



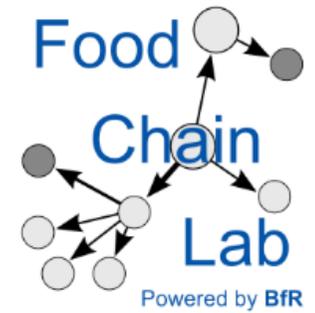
Data for FoodChain-Lab

Collection – Import – Cleaning

Alexander Falenski, Marion Gottschald, Marco Rügen,
Christian Thöns, Matthias Filter, Annemarie Käsbohrer,
Bernd Appel, Karsten Nöckler, Armin A. Weiser

Outbreak: Tracing workflow using FoodChain-Lab I

First information on food producing company involved in foodborne disease outbreak



Template

Start tracing template

Data needs for tracing – by type



Type of Business

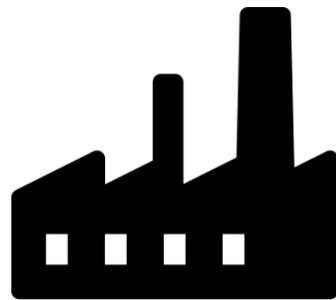
Name

Lot No.

Name

A station

(e.g. a food producer)



Longitude
Latitude

Address

A delivery

(e.g. of a food ingredient)

Amount



Delivery Date

Delivery Relations

Start Forward tracing template: Bakery and patients



Bakery

Inquired Company:	Bakersfield Bakery	[Address]	DE	Manufacturer
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For questions please contact the FoodRisk-Labs team, +49 (30) 18412-4444, foodrisklabs@bfr.bund.de

Products in Focus:	Relevant period of sale:	Onset of disease:

Information to complete the sheet:

Please keep track of all delivered products matching the product descriptions that were sold during the relevant period in a lot-based manner.

<u>Recipient</u>				<u>Product</u>		<u>Lot Information</u>		<u>Delivery</u>			<u>Comments</u>	
<u>Name</u>	<u>Address</u> <small>(e.g. Street, ZIP, City)</small>	<u>Country</u>	<u>Type of Business</u>	<u>Name</u>	<u>EAN</u>	<u>Lot Number</u>	<u>Best Before</u> <u>Date or</u> <u>Use-by Date</u>	<u>Delivery Date</u>				<u>Amount</u> <small>(e.g. 45 kg)</small>
								<u>Day</u>	<u>Month</u>	<u>Year</u>		
Patient01		DE	Patient	Summer Cake		SC01		6	11	2017	1 Piece	
Patient02		DE	Patient	Summer Cake		SC02		6	11	2017	1 Piece	
Patient03		DE	Patient	Summer Cake		SC03		6	11	2017	1 Piece	
Patient04		DE	Patient	Summer Cake		SC04		6	11	2017	1 Piece	
Patient05		DE	Patient	Summer Cake		SC05		6	11	2017	1 Piece	

Patients

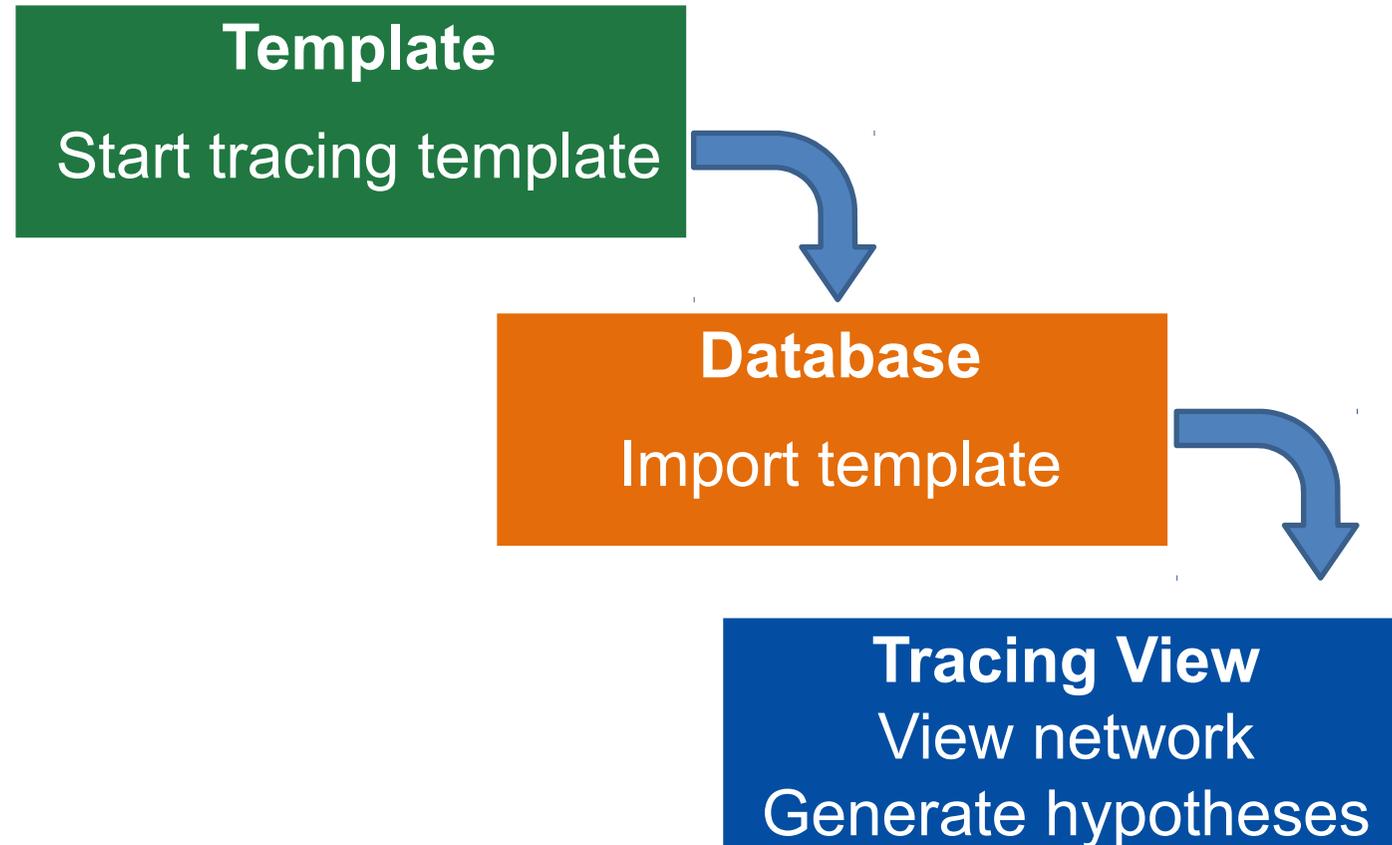
Contaminated product

Online Validation: <https://foodrisklabs.bfr.bund.de/templatevalidator/>

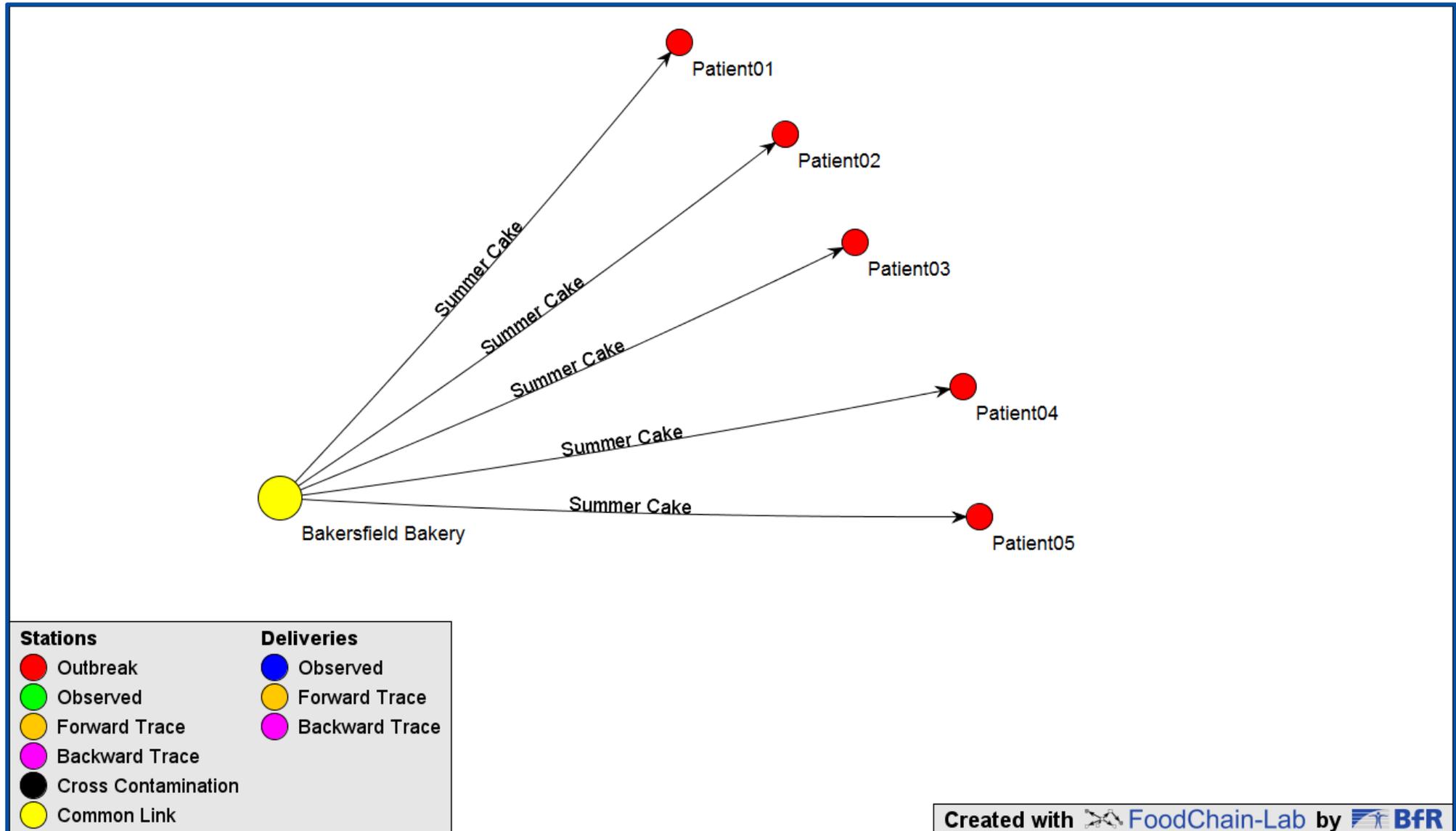
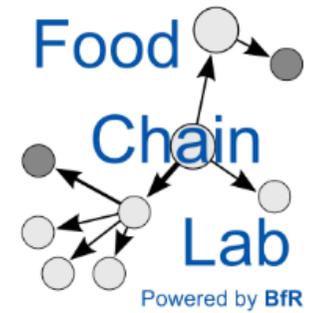
Outbreak: Tracing workflow using FoodChain-Lab II



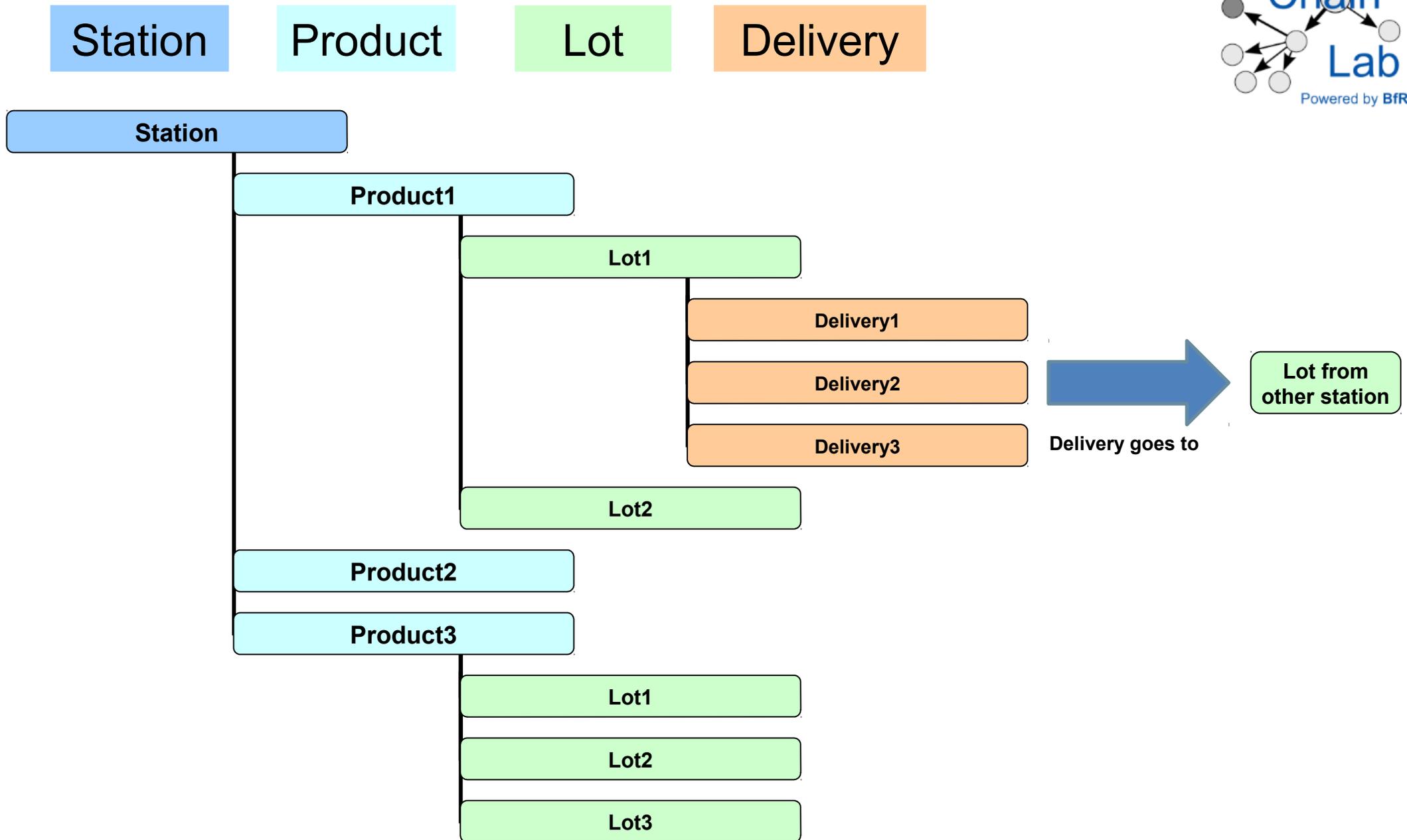
First information on food producing company involved in foodborne disease outbreak



Tracing View: Bakery and patients



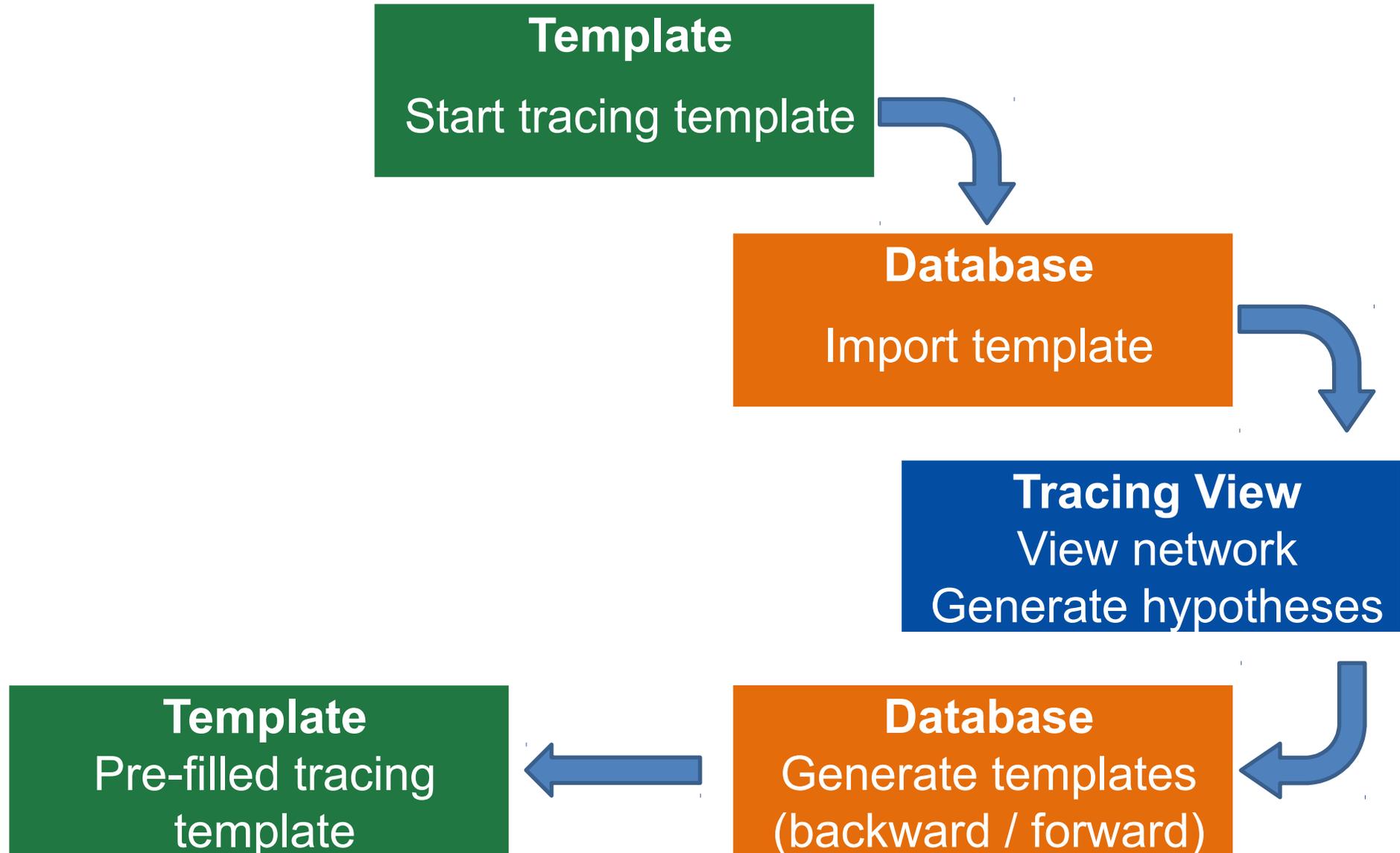
Database: Structure of food chains



Outbreak: Tracing workflow using FoodChain-Lab III



First information on food producing company involved in foodborne disease outbreak

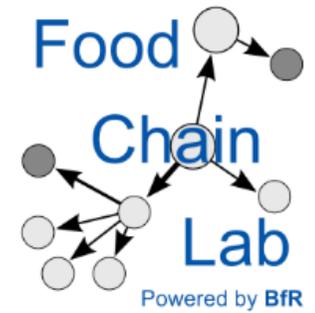


Pre-filled backtracing template generated by the database



Inquired Company:	Bakersfield Bakery	[Address]	DE	Manufacturer									
For questions please contact the FoodRisk-Labs team, +49 (30) 18412-4444, foodrisklabs@bfr.bund.de													
Outgoing Goods													
	Product		Lot Information		Delivery			Recipient			Comments		
	Name	EAN	Lot Number	Best Before Date or Use-by Date	Delivery Date			Amount	Name	Address		Country	Type of Business
	Summer Cake		SC01		6	11	2017	1 Piece	Patient01		DE	Patient	
	Summer Cake		SC02		6	11	2017	1 Piece	Patient02		DE	Patient	
	Summer Cake		SC03		6	11	2017	1 Piece	Patient03		DE	Patient	
	Summer Cake		SC04		6	11	2017	1 Piece	Patient04		DE	Patient	
	Summer Cake		SC05		6	11	2017	1 Piece	Patient05		DE	Patient	
Information to complete the sheet:													
Fill in outgoing goods which are already known (see grey fields above).													
Please keep track of the ingredients of all sent products - do it in a lot-based manner.													
In Column A starting with Line Number 22 please enter the line number of the outgoing good being the product of this ingredient. Afterwards, enter the ingredient information in													
Please repeat the outgoing good as often as necessary in order to capture all its ingredients.													
Incoming Goods - lot-based Ingredient List													
Line Number or Lot Number from Outgoing Goods	Ingredient		Lot Information		Delivery			Supplier			Comments		
	Name	EAN	Lot Number	Best Before Date or Use-by Date	Delivery Date			Amount	Name	Address		Country	Type of Business
					Day	Month	Year	(e.g. 45 kg)		(e.g. Street, ZIP City)			

Outbreak: Tracing workflow using FoodChain-Lab IV



First information on food producing company involved in foodborne disease outbreak

Template
Start tracing template

Database
Import template

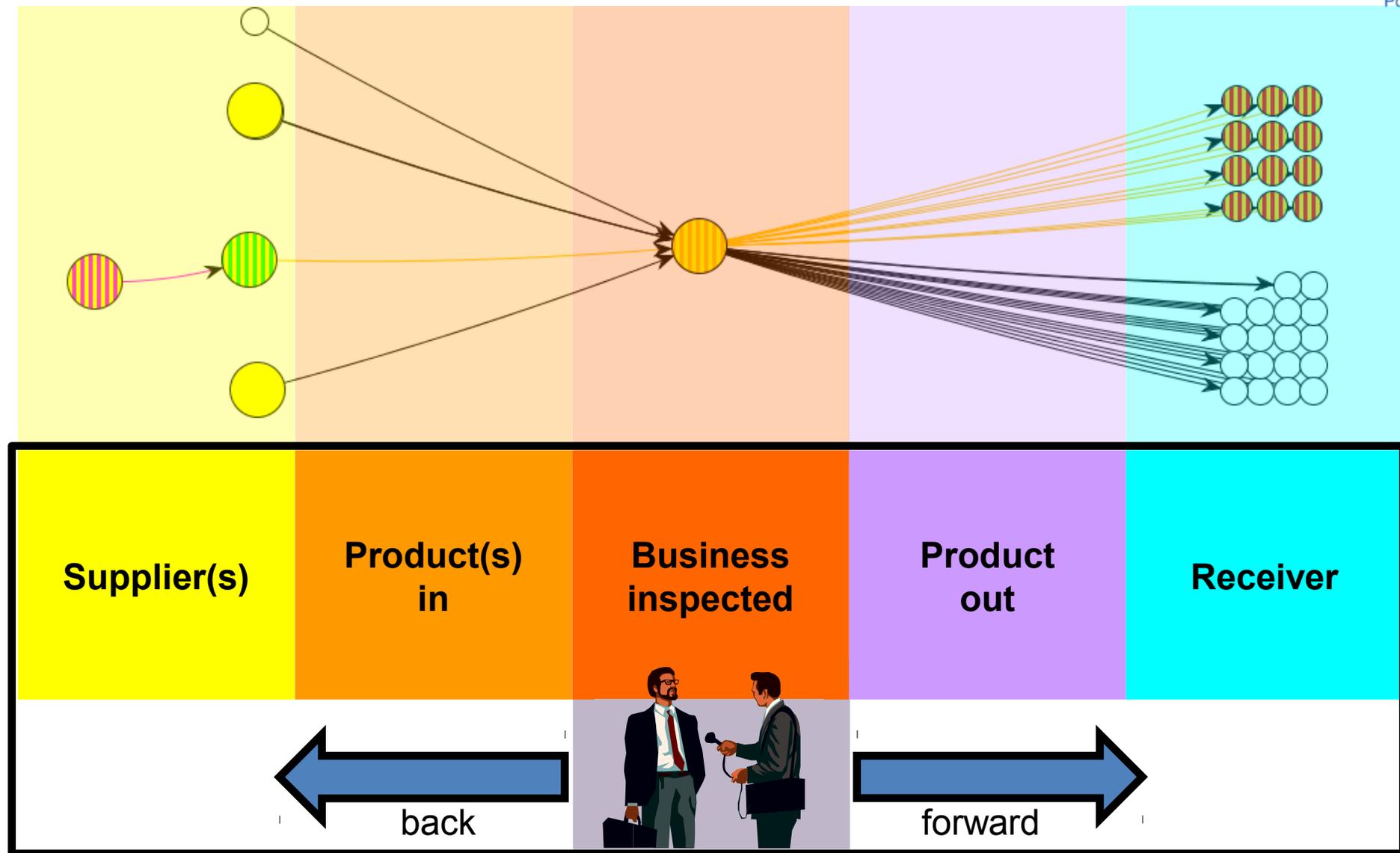
Tracing View
View network
Generate hypotheses

Database
Generate templates
(backward / forward)

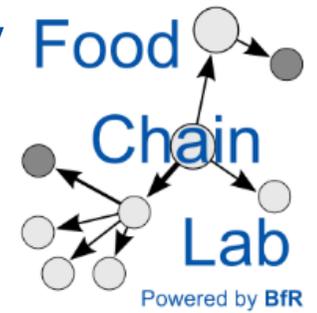
Template
Pre-filled tracing template

Food Safety Officer
Conducts interviews
with companies

Inquiry at a cake manufacturer



REGULATION (EC) No. 178/2002, Article 18, Traceability Food



- (1) The **traceability** of food, feed, food-producing animals, and any other substance intended to be, or expected to be, incorporated into a food or feed **at all stages of production, processing and distribution**
- (2) **Food and feed business operators** shall be able to **identify any person from** whom they have been **supplied**

To this end, such operators shall have in place **systems and procedures** which allow for this information to be made available to the competent authorities **on demand**.

- (3) **Food and feed business operators** shall have in place systems and **to** which their products have been **supplied**. This information shall be made available to the competent authorities **on demand**.

Outbreak: Tracing workflow using FoodChain-Lab V



First information on food producing company involved in foodborne disease outbreak

Template
Start tracing template

Database
Import template

Tracing View
View network
Generate hypotheses

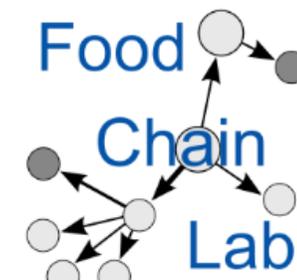
Database
Generate templates
(backward / forward)

Template
Pre-filled tracing template

Food Safety Officer
Conducts interviews
with companies

Template
Completed tracing template

The pre-filled backtracing template has been completed



Inquired Company:	Bakersfield Bakery	[Address]	DE	Manufacturer							
For questions please contact the FoodRisk-Labs team, +49 (30) 18412-4444, foodrisklabs@bfr.bund.de											
Outgoing Goods											
Product	Lot Information			Delivery		Recipient			Comments		
	Name	EAN	Lot Number	Best Before Date or Use-by Date			Amount (e.g. 45 kg)	Name		Address (e.g. Street, ZIP City)	Country
Summer Cake			SC01	6	11	2017	1 Piece	Patient01		DE	Patient
Summer Cake			SC02	6	11	2017	1 Piece	Patient02		DE	Patient
Summer Cake			SC03	6	11	2017	1 Piece	Patient03		DE	Patient
Summer Cake			SC04	6	11	2017	1 Piece	Patient04		DE	Patient
Summer Cake			SC05	6	11	2017	1 Piece	Patient05		DE	Patient

Information to complete the sheet:

Fill in outgoing goods which are already known (see grey fields above).

Please keep track of the ingredients of all sent products - do it in a lot-based manner.

In Column A starting with Line Number 22 please enter the line number of the outgoing good being the product of this ingredient. Afterwards, enter the ingredient information in columns B

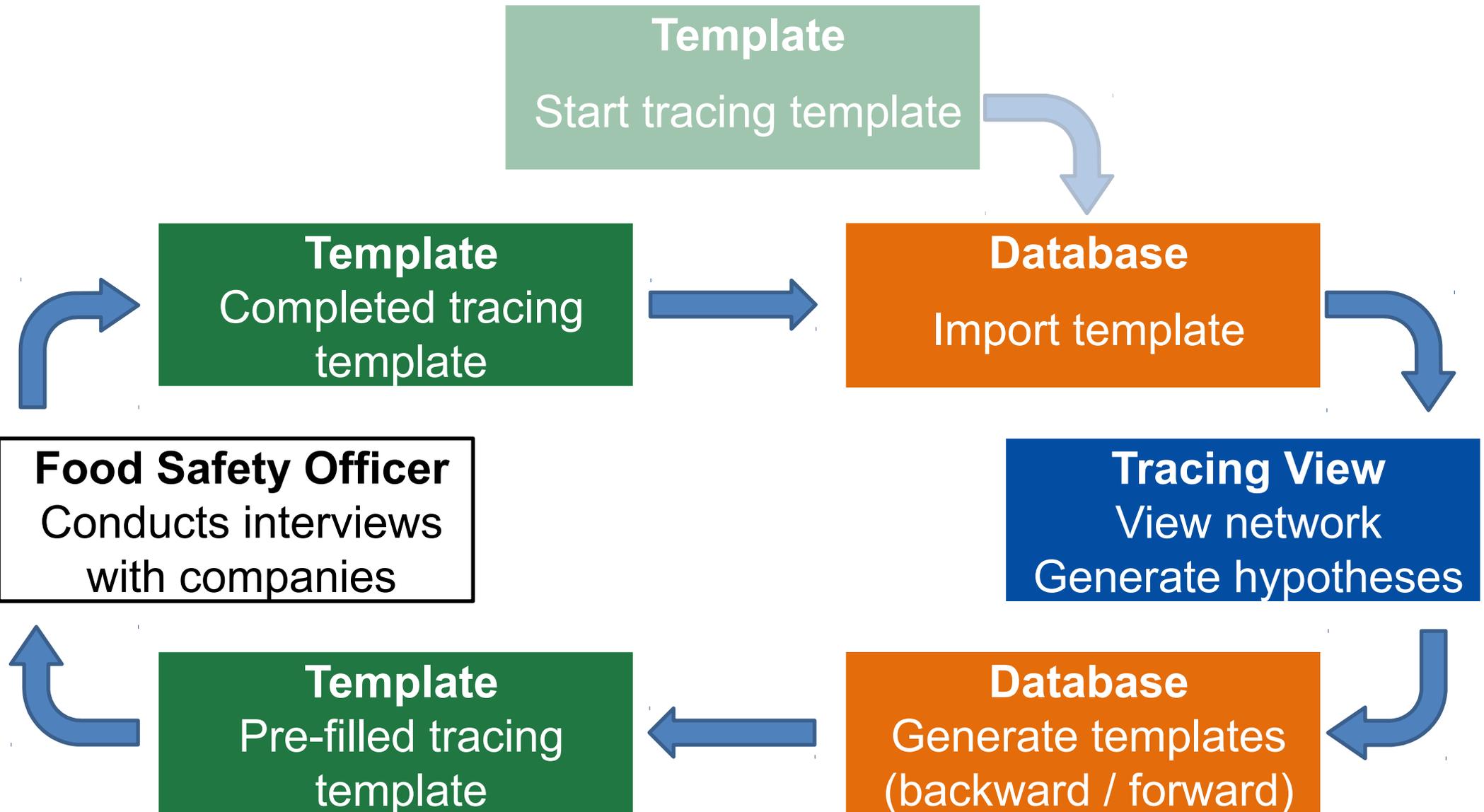
Please repeat the outgoing good as often as necessary in order to capture all its ingredients.

Incoming Goods - lot-based Ingredient List													
Line Number or Lot Number from Outgoing Goods	Ingredient		Lot Information		Delivery			Supplier			Comments		
	Name	EAN	Lot Number	Best Before Date or Use-by Date	Delivery Date			Amount (e.g. 45 kg)	Name	Address (e.g. Street, ZIP City)		Country	Type of Business
					Day	Month	Year						
SC01	Butter		Bu100		3	11	2017	6,3 kg	Dairy Products Ltd.		DE	Supplier	
SC01	Sugar		Su200		1	11	2017	12,8 kg	Dry Stuff Inc		DE	Supplier	
SC01	Eggs		Eg220		4	11	2017	90 Piece	Chickens & Eggs Farm		DE	Supplier	
SC01	Flour		Fl101		1	11	2017	11,2 kg	Dry Stuff Inc		DE	Supplier	
SC01	Salt		Sa121		1	11	2017	116 g	Dry Stuff Inc		DE	Supplier	
SC01	Baking Powder		BP001		1	11	2017	368 g	Dry Stuff Inc		DE	Supplier	

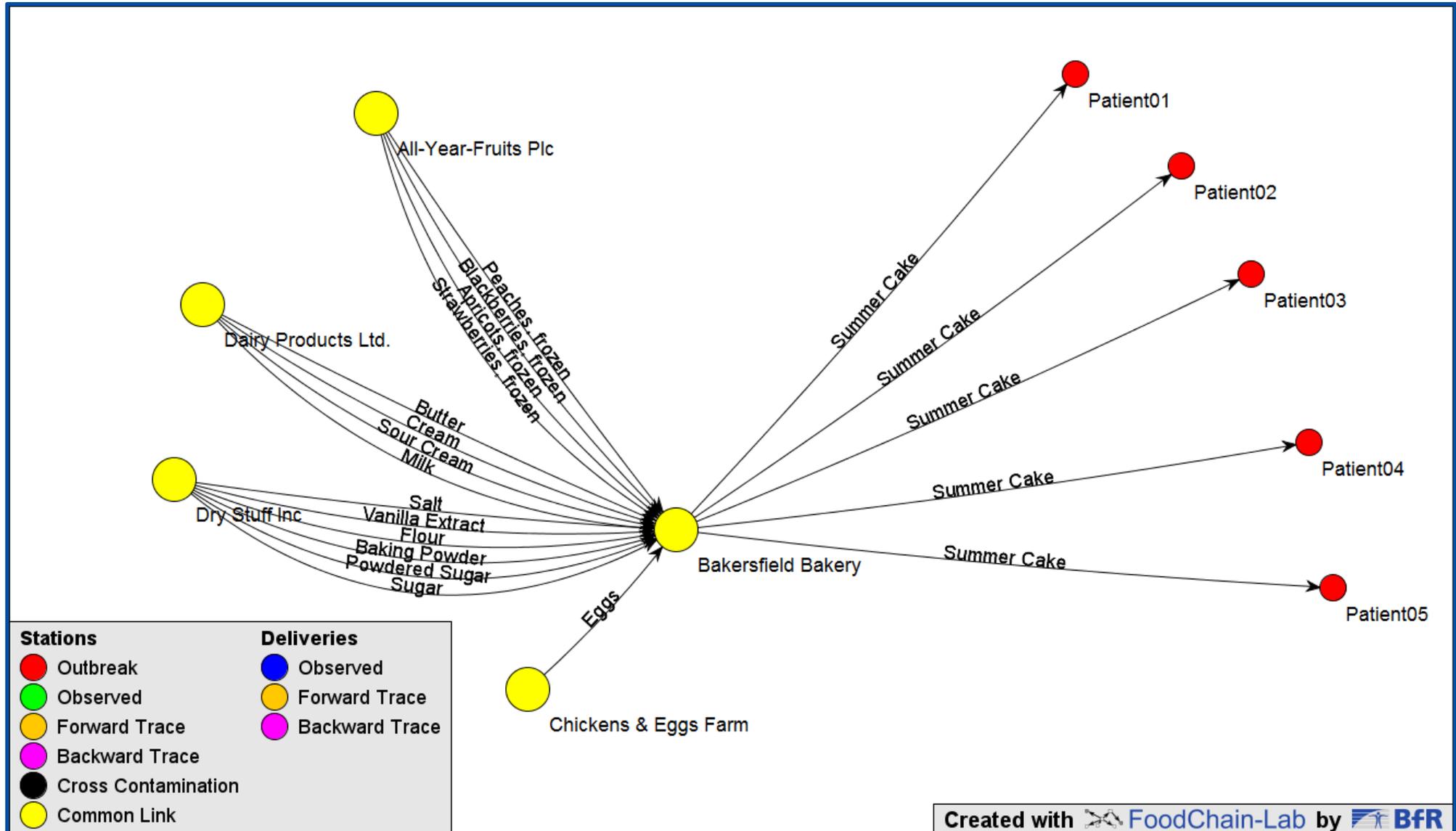
Outbreak: Tracing workflow using FoodChain-Lab VI



First information on food producing company involved in foodborne disease outbreak



Tracing View: Bakery and patients



Created with FoodChain-Lab by BfR

Outbreak: Tracing workflow using FoodChain-Lab VI



First information on food producing company involved in foodborne disease outbreak

Template
Start tracing template

Template
Completed tracing template

Database
Import template

Food Safety Officer
Conducts interviews with companies

Tracing View
View network
Generate hypotheses

Template
Pre-filled tracing template

Database
Generate templates (backward / forward)

 Bakery 1, **Sesame** Street 15, 12345 Crumbling Hills, Germany

Summer Cake

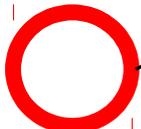
Luxury Hotel

Hilltop 1

12234 Pompous Hills

Germany

Chocolate Cake

 Bakery 1, **See Same** Street 15, 12345 Crumbling Hills, Germany

SimSearch Options

Station: Name: 3 Zip: 1 Street: 3 Number: 1 City: 3 VATnumber: 0

Product: Station: 0 Denomination: 3 Item number: 0

Lot: Article: 0 LotNo: 1 BestBefore: 0 DateManufacturer: 0

Delivery: Lot: 0 DeliveryDate: 0 Recipient: 0

OK Cancel

ID	Address	CompanyID	Type of busin...	VATnumber	Code	IsCase	Number Ca
1 30	Salad harvester Ltd Big Street Hometown		horticultural farm			yes	
2 31	Salad harevster Ltd Big Street Hometown		horticultural farm			yes	

Levenshtein distance

M	A	Y	O	N	N	A	I	S	E
=	=	=	=	=	-	=	=	=	=
M	A	Y	O	N		A	I	S	E

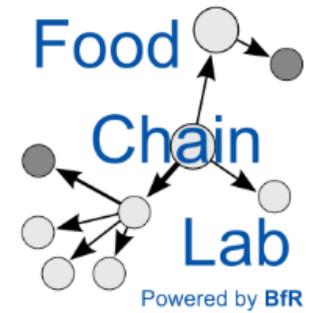
E	L	E	P	H	A	N	T
=	=	=	o	-	=	=	=
E	L	E	F		A	N	T

Works well for finding duplicates

Data – sometimes still analogue...

...luckily often digital

Excel spreadsheet, XLSX



Caterer A

Menu 1 on 1st September

*Pasta with ground beef
tomato sauce*

Vanilla pudding with straw

Menu 2 on 3rd September

Potato soup with bread

Fruit yoghurt

Station	Product Name	Lot Number	Lot size		Delivery Date Departure			Delivery Date Arrival			Unit weight/vol./pck.		Recipient
			Quantity	Type / Unit	Day	Month	Year	Day	Month	Year	Quantity	Type / Unit	
6	Blackberries	BB001	500	kg	9	8	2017	10	8	2017	500	kg	36
1	Butter	Bu100			2	11	2017	3	11	2017	6,3	kg	2
37	Sugar	Su200			30	10	2017	1	11	2017	12,8	kg	2
38	Eggs	Eg220			4	11	2017	4	11	2017	90	Piece	2
37	Flour	Fl101			30	10	2017	1	11	2017	11,2	kg	2
37	Salt	Sa121			30	10	2017	1	11	2017	116	g	2
37	Baking Powder	BP001			30	10	2017	1	11	2017	368	g	2
1	Milk	Mi05			2	11	2017	3	11	2017	8,9	Litre	2
37	Vani												2
1	Crea												2
1	Sour												2
37	Pow												2
36	Peac												2
36	Apri												2
36	Strav												2
36	Black												2
39	Dou												2
2	Sum												3

```

<Details>
  <Reference>2015.1658</Reference>
  <Subject>
    Salmonella (presence /25g) in frozen salted chicken breast pieces from Thailand
  </Subject>
  <DateOfCase>29/12/2015</DateOfCase>
  <NotificationType>
    food - alert - border control - consignment released
  </NotificationType>
  <ActionTaken>informing authorities</ActionTaken>
  <NotificationFrom>Netherlands (NL)</NotificationFrom>
  <DistributionStatus>distribution to other member countries</DistributionStatus>
  <Product>frozen salted chicken breast pieces</Product>
  <ProductCategory>poultry meat and poultry meat products</ProductCategory>
  <RiskDecision>serious</RiskDecision>
  <PublishedInRCP/>
</Details>
    
```

RASFF notification, XML

Handwritten, sent by fax

COS – a ‘bus stop’ for FoodChain-Lab – as a first approach on the way to a harmonised standard:



COS

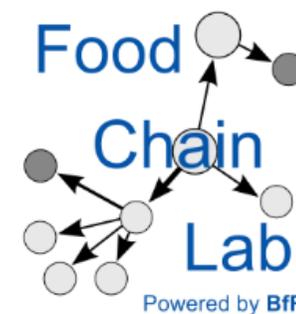
- Collects (NRW-) Tracing Data
- Contains a food business database with curated data
- Is doing validation internally based on existing master data
- Outputs data into newly defined xml-structure and sends it into a newly developed webservice

FCL

- Monitors the webservice, awaits new data
- Analyses data (semi)-automatically
- Prepares analysis reports and sends it back to the webservice

COS

- Fetches the report – management measures or further data collections will be initiated



FoodChain-Lab Live

Templates, the database and template generation



Thank you for your attention

Alexander Falenski

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