved since this centralization policy?**
- I do not know anything that has decreased in performance because of centralization. Only that people have to rely on other people. They have to cooperate with the DC.
- **So this human touch is a bit difficult?**
- Yes because they have to give away their control.

- **Did you face any expected or unexpected issue with centralization?**
- Not really. The warehouse is running smoother and smoother, getting better and better with the processes. Last year we had many issues with the system but now it is ok.
- **What were the consequences of this?**
- That you have a poor availability because the stock could not be delivered since the data are not clear and not easy to monitor. But this has not much to do with centralization or decentralization. We have the same system, M3, as in the UK while in France they work with IBS. We are in the database of the UK. We depend on them with the support. But that's too much centralization, merging the databases. If we do something in the database because we want to do it, for our market situation, it can really affect the business or the way the system works in the UK and vice versa. It's too much of a trouble. In the UK they are 10 years behind, I know.
- **What would be the reason?**
- A simple example: if we cut our fax line, there is no problem because only 0.1% comes to the fax. But if we do the same in the UK, the complete turnover is 0. We do 40-50% through the web and digital way. In the UK it's mainly calling, faxing machines, they only have one or two customers who place their orders through EDI or the web. That's not a problem but you understand that we face totally different situations and issues that they do. We want to be more and more on the digital highway. Because we do not have to place any orders, everything is automatically put in the system when the customer orders. In the UK these orders would rather be put by emails.
- **Is it a waste of time?**
- Yes but we were there 10 or 15 years ago. This is only because we are a small country and in competitive market. We have to constantly move forward. In the Netherlands, there is a really high level of internet usage and thinking. For instance, to illustrate this developed aspect of our country, the government plans to send the tax invoices by internet and not by post, even to the elder people. This is still a bit of a problem but it shows where we are with the technologies and the internet.
- **This e-business orientation, is it linked to centralization or decentralization?**
- Yes of course, it makes all the computations quite easy. E-business is quite important. ERP systems are getting better and better with all kind of processes, they are 25 years old so it is not a new business but an established one. These things are getting common here now.
- **So for company which are centralizing, e-business is a key component?**

- Yes. I think the environment I am working in at the moment is really optimized. We might keep this structure for the coming 5 to 10 years.
- **No big change ahead then?**
- Not in my opinion. To be honest, with more automation we could reduce the costs with less people. The labor is by far the most costly part of doing business here in the Netherlands. However, we have already faced situations where we needed more people to manage the daily tasks since two people out of the 5 from the team were made redundant. That is a lot in terms of percentage, 40%. Everyone was complaining and too busy. But if we organize ourselves well with automation, we are enough to do the work. That is of course the progress you make through automation and communication (EDI for instance). It costs money to use this EDI system since it is owned by another company. If we could get rid of this and own our own EDI system that would be good. But then we would have to change, our supplier would have to change to exchange messages with us on the same platform. Running this communication platform would save us around 60,000 euros. That's nice even if we withdraw the additional costs of hiring someone for the maintenance and then you have more control. Here the environment is so competitive, while in the UK for instance there is no competition.
- **What is the reason behind this?**
- I don't know. First of all, we have many people on a small piece of land. Any branch I know is competitive in the Netherlands as we are all fighting for the same customers. This is the entrepreneurship of the Dutch people. It is a given fact. Our margins are therefore every year under a lot of a pressure. The customers are also really demanding and do not hesitate to go to other competitors. Here in the Netherlands, there is a company that provides a data base for many products. The customers can use this database to have a clear vision on the different companies offering this product and at which price. The customer can then see who is the cheapest. That kind of organized database are in the Netherlands and will certainly spread more and more worldwide but it makes it really easy for the customer who does not care to buy in the Netherlands or even in Germany. Based on the database, he can see if buying abroad is not cheaper, even after the distribution costs. It is more open than when there was no internet, it is challenging and keeps us sharp.
- **Ok. We discussed the qualitative aspect of this topic deeply so far, but what kind of data do you think are relevant to quantify the performance of this centralization?**

- The inventory and stock value.
- **Ok. And about the purchasing, the pricing so the contracts with the supplier, is it done in a centralized way?**
- Yes. So there is a purchasing department, different from my procurement department. For me the pricing is given.
- **What about the purchasing?**
- The purchasing is done here in Bleijswijk, we do the buying once the terms of the contract and thus the pricing have already been discussed. We work between these lines. And the distribution? Centralized again.
- **The last aspect would be the human resources. According to you, what would be the impact of centralization and decentralization on the human resources?**
- If you centralize and if you do it properly with the help of good solver systems, then the advantage of centralizing is enormous, in terms of labor. We can do the job with less people. When I arrived we had two issues: not enough people and problems with the new system. But now we are 7 months further, the system is getting better, people are more used to work with different kind of system, especially the ERP system. The technical guys have also improve a lot the different problems. Over the last weeks people say they have enough time to work now. Finally, with a good system and if the people are well educated with this system, then centralizing offers you a lot of advantage in labor. If we have a good communication with our supplier about the packing (a complete pallet, a box of 12 or piece by piece), we can order in better ways to just check in a pack or a pallet instead of different smaller boxes. It is easier for the receiving but also for the supplier. If you go for a centralized system, don't forget the order administration. You have less purchase orders, you have less items or lines to receive in your warehouse, you have less invoices.
- **So there is no disadvantage in terms of human resources for a centralized system? A decentralized system cannot be attractive regarding the human resources?**
- The only real advantage I see is sales. And maybe you have some decentralized stock to very fast serve your customer. But since we are in the middle of the country, so the biggest distance from here is 250 km. If it is really needed, you can just buy a carrier such as DHL to serve the customer. I think in 10 years the decentralized stock will be less and less. We also have the opportunity of the hubs, so if we want to be more accurate with our customers we can use those hubs and ask if they have the stock so the customer can easily access it. If it was my business for example, I would make a branch to a very

surfing point. Give the customers but also suppliers the opportunity to come, have a cup of tea and talk with the people from Rexel. And see how we can help our customers. Because it is easy to send emails etc. but this soft part is really important.

- **Regarding the strategy of centralization and decentralization, what would be the challenges ahead for the coming years?**
- The most difficult part of this is the assortment. That is the responsibility for a product manager. There is a huge assortment of suppliers. The question is: what should we have in stock since the supplier has a lot of different items in his portfolio. Since the supplier deliver sometimes up to 3 times a week, I can very easily order from him. Therefore, I will put in stock some products and put orders with the very good suppliers for having the product in less than 4 days. The most difficult part is thus what do I have in the warehouse and what do I just order from the supplier?
- **So the supplier terms are better if you are centralized since you buy more?**
- Yes. Since we are bigger and bigger we are more important for the supplier so we can have better conditions. The biggest advantage in the future is being closer to the customer. So we could try to cut out some levels in the vertical chains. From the manufacturer to the customer. Look for the corporations between the different kind of chains. We are very good because we have a very big customer portfolio. How to make it as efficient as possible? If you are able to cut out a level, for example you can buy a customer. A really big of our customer was bankrupt, if we had desired to buy, then all of a sudden it was not anymore a customer but we would have better prices increasing our margins. I think most of the movements in Europe will go in that way. The key to control the costs.
- **Do you know anything about the discounts?**
- No. I know that our supplier, for instance Philipps, sets a price for instance 100 euros. We are the producer. Then there is Rexel then the end-customer. The intermediate will get 30% shortage. So they put a price on the high level. We buy for instance for 60% shortage. 100 euros is the gross producer price and we get a shortage of 60% so we pay 40 euros. Our end-customer knows he has to pay 60. So we make 20. Because of the internet and the openness from the shop I can easily buy from Germany or anywhere. The Dutch people always want to know how much shortage or discount they can get.
- **Because depending on the discounts, some strategies can be better because they encourage the company to buy more or less quantities. I was therefore wondering what kind of discounts you have with your suppliers.**

- This is something we don't really have in control at the moment. I really don't have any information about if you buy this you get a discount, but if you buy in bigger quantities you have more discounts. At this moment, these advantages are there, since it is also good for the supplier to sell more at once since they can pick and transport in bigger quantities, it saves labor. We are not really measuring the gains at the moment because of the lack of time and information from the supplier. We can make money in that area yes, there is an added value but at the moment we have other priority.
- **The next question is about the environment in which you are working. For instance the labor quality: the level of education you need, is it difficult to form an employee? What about the tax regimes? The level of competition? The strikes or problems linked to the employees?**
- No it is easy to train them. We go via Randstad. So here the workforce is easy to hire and train. The Netherlands is a competitive market. And it is really rare to see a strike. As the workers are temporary, it changes regularly.
- **The last question: do you have any recommendations for managers considering centralization and decentralization?**
- In my job, the most important is take care that you have reliable data. Especially the turnover pieces on which you make a forecast. You must track it from your ERP system. And then you have to make sure that the branch will work with the DC. You need to be really well equipped and keep your promise. For the centralization, you have to centralize the purchasing department, invite the suppliers and get better conditions. It is interesting for a supplier if the company is centralized since it has to deliver to one point.
- **Perfect thank you very much. This was the last question. Thank you for your time.**
- You're welcome.

Interview n°6 – Suzanne Sheeran – Inventory manager at Rexel Australia

- **Hi Suzanne, thanks for your time for this interview. Before we begin, did you have a look at the questionnaire? The first questions are introduction questions. Your position at Rexel Holdings Australia is inventory manager right?**
- Yes, for one month.
- **Before that, which position did you have at the company?**
- I used to be a demand planner for 18 months.
- **What are your daily tasks as an inventory manager?**

- Basically, the daily tasks involve a lot of reporting and reviewing. Reporting on the KPIs (backorders, stock availability), see if the stocks are getting low and provide the team with actions. But the KPIs are the main focus. We are also currently looking at the supplier returns. Also, dealing with our branches if we have to return products to them.
- **Ok. Now I will ask you questions for which I already found answers in the literature. The aim is to compare your ideas and feedbacks with my findings. The first question is, how would you define a network centralization or decentralization?**
- I would define centralization as collecting all your business tasks into one. In terms of our business it would be the inventory, so bringing the inventory at a centralized location and distribute it from there. Decentralization is the old model of Rexel, where each branch would order from the supplier, as opposed to having a centralized spot.
- **Thanks. According to you, what would be the advantages and disadvantages of both strategies?**
- The advantages of centralization are that you would reduce your freight costs as you don't have to ship to many different locations but only one. You would also have a better buying power as we bulk buy in a centralized system while an independent branch wouldn't be able to do so. Bulk buying allows savings too. The disadvantages of centralization are that the branches lose their autonomy so they are restricted. Also, this centralization compromises service level: instead of going from supplier to branch this would go from supplier to DC then to the branch which adds some time to the total lead time. The advantages of decentralization are the opposite: the branches were more autonomous and can deal directly with the supplier and do not need to go to a middle-man as for centralization. And the disadvantages of decentralization is that we end up having a whole lot of mini-businesses, each branch is acting on its own and that causes problem, for instance regarding provisions. The provisions are calculated on a national scale, but if each branch provides individually this leads to much more provisions than what should be. This might lead to an overstock of those provisioned items. That's the disadvantage of decentralization. We end up multiplying the issue by the number of branches we have.
- **Thank you Suzanne. Do you have any other ideas regarding these advantages and disadvantages?**
- No, that is all.

- **Ok perfect. Then we can switch to the next question which is: according to you, for both strategies, what are the most important KPIs or variables to follow and track to make sure things are done correctly?**
- Well, the two main KPIs would be the service level rate and the inventory value (or position). You have to balance the two.
- **Inventory value and service level, ok. That was it for the question 2 in general. Let us go to the next section now, question 3, which is the situation of the company. Generally, in the literature, they try to divide the companies in two categories: the fully decentralized and the fully centralized ones. Sometimes companies can also be in the middle. If you had to guess where Rexel Australia lies, where would your company be in terms of centralization degree from 0% to 100%?**
- Rexel Australia would probably be 50 to 60% centralized.
- **Ok, so you are already halfway there.**
- For New South Wales yes, even maybe more as the cables are centralized here, we can get many fast moving items in this DC. But overall for the company, I would say a bit less than 50%.
- **Ok, what are the things left to be centralized? Only warehouses or also other departments such as purchasing, HR ...?**
- Yes definitely, each branch has their own purchasing. That's definitely not centralized. While for instance Rexel UK, the branches do not do any purchasing as it is done in a centralized location. There are people who place orders on behalf of the branches which does not happen in Australia as each branch places its own orders.
- **How has this centralization degree evolved over the last years?**
- What happened is that we used to be moving towards a centralized model. We were going to put different DCs in the country. But now, we shifted to a more decentralized model. We are actually reducing the number of suppliers in the DC here (Sydney). Last year we were increasing the number of suppliers while this year we are being reducing the number of suppliers. Why this happened? It is just an overall strategy change. In the first instance we were working directly with the customer. So anyone can order anything online and we would ship it directly to the customer. Now with the costs involved and since the branches are not complying (not buying from the DC), they decided to go to a bit more decentralized model. So we are looking for a "happy medium". We are moving now to the previous replenishment model where we stock 3 to 4 thousand SKUs, much

less than what we are stocking right now. And why this change happened? This is mainly costs-related as it has been difficult to get the centralized model to work.

- **If we look at the timeframe, when did you decide to go from a decentralized to a centralized model?**
- About two or three years ago.
- **Ok, so now after those three years of moving to a centralization you start to switch back again to a decentralized system?**
- Yes.
- **In terms of costs and changes over these last three years (for instance facilities opened and closed), could you give me any evolution? For instance, how many branches and DCs did you have back then?**
- This data would probably not be relevant as only one DC has been created and the branches did not change much. That's maybe not the best thing to look at.
- **Ok. So when you were going to a centralization strategy, what were the main objectives?**
- The main objectives were to provide and over service the branches. So if they order by 9 PM they should receive it by 12 the next day. So service and stock availability were the things we pushed for.
- **So the idea was to ensure a good service level to the branches?**
- Yes as it is one of our KPIs. But, even if this does not hold for all centralization situations, in our situation we could not compete with the service level. Sometimes the service level from the suppliers were better than ours. Also, another thing was to reduce the inventory as we had a huge provisions issue. To reduce that, we moved to a centralized system.
- **I understand this reduction in inventory value through the inventory pooling, decreasing the provisions. But how did you plan to increase the service level by centralizing?**
- Actually, our aim was, in a best case scenario, to deliver the products in the day + 1 time to perform better than other suppliers. We managed to achieve it but it appeared to be too costly.
- **Ok. So you managed to reach this Day + 1 thanks to the centralization but your costs went too high, right?**
- Yes, that's correct.
- **So this cost issue is the reason why you switched back to the decentralization?**

- Yes, in addition to this noncompliance issue from the branch. Because one of the biggest issue we had here was that the branch had a choice: it could either buy from the DC or it could buy direct from the supplier. Once it had that choice, the DC would buy taking in account the demand from the branches but these branches might not buy from the DC but directly from the supplier. So basically the reason why we went for a centralized system was the issue in inventory we had and the service level we wanted to meet and the fact that we wanted to go directly to customer. We are now going back to decentralized since the compliance of the branches is not there. The branches would go directly to the supplier and not to us. And also it was getting too expensive.
- **What costs were involved when you say too expensive?**
- Well, simple things as running along the shifts and stuff. You know, if your service level is when you get an order at 9 PM and you get the product by twelve the next day, you have to run a night shift, correct? So these costs were kind of expensive.
- **Ok. And the fact that the branch was directly ordering from the supplier instead than going and ordering from the DC was an issue as you were buying for them but they were not buying from you, right?**
- Correct.
- **Who are the persons who decided which strategy to adopt?**
- The person to make the decision was the MD (managing director), I think this is the MD but I am not too sure.
- **Ok. So he is the one who decided to go to a decentralized system again?**
- I am not too sure, I could not tell who took that decision. I think it also came from a pressure from the costs. That's what I think.
- **Ok. So you realized it was getting too costly to ensure this service level. Perfect. You basically already answered the next questions which were "what are the short and long term expectations" for this centralization change: inventory reduction and improving service level. While now, you are going back to a decentralization to reduce the costs from the lack of compliance from the branches. The next question now is, when you adopted a new strategy (may it be centralization or decentralization), how did you plan to measure the evolution and what did you want to measure to make sure you were going to the right direction? For instance, when you went centralizing, what did you follow to make sure this was efficient and you were on the right way?**

- Ok, so for each supplier we are working with, we look at how much margins we make. So we look at the profitability of each supplier we have here at the DC. So if we are not reaching the desired profitability, we wonder if we went to keep working with that supplier or not. And we are also looking at ranges. For instance we have three or more similar products where the customers do not care what brand it is, then we might reduce this product range to one. So, that is how we are evaluating which way to go now. We do not want to go fully centralized anymore. We want to be in the middle. So first we were completely decentralized, then we went towards complete centralization. We then realized it didn't work. Now we are going half way to find the half way medium.
- **When you decided to go decentralized, what did you follow to make sure you were doing it right? Checking if the inventory was indeed being reduced? If the service level was reached?**
- It was mostly a focus on a service level.
- **Ok, now you are going on the path of this halfway medium, you pay attention at the costs issue you had while achieving centralization in order to reduce it. But what kind of costs was it exactly?**
- I would not know the sort of costs. I would say costs of centralization. To move to decentralization, as we transact with the suppliers we will have a restocking fee, which is going to cost us as we ask the supplier to take back their goods. That is the main one. But we are still in this process as we just started. We try to sell out things.
- **The aim is to reduce the costs of the night shift for example as you mentioned previously?**
- Yes so it is about the profitability like the cost and the P&L. This kind of questions would probably be best to ask to Simone or Steve Amos.
- **Ok, I take a good note of this. The next question is, when you decided to go for centralization or decentralization, what were the issues you foresaw to happen? And what actually happened in the end that you had not foreseen? To summarize, what were the problems you expected and the ones you did not expect?**
- Well, we thought that the branches might not comply but we did not realize how big that problem would be, that lack of compliance. Also I think that another problem is that there was not much time to do this whole centralization process. In one year we grew a lot. We went from 2 or 3 thousand parts to more than 20 thousand parts. That's a really big jump. That led to a lot of problems. We didn't expect that branches wouldn't be

complying. We also didn't expect that the suppliers would be approaching branches directly, which didn't help either

- **The fact that the supplier approached the branches and the lack of compliance from the branches brought an issue. But why was it such an issue?**
- Because if you have a business, and that no one buys from you, you have a problem. Our customers are the branches. If they don't comply and don't buy from us, that's not profitable.
- **As a demand planner at that time, your forecast of the demand were wrong as the branches were never buying from you but directly from the supplier.**
- That's correct.
- **Ok. Did you face any other problem?**
- Another problem we faced was the project demand. Since our data were really poor, we cannot capture the project demand.
- **What do you mean by project demand?**
- That is the number of products or items you need for your project to deliver to the customer.
- **Ok, thanks. For the next section, you have to answer only to the questions you think are relevant for your position. I mean as an inventory manager, the first questions are mainly for you but then the distribution costs, purchasing, service level and HR are maybe better for other people. Here those questions are more data-oriented. We can go through them but maybe you will say it is more relevant to send figures. For instance for the inventory, what I saw in the literature is that when you go from a decentralized to a centralized system, cycle and safety stocks should be reduced as you mentioned as the demand pool in fewer facilities. On the other hand the distribution and transportation costs will increase as the delivery time and the service level will be decreased. Did you manage to measure those variables?**
- I would not be able to say about all of this. Regarding the distribution costs you should probably ask Marc who looked after the transportation costs.
- **Ok. What about the cycle and safety stocks? Even if they are considered as just stocks or inventory.**
- The problem is that we did not have time to measure since we had all this changes in one year and now we are moving backwards. I can tell you generally how much stock we hold. Initially when we first started with the DC we were holding one or two months

as min and max. We gradually dropped that based on where the suppliers were located. We achieved that reduction in safety stocks. But in terms of how this affected the branches, it is a difficult question to answer. But you could ask Steve Amos as he is in charge of all the replenishment.

- **Ok. Because based on what you told me, I wondered if you followed the evolution of your overstocks. Did you do such a thing?**
- I will have a look.
- **Ok, because this section is mainly about figures. My idea is to check if for Rexel, as they were trying to centralize, the findings in the theory match or not the practice (inventory value decrease, increase in transportation costs ...). Because at the beginning of the interview you told me that the transportation costs did not really decrease as you had more bargaining power.**
- Well it depends on the supplier. And the major advantage is that we were bulk buying from a long distance. Therefore we did not do small shipping many times but rather one big order.
- **Do you think about any other relevant things to follow or track for centralization?**
- I think it is about it what you can measure. Just ask Marc about the transportation costs.
- **Ok. Because for this practical part I am asked to gather information, analyze it and obtain results. For this section, that is what I tried to do. But if you tell me it is hard to get those figures, I wonder if there would be something else I should look after.**
- Ok, send me an email with the data you need and I will have a look.
- **Thanks. Regarding purchasing maybe I should ask other people as Tim or Nina since in the literature they were mentioning three steps: does the company centralize the pricing? Does it centralize the purchasing? Does it centralize the distribution?**
- Here the pricing is centralized to a certain degree. The DC pricing is centralized but the branches can get local deals.
- **Ok so the pricing is centralized and the purchasing is more local?**
- Well the pricing at the DC is fix. But the prices that the branches negotiate with suppliers can be local deals and get cheaper prices. So the DC is fixed while the branches are more flexible.

- **Ok since, the branches are buying from you the price is fixed but if the branch decides to go directly to the supplier it can get another price which makes it flexible, right?**
- Yes that's correct.
- **Ok this is a bit different from what I reviewed in the literature as the branches have two options. What about the purchasing?**
- It is local. Purchasing is local. The branches do their own purchasing, the DC does its own purchasing. They have their own team to do it.
- **Ok, what about the distribution?**
- Actually the distribution would be local because the majority of the branches especially in Queensland or WA directly buy from the supplier. Only NSW would have the most centralized distribution as they can buy from the DC.
- **So is this why you are switching back to a decentralized structure?**
- Especially because we cannot obtain the compliance we want.
- **What are the reasons behind this purchasing strategy?**
- The biggest thing in Australia I think are the distances between the branches and stuff. This purchasing strategy is because it is more historical. I don't think they are ready for centralizing purchasing yet as it means you need to have a lot of data that we do not have. That is why each branch is doing its ordering, it might not be the most efficient way but it is the best way for us as it is what works for us at the moment.
- **This lack of data is preventing you from being more efficient?**
- Yes, definitely.
- **What kind of data are you missing?**
- Probably the project data. Being able to separate the project demand from other normal demand.
- **Regarding the HR questions, should I ask you those questions or rather someone else?**
- You should maybe talk to Steve Beal.
- **Because what I reviewed in the literature is when you are centralizing or decentralizing with your human resources the things that can happen is when you centralize you need less skilled workers. And that is a reduction in staff costs, learning costs, administration costs. But when you are decentralizing, people are**

granted more autonomy, they can do more things, find more answers and be more creative. How does it work for Rexel?

- Maybe you should ask to Steve Beal.
- **In terms of economies of scale, did you benefit from anything while you centralized?**
- We had better buying. Probably ask Steve Amos. I don't think we have experienced this long enough to know the answer to this.
- **That was it for the section 4. Now it is more about recommendations. Based on your experience, what advice would you give to managers considering centralization or decentralization?**
- I think planning is key. And don't try to do too much too soon. Like, pace yourself. What we did is we increased our SKUs too fast in a short period of time. When you do that, things go wrong. Do not try to do too many things too soon otherwise it has consequences. You need a plan, a vision and be able to stick to it. At the start of any project, it is going cost you money. You need to be able to stick to it and measure it. Planning is crucial and you need a picture of where you are going.
- **Ok thank you. And what advice would you give to any young student about to graduate?**
- The advice I would give is that the skills you need are Excel, data. Be able to handle large amount of data. That is the best thing.
- **Perfect, thank you very much. That was it for the questionnaire. Now you have answered to all my questions, do you believe I should include other relevant ones or am I missing an important part of the topic?**
- No, I think it would be worth getting a perspective from the warehouse as they have to physically handle this and the high level managers. Try to interview Steve Beal, Steve Amos, Marc Bell, Simone Parnell. Send them an email as they might be difficult to reach. I can contact Simone and Steve Beal if you want.
- **Ok thank you. I will try to contact them as soon as possible. Regarding the purchasing, should I ask other people who would have more specific knowledge about the topic?**
- No. I think you already know the right persons to interview. Any other person might not have the answers to your specific questions. Nina could potentially help you with the international purchasing. You could also contact Camille, as she did some kind of similar work in Shanghai. I will have to leave you now to go back to work.

- **Ok, perfect. Thank you very much for your time and your feedback. Good luck for the work. I wish you a nice day.**
- All right. We keep in touch for the following. Bye.
- **Perfect, talk to you later. Bye.**

4. Assessment method

Such assessment criteria can be found on the Figure 8 below (see X. Derycke 2014). The number of branches inside the country, the potential sales (in millions of euros) of the warehouse for the territory to be centralized, the share of counter sales and the share of common & top items are key variables for the decision-making process. Gathering such data can then be really helpful.

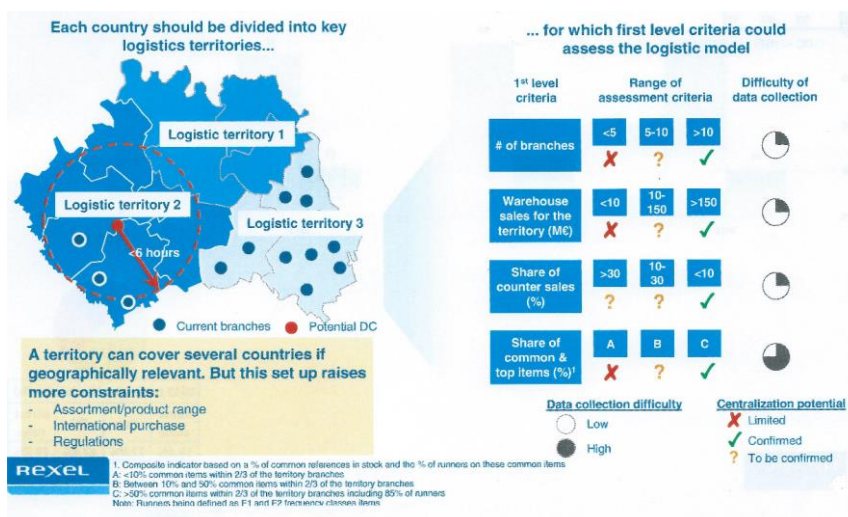


Figure 8

Logistics centralization assessment: first level screening

However, these guidelines are theoretical and are not always carefully followed. This can however help in understanding the following sections, which describe Rexel's strategy in the Netherlands and Australia. Rexel Netherlands has indeed centralized its warehouses, following some of the guidelines mentioned on the Figure 8.

The two following cases are divided in different sections to clearly illustrate the concepts developed in the literature review and link them with the practice. The strategy, the inventory, the transport and distribution, the purchasing and sales and the system will therefore be tackled. The human resources and the corporate social responsibility will also be addressed in the Netherlands case but not for Australia since only enough relevant data could be collected for the former case (see 2.2).

5. Recommendations for young graduated students

The supply chain is an interesting field with the various challenges it brings along. Consequently, every day is different and has its own problems. This can be illustrated by saying that the same company, trying to achieve similar results (i.e.: a centralized model) at different places, will still face different challenges and different issues at each place. To cope with this successfully and deal with these daily problems, it is logically important to be stress-resistant.

Also, since working in the supply chain requires the employees to work with large amount of data, it is really important to have skills in Excel and data management. That is highly valued by the companies and will be used a lot. The importance of having reliable data and an efficient system has been underlined all along this thesis as being critical.

6. Distribution structure of Rexel Netherlands.

- a. The DC in Bleiswijk is represented in orange.
- b. The hubs are represented in green.
- c. The branches are represented in pink.

