

Ervaringen Uitwisselen Document tbv Inspectie

Velin - Utrecht

14 November 2019

Rene Brouwer

Agenda

- **Introductie LyondellBasell**
- **Botlek Maasvlakte**
- **Uitdagingen Uitwisseling Documentatie**
- **Mogelijke oplossing**
- **Ervaring**
- **Discussie**

Cautionary Note Regarding Forward-looking Statements

The statements in this presentation relating to matters that are not historical facts are forward-looking statements. These forward-looking statements are based upon assumptions of management which are believed to be reasonable at the time made and are subject to significant risks and uncertainties. Actual results could differ materially based on factors including, but not limited to, the business cyclicality of the chemical, polymers and refining industries; the availability, cost and price volatility of raw materials and utilities, particularly the cost of crude oil, natural gas, and associated natural gas liquids; competitive product and pricing pressures; labor conditions; our ability to attract and retain key personnel; operating interruptions (including leaks, explosions, fires, weather-related incidents, mechanical failure, unscheduled downtime, supplier disruptions, labor shortages, strikes, work stoppages or other labor difficulties, transportation interruptions, spills and releases and other environmental risks); the supply/demand balances for our and our joint ventures' products, and the related effects of industry production capacities and operating rates; our ability to achieve expected cost savings and other synergies; our ability to successfully execute projects and growth strategies; any proposed business combination, the expected timetable for completing any proposed transactions and the receipt of any required governmental approvals, future financial and operating results, benefits and synergies of any proposed transactions, future opportunities for the combined company; legal and environmental proceedings; tax rulings, consequences or proceedings; technological developments, and our ability to develop new products and process technologies; potential governmental regulatory actions; political unrest and terrorist acts; risks and uncertainties posed by international operations, including foreign currency fluctuations; and our ability to comply with debt covenants and service our debt. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the "Risk Factors" section of our Form 10-K for the year ended December 31, 2018, which can be found at www.LyondellBasell.com on the Investor Relations page and on the Securities and Exchange Commission's website at www.sec.gov.

The illustrative results or returns of growth projects are not in any way intended to be, nor should they be taken as, indicators or guarantees of performance. The assumptions on which they are based are not projections and do not necessarily represent the Company's expectations and future performance. You should not rely on illustrated results or returns or these assumptions as being indicative of our future results or returns.

This presentation contains time sensitive information that is accurate only as of the date hereof. Information contained in this presentation is unaudited and is subject to change. We undertake no obligation to update the information presented herein except as required by law.

Reconciliations for our non-GAAP measures can be found in the Appendix to this presentation or on our website at www.LyondellBasell.com/investorrelations.

LyondellBasell is a strong, global company delivering outstanding performance

LEADING⁽¹⁾

#1

Producer of **polyethylene** in Europe
Producer of **polypropylene** in North America and Europe
Producer of **oxyfuels** in North America and Europe
Producer of **polypropylene compounds** globally
Licensor of **polyolefin technologies** globally

DIVERSE



Many of our **materials** go into products that people use every day, such as food packaging, electronics, children's toys and fuels.

GLOBAL



Every day, our **employees** work around the clock to safely **advance solutions** to our world's biggest challenges.

GROWING

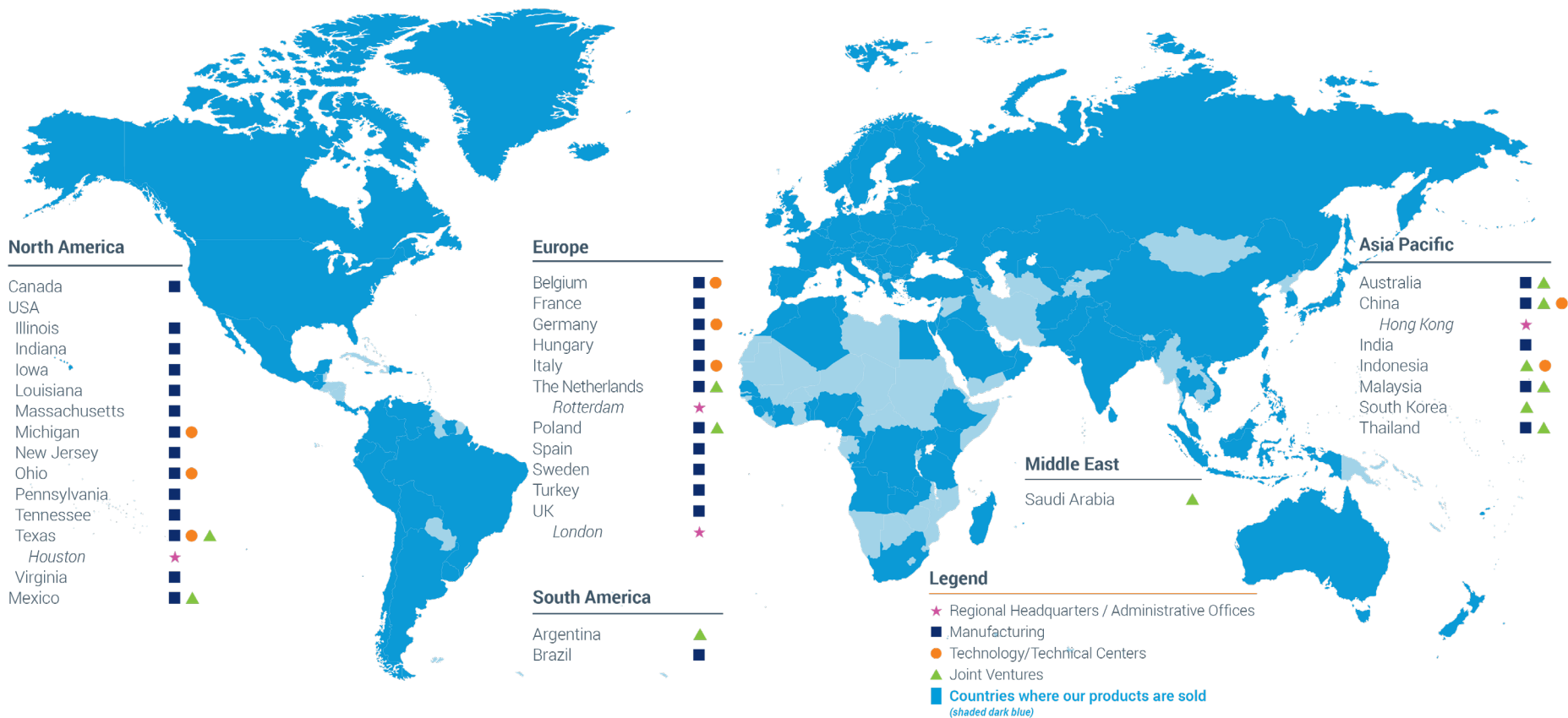


Increased U.S. ethylene capacity by **23%** since 2012
Building the first world-scale **Hyperzone HDPE plant** and world's largest **PO/TBA plant**
Acquired A. Schulman, expanding our position in the **advanced polymers markets**

One of the world's largest plastics, chemical and refining companies producing products and materials key to advancing solutions to modern challenges

⁽¹⁾ 2018 data as of December 31, 2018

LyondellBasell has the scope and scale to serve global markets



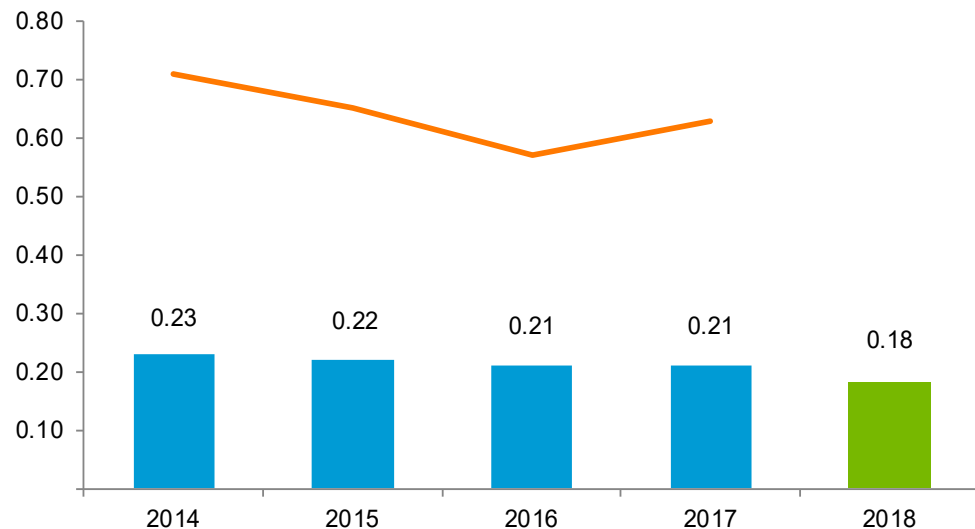
**We manufacture and have joint ventures in 24 countries
Our products are sold in more than 100 countries**

Note: Map is as of December 2018

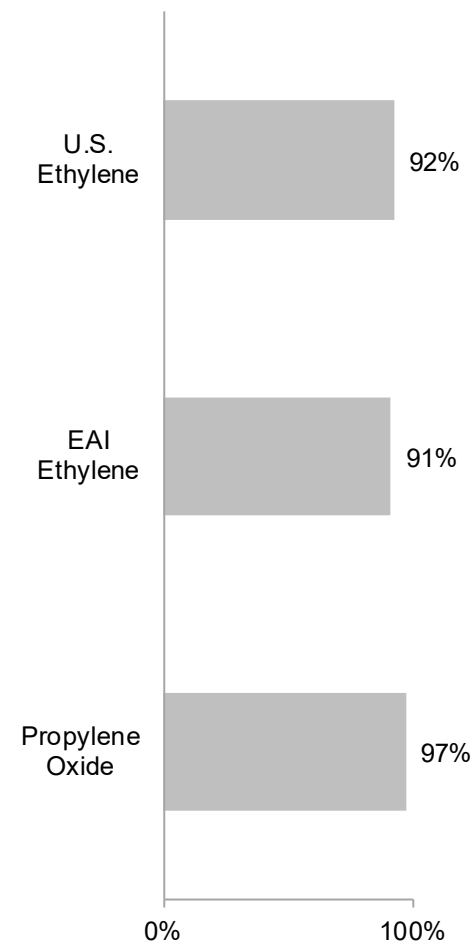
LyondellBasell operates some of the safest, most reliable facilities in the industry

LYB Total Recordable Incident Rate⁽¹⁾

LyondellBasell Safety Injuries per 200,000 Hours Worked



2018 Operating Rates⁽²⁾



(1) Source: American Chemistry Council (ACC), LYB. ACC data includes all available periods. Number of hours worked includes employees and contractors. Data includes safety performance from the acquisition of A. Schulman for the period August 21, 2018 forward.

(2) Excludes the impact of turnarounds.

Our products are advancing a range of solutions in nearly every geography and sector of the economy



Cleaner air & fuel efficiency

Stronger, lighter plastics support increased fuel efficiency



Clean water

Stronger, longer-lasting pipes used in municipal water systems and key elements used in water filtration systems



Quality healthcare

Improved medical supplies such as synthetic latex gloves, hand sanitizers, biohazard bags and pill coatings



Food safety & access

Food packaging and films that improve freshness, portability and extend shelf-life



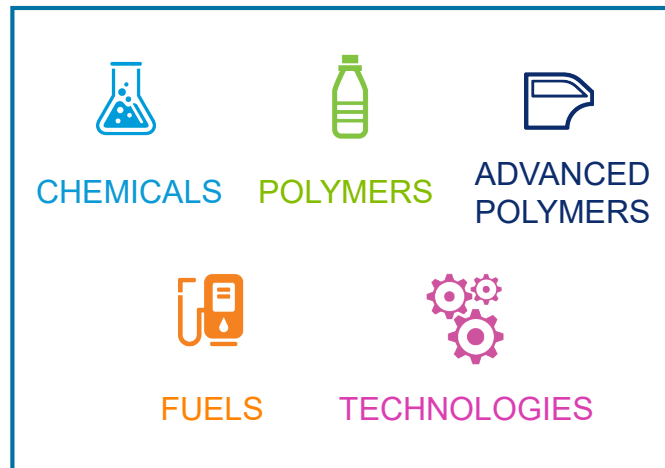
Sustainable & modern living

Materials that form components used in solar panels, wind turbines, children's toys, cosmetics, leak- and shatter-proof containers



Agricultural efficiency

Lighter machinery, crop protection and soil conditioning used to be more efficient in agroprocessing



LyondellBasell delivers innovative products and solutions in five key areas



CHEMICALS

We produce the chemical building blocks for:

- automotive fluids
- furniture / household goods
- coatings / adhesive / cleaners
- cosmetics / personal care products



POLYMERS

Our versatile plastic resins are used to create a variety of products including:

- automotive parts
- packaging
- piping
- textiles
- renewable energy technologies
- agricultural films / irrigation
- healthcare
- food supply products



ADVANCED POLYMERS

Our diverse portfolio is used to create customizable products including:

- automotive parts
- differentiated packaging
- electronics / appliances
- construction materials
 - roofing
 - flooring
 - geomembranes
 - specialty pipe



FUELS

Our refinery in the U.S. produces:

- gasoline / fuel components
- low-sulfur diesel
- jet fuel
- lubricants
- oxyfuels that help improve air quality



TECHNOLOGIES

We license our state-of-the-art manufacturing and process technologies:

- technologies that are used by chemical and plastics companies around the globe

Botlek Maasvlakte history

- 1972 : Start-up PO plant
- 1976 : First water treatment start-up
- 1977 : Start-up GTBA production
- 1979 : Start-up TBHP - 1
- 1983 : Start-up C4 plant
- 1984 : PO capacity debottleneck
- 1987 : Start-up MTBE plant
- 1990 : Start-up TBHP - 2
- 1991 : Start-up Europoort terminal
- 1995 : Start-up PGE plant; start ontwerpfase Maasvlakte plant
- 2000 : Start bouw Maasvlakte plant
- 2002 : Start-up BDO plant
- 2003 : Start-up Maasvlakte plant
- 2015 : two boiler integrated & C4 Expansion

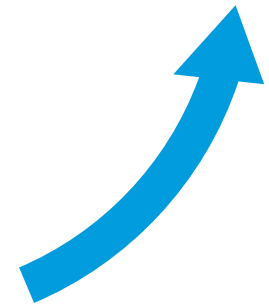
Uitdaging: hoe delen we informatie met Inspectie autoriteiten?



Asset Owner



Inspection Agency



Resolution



Asset Owner



Inspection Agency



Virtual Vault

- Dashboard
- Documents
- Q&A
- Roles & users
- Reports
- My Virtual Vaults

Terms of Use

virtual vaults

Pilot inspectie buisleidingen » Documents

Index report My activity

View Print Download Refresh Search in folder

Level up

- 1 ILT Correspondentie
- 2 MOC
- 3 Procedures
- 4 Toestandsrapportages 2018
- 5 5 Management Reviews
- 6 3-1 Procedures - ILT - Schrijf
- 7 3-3 Procedures - ILT - Download

Manage Details

Pilot inspectie buisleidingen

- Upload files
- Create folder
- Create placeholder
- Reindex folder
- Mass rename

0 items selected

- Delete
- Move
- Edit

11:40
26-8-2019

Virtual Vault

Virtual Vaults Google

virtual vaults Start tour Support Rene Brouwer

Pilot inspectie buisleidingen » Roles and users - Users: 4 (Guests: 0) Permissions report Users overview

+ New role Expand all Collapse all Refresh Send feedback

Vault Admin

▼ Vault Admin (2 users)

Enable users Disable users Change role Change Q&A role Send invites

<input type="checkbox"/>	Rene Brouwer	Q&A Admin	
<input type="checkbox"/>	john.bosma@lyondellbasell.com	Q&A Admin	Invited Resend

Content Admin

▼ ILT (2 users) Set permissions (21/21) Invite users

Enable users Disable users Change role Change Q&A role Send invites

<input type="checkbox"/>	Tamara Borkovska (tamara.borkovska@ilent.nl)	Question Submitter	Last login: 18-Jun-2019 21:27
<input type="checkbox"/>	Joop Aardema (joop.aardema@ilent.nl)	Question Submitter	Last login: 18-Jun-2019 15:26

End User

LYB (0 users) Set permissions (15/21) Invite users

+ New role

Terms and conditions

virtual vaults

Virtual Vault

ILT



Vault permissions

Set permissions on Vault level. By default, these permissions apply to both **existing** and **newly added content**.

[More info on permissions](#)

Custom permissions (selected)

Set permissions on individual folders/documents. By default, these permissions apply only to **existing content**.

> 1 ILT Correspondentie	<input checked="" type="checkbox"/>						
> 2 MOC	<input checked="" type="checkbox"/>						
> 3 Procedures	<input checked="" type="checkbox"/>						
> 4 Toestandsrapportages 2018	<input checked="" type="checkbox"/>						
> 5 5 Management Reviews	<input checked="" type="checkbox"/>						

Cancel

Save

Virtual Vault

AutoSave Off | Permissions report - Pilot inspectie buisleidingen 26-Aug-2019 11:43 - Protected View - Excel | Brouwer, Rene

File Home Insert Draw Page Layout Formulas Data Review View Developer Add-ins Help Acrobat Tell me what you want to do

PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View. Enable Editing

G9

virtual vaults				Pilot inspectie buisleidingen											
PERMISSIONS REPORT															
Date:	26-Aug-2019														
Time:	11:43:07 CET														
By:	Rene Brouwer														

TYPE	INDEX	TITLE	EXT	LYB			ILT										
				Access	Print	Download	Access	Print	Download	Upload	Delete	Edit	Copy	Move	Change structure		
Folder	1	ILT Correspondentie		✓			✓	✓	✓	✓							
Document	1.1	2019-04-09 345793 Lyondell 26062019 Borkovska (003)	.pdf	✓			✓	✓	✓								
Folder	2	MOC		✓			✓										
Document	2.1	MOC RBO-17-315 - Pigging Propyleenleiding	.pdf	✓			✓										
Document	2.2	MOC RBO-18-068 rev.0 - XV-91B05	.pdf	✓			✓										
Document	2.3	MOC RMO-17-027 - Pigging Propyleenleiding - Vooronderzoek	.pdf	✓			✓										
Document	2.4	MOC RMO-17-104 - CWW Leiding omleggen	.pdf	✓			✓										
Folder	3	Procedures		✓											✓	✓	✓
Document	3.1	B-RM-0001 - Beheer Buisleidingen	.pdf	✓											✓	✓	✓
Document	3.2	P-PS-3301 - MOC	.pdf	✓											✓	✓	✓
Document	3.3	P-PS-3301-REF02	.xlsx	✓											✓	✓	✓
Document	3.4	P-PS-3301-REF03	.doc	✓											✓	✓	✓
Document	3.5	OES-033 Process Risk Management (PRM) Standard	.doc	✓											✓	✓	✓
Folder	4	Toestandsrapportages 2018		✓													
Document	4.1	2018 toestandsrapportage buisleiding P0574 - Effluent Botlek	.pdf	✓													
Document	4.2	2018 toestandsrapportage buisleiding P91054 - Propyleen - Europoort - Botlek	.pdf	✓													

Sheet1

Virtual Vault

Virtual Vaults Google

virtual vaults Support Rene Brouwer

Pilot inspectie buisleidingen » Reports

Activity [More info](#)

Document activity by user

Shows all content activity of all users in this Vault.

Select...

Activity by date

Shows the document activity and amounts of logins of all users, per day.

Select...

My audit trail

Shows all content actions that have been done by you.

Select...

My activity

Lists the Vault's index structure that is available to you, including your last View, Print and Download actions.

Download report

Users & permissions [More info](#)

Permissions report

Lists all roles with their corresponding content permissions.

Select...

Users overview

Lists all users - both active and inactive - that have ever been invited to this Vault.

Download report

Authorization report

Shows all content related permissions changes in this Vault.

Select...

Content [More info](#)

Index report

Lists the Vault's index structure that is available to the selected role or group, including the dates on which the documents have become available to them.

Select...

New documents

Lists all documents that have become available to you since your last login.

Download report

Unsupported files

Lists all documents that can not be presented in the document viewer and what the reason was.

Download report

7 019

Terms and conditions

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Virtual Vault

AutoSave On My audit trail - Pilot inspectie buisleidingen 26-Aug-2019 1142 - Protected View - Excel Brouwer, Rene

File Home Insert Draw Page Layout Formulas Data Review View Developer Add-ins Help Acrobat Tell me what you want to do

PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View. Enable Editing

C23 : X ✓ fx rene.brouwer@lyondellbasell.com

virtual vaults Pilo

MY AUDIT TRAIL

Date: 26-Aug-2019 Date range: 01-Jun-2019 - 26-Aug-2019
 Time: 11:42:05 CET User: Rene Brouwer
 By: Rene Brouwer Role: All
 Index: Full

ROLE	USER NAME	DATE	INDEX	TITLE	EXT	ACTION	VIEWED (sec.)	BEFORE
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:54:44 CET	7.5	OES-033 Process Risk Management (PRM) Standard	.doc	Create		
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:54:20 CET	3.5	OES-033 Process Risk Management (PRM) Standard	.doc	Create		
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:48:04 CET	7.1	B-RM-0001 - Beheer Buisleidingen	.pdf	Create		
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:48:04 CET	7.2	P-PS-3301 - MOC	.pdf	Create		
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:48:04 CET	7.3	P-PS-3301-REF02	.xlsx	Create		
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:48:04 CET	7.4	P-PS-3301-REF03	.doc	Create		
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:47:22 CET	7	3-3 Procedures - ILT - Download		Modified - Edit		3-3 Procedures
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:47:13 CET	6	3-1 Procedures - ILT - Schrijf		Modified - Edit		3-1 Procedures
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:46:40 CET	7	3-3 Procedures - ILT - Download		Create		
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:09:53 CET	6	3-1 Procedures - ILT - Schrijf		Create		
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 14:01:36 CET	4.1	2018 toestandsrapportage buisleiding P0574 - Effluent Botlek	.pdf	View	21	
Site Admin	rene.brouwer@lyondellbasell.com	26-Jun-2019 11:26:26 CET	4.2	2018 toestandsrapportage buisleiding P91054 - Propyleen - Europort - Botlek	.pdf	View	123	
Site Admin	rene.brouwer@lyondellbasell.com	21-Jun-2019 15:39:53 CET	3.1	B-RM-0001 - Beheer Buisleidingen	.pdf	View	217	
Site Admin	rene.brouwer@lyondellbasell.com	12-Jun-2019 18:12:31 CET	4.5	2018 toestandsrapportage buisleiding P-137334-01 - BDO - Botlek - LBC	.pdf	View	3	
Site Admin	rene.brouwer@lyondellbasell.com	12-Jun-2019 18:11:43 CET	4.6	2018 toestandsrapportage buisleiding NG-11-4008-01 - Aardgas	.pdf	Create		

Ervaringen

■ LyondellBasell

- Gekozen oplossing redelijk intuïtief
- Toegang te beveiligen per folder
- Beveiligingsinstellingen van: niets, tot alles.
- Watermerk bij lezen, downloaden, en schermafdrucken
- Rapportage

■ Inspectie

- Soms lastig te lezen – Watermerk
- Makkelijk toegang

Discussie / Vragen?

