

CRYO AB HSE Strategy

Last Update: 2009-10-08

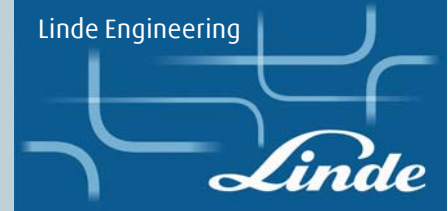
Linde Engineering

The Linde logo is a stylized, white, cursive script of the word "Linde" set against a dark blue background.

—Prepared by: Peter Sundin



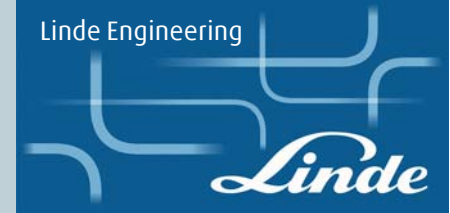
- **HSE Management Aims**
- **HSE Harmonisation Level of CRYO AB**
- **Success Factors for Leading HSE Performance**
- **Current Situation of HSE Management**
- **Current HSE Management Organization**
- **Strategic Initiatives**
 1. Improve the HSE Management Organization
 2. Improve the HSE Management System
 3. HSE Training Program
 4. Supervision and Inspection
- **HSE Performance Indicators**



- Linde Engineering will play a **leading** role in the world market related to its core products. **Leading HSE performance** is the **pre-requisite** for achieving this. Therefore LE published its HSE Management Strategy which involves all LE Companies. To support and contribute to this process, CRYO AB set up the following HSE Management Aims:
 - Establish a **strong and clear HSE Management Organization** as well as effective, efficient, transparent and integrated **HSE Processes**
 - **Pro-actively care** for and preserve the health of our employees
 - Fulfilling the HSE requirements shall be a pre-requisite to any business. Safety-related and environmental aspects shall be considered **in each decision we take**. CRYO AB shall become positive part of LE for the leading HSE performance.
 - Comply with LE's relevant HSE requirements
 - Further increase all employees' **awareness** for HSE through trainings
 - All Managers and Group Leaders shall demonstrate their **strong visible leadership** towards HSE
 - All employees shall be **familiar with** the relevant HSE requirements and processes, be actively **concerned, committed and involved in HSE**

Degree of Harmonization

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Country	Company Name	Level of Harmonisation		Sequence
		Current	Intended	
Sweden	CRYO AB Gothenburg	low	medium	

Level Description

Low

- reporting of incidents and HSE performance
- minimum The Linde Group and LE Division HSE requirements apply
- exchange of experience as deemed necessary

Medium

- same as for "Low" level
- implementation of aligned General HSE Processes
- part of LE Division HSE audit program
- regular exchange of experience
- aligned global improvement process

High

- same as for "Medium" level
- harmonized HSE processes and methods for plant project execution

Success Factors for Leading HSE Performance

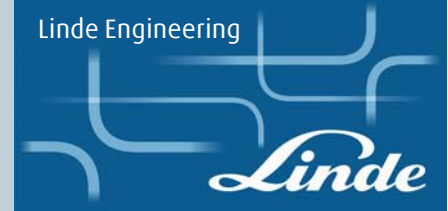
- Visible leadership in HSE by managers
- Employees actively concerned, committed and involved in HSE

- Knowledge about legal, internal and client HSE requirements
- Management system approaches
- HSE technical knowledge/ expertise



- Efficient and effective
- Well-defined, transparent
- Integrated and consistent with other business processes

- Clear set-up of HSE organisation
- Full coverage of all business activities
- Well trained
- Sufficient capacity

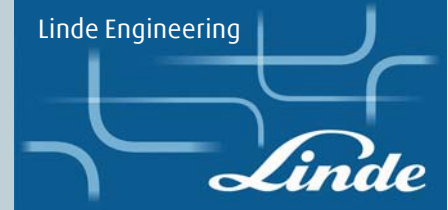


Current Situation of HSE Management

- ❑ **One part time HSE Manager**
- ❑ **HSE inspection and supervision on different levels:**
 - Occupational Health and Safety Committee Meetings held twice a year, called by HSE-Manager, to discuss HSE related topics (legal requirement)
 - Monthly inspections with Supervisors and workers Safety ombudsman of the fabrication to identify unsafe factors and arrange required improvements.
 - Daily fabrication inspections performed by Site HSE Manager to ensure safe working conditions
 - HSE as a topic of the daily Manufacturing Morning Meeting performed by the Manufacturing Managers to increase the employee's awareness regarding HSE
- ❑ **Fulfill the Legal Requirements**

HSE Management Organisation

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QHSE Linde Division
Geert Arnemann

Health Safety Environment
Peter Sundin

**BUSINESS AREA
DISTRIBUTION EQUIPMENT**
Stefan Hellberg

Risk Assessment
Fredrik Ekskog
(Senior Safety Delegate)

Safety Delegates

Krister Johanson
Henry Andersson
Caroline Rognelund
Anders Frandsen
Samuel Wiselqvist
Magnus Johansson

**BUSINESS AREA
PLANTS & SPECIAL EQUIP**
Gunnar Trygg

HSE Coordinator
Johan M Andersson

Project Nynäshamn
Lars Persson

HSE-Manager Maria Nilsson

PRODUCTION SUPPORT
Håkan Stanryd

HSE Coordinator
Bengt Andreasson

ENGINEERING
Hans-Einar Forsberg

HSE Coordinator
Hans Gustafsson

ADMINISTRATION & FINANCE
John Granlund

HSE Coordinator
Lars-Erik Petersson

AFTER SALES
Gunnar Lennerås
Philip Werner

HSE Coordinator
Tobias Jansson

Safety Committee

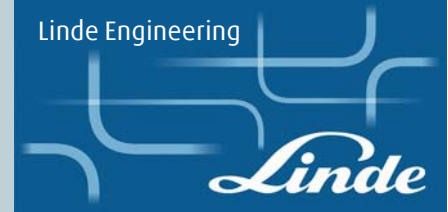
Peter Sundin

3 Safety Delegates

1 Safety Engineer Previa

Strategic Initiatives:

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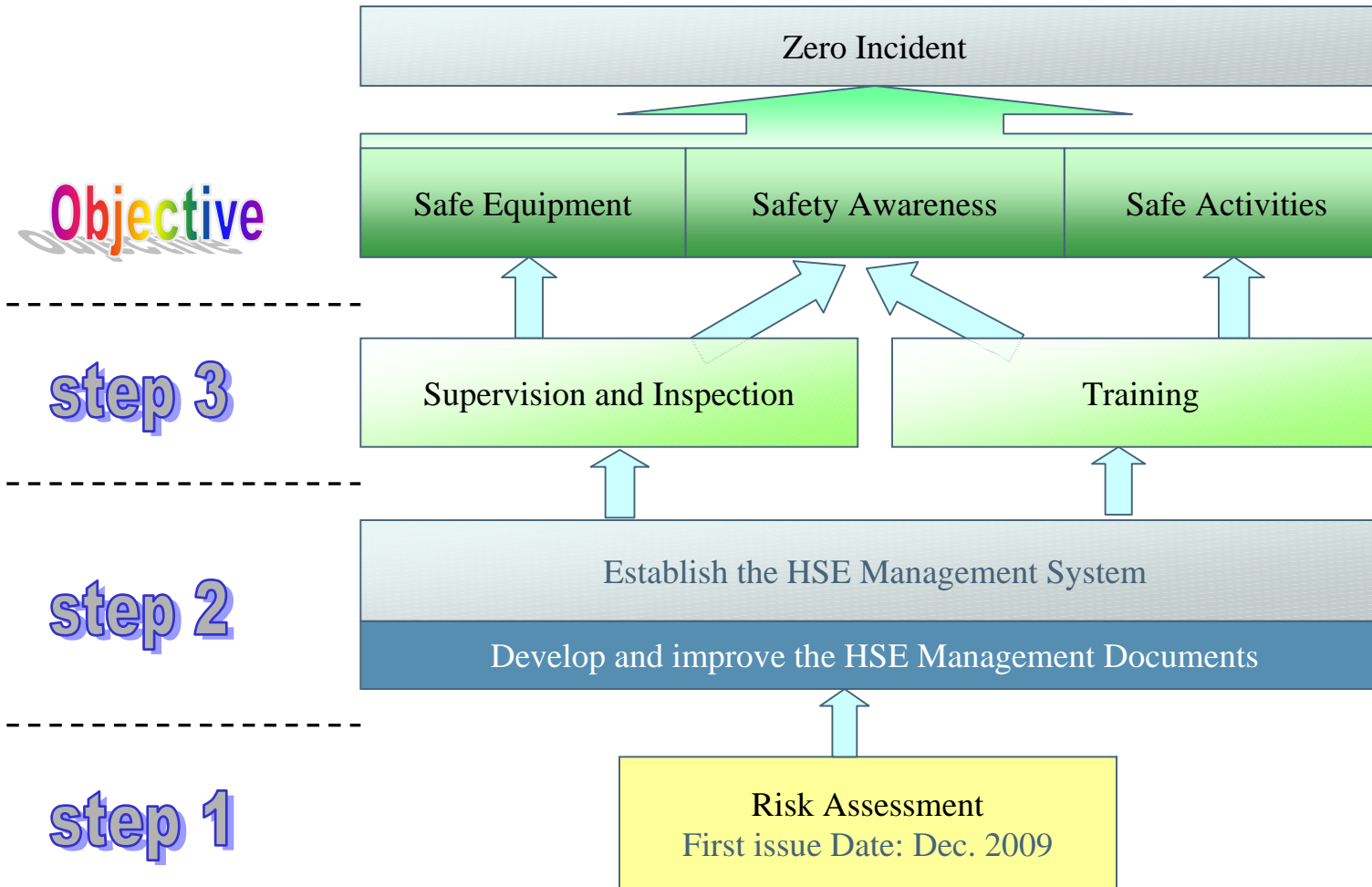
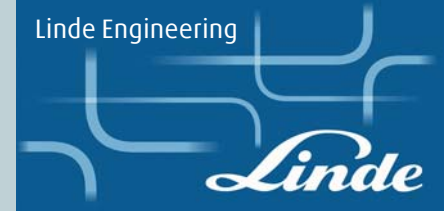
1. Improve the HSE Management Organization

Based on current HSE Organization, the following measures need to be implemented to improve the HSE Management

No.	Measures	Responsibilities	Due Date
1	Assign HSE Delegates in the Fabrication and Engineering Departments (Project Execution, Procurement, Design, Inspection) to support the Department Managers and the HSE Manager on HSE	Peter Sundin Support by each Department Manager	October 2009
2	Assign one risk assessment coordinator	Fredrik Ekskog	June 2009
3	HSE for small projects Engineering	Hans-Einar Forsberg	December 2009
4	HSE for small projects Construction	Johan M Andersson	December 2009

Strategic Initiatives:

2. Improve the HSE Management System



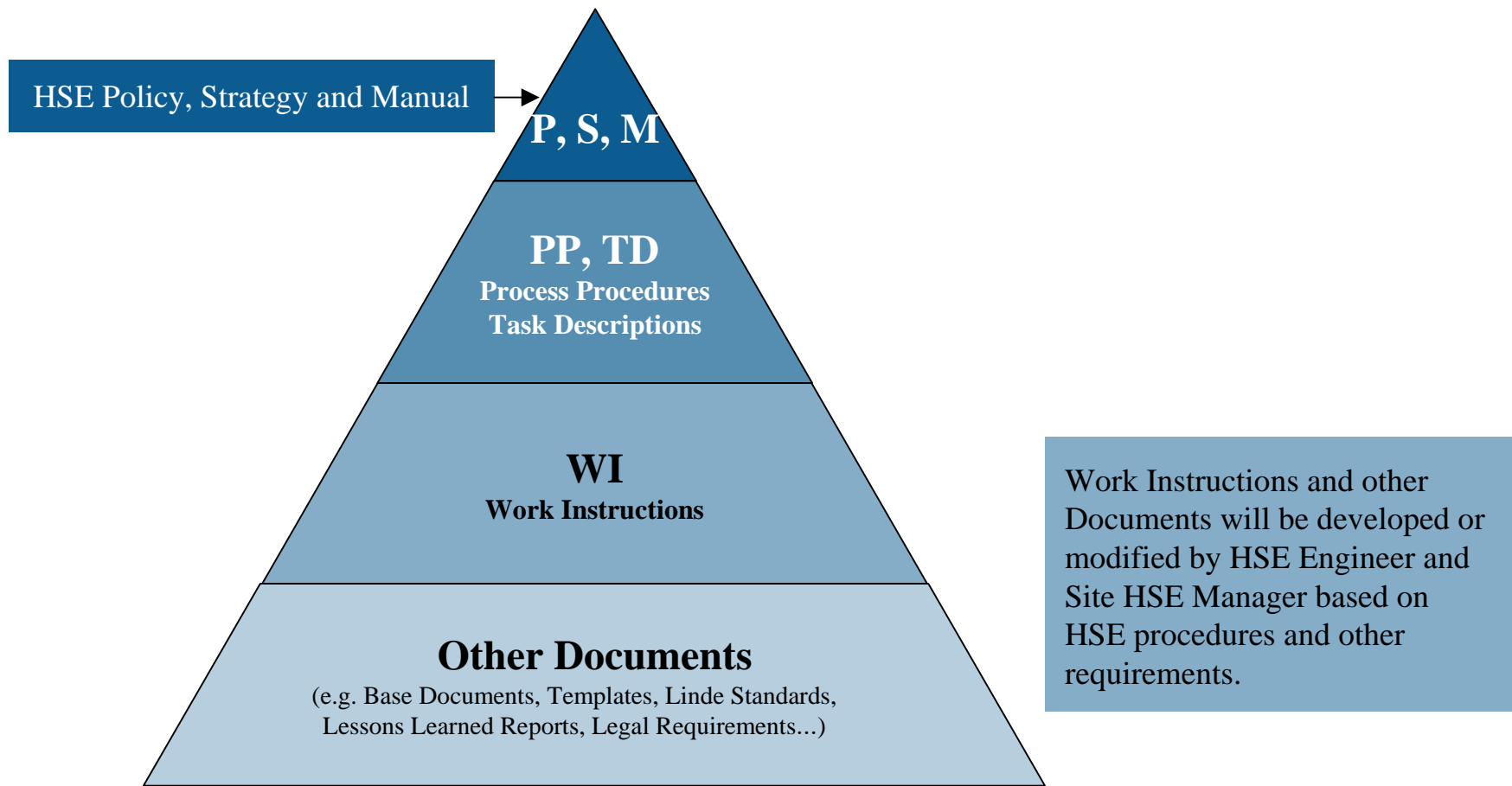
Strategic Initiatives:

2. Improve the HSE Management System

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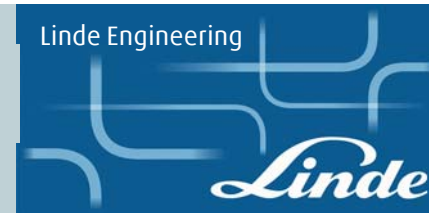
CRYO AB will improve existing and develop new relevant documents of the HSE Management System in accordance with legal and LE requirements



Strategic Initiatives:

2. Improve the HSE Management System

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List of CRYO AB HSE Process Procedures

No.	Name of Process Procedure	Prepared by	Due Date	Current Status
1	Risk Assessment, New workshop	F. Ekskog	2009-06-30	
2	Risk Assessment, Rebuilt workshop	F.Ekskog	2009-12-31	
3	Risk Assessment, existing workshop	F.Ekskog	2009-12-31	
4	Incident Reporting and Investigation	P. Sundin	2008-12-31	
5	Delegation of Employees Duties & Responsibilities	T. Andersson	2009-03-16	
6	Fire and Explosion Protection	L. Ivarsson	2009-03-31	
7	Occupational Health Management	P. Sundin	2009-04-30	

● Finished
 ● In Preparation
 ● Not Started

Strategic Initiatives:

2. Improve the HSE Management System

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List of CRYO AB HSE Process Procedures

No.	Name of Process Procedure	Prepared by	Due Date	Current Status
8	Measurement and Monitoring	P. Sundin	2009-12-31	
9	Work Permit System	T. Andersson	2010-03-31	
10	HSE Instruction Training	P. Sundin + T. Andersson	2009-12-31	
11	Work Equipment Management TEKLA	H. Stanryd + Plambeck	2009-11-31	
12	Hazardous Materials Management	P. Sundin	2009-12-31	
13	Environmental Protection	P. Sundin	2010-02-31	
14	Emergency Preparedness	P. Sundin	2010-03-31	



Finished



In Preparation

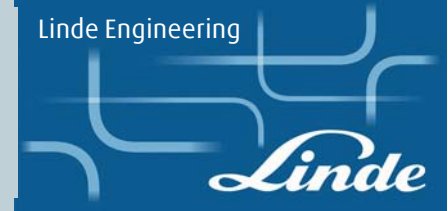


Not Started

Strategic Initiatives:

3. Realize the HSE Training Program

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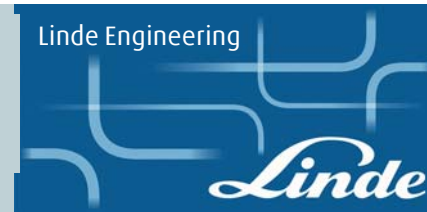


We will provide training to:

- **all Managers** in order to enable them to demonstrate their strong visible leadership towards HSE (internal audits/check-ups)
- **all workers** to make them familiar with the relevant HSE regulations, to increase their HSE awareness and to actively involve them in the HSE improvement process (5S, quality projects, risk assessments etc.)

Strategic Initiatives:

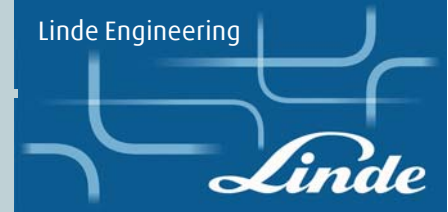
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3. Realize the HSE Training Program – Sporadic Trainings

Training for	HSE Training Topics	Trainer	Due Date	Participants
HSE Manager	<ul style="list-style-type: none"> ▪ HSE Education 	External	20010-04-01	Peter Sundin
Managers	<ul style="list-style-type: none"> ▪ Relevant new HSE Procedures 	HSE Manager	2009-12-31	Relevant Managers
HSE Rules Supervisors	<ul style="list-style-type: none"> ▪ Legal HSE Requirements ▪ HSE Task Description 	HSE Manager	Nov. 2009	Supervisors
Employees, Workers	<ul style="list-style-type: none"> ▪ Legal HSE Requirements ▪ Relevant HSE Procedures and Requirements 	Supervisors (HSE Man)	Continued	All Employees & Workers

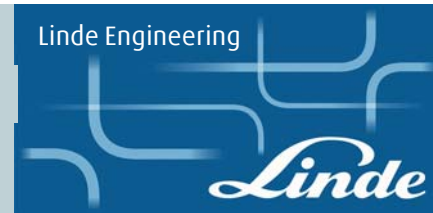
Strategic Initiatives:



3. Realize the HSE Training Program – Regular Trainings

Training for	HSE Training Topics	Trainer	Frequency	Participants
HSE Rules	<ul style="list-style-type: none"> ▪ HSE Strategy ▪ Visible Leadership Skills ▪ Established HSE Procedures and how to supervise the implementation of HSE procedures 	HSE Manager	Once a Year	All HSE Rules
Supervisors & Managers (CRYO and on site)	<ul style="list-style-type: none"> ▪ Basic relevant HSE Knowledge and important procedures within their area of responsibility ▪ Visible Leadership Skills 	HSE Manager or External Trainer	Once a Year & on demand	Relevant Managers
All staff	<ul style="list-style-type: none"> ▪ Fire Drill and Fire Protection 	Fire protection responsible	Once a Year	All staff

Strategic Initiatives:



4. Improve the Supervision and Inspection

Execute inspections and supervision on different levels to improve the overall HSE situation and awareness of all employees

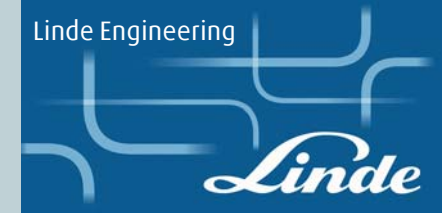
Type of Inspection	Frequency	Participants	Due Date	Current Status
Safety Walk	Daily	Manufacturing Manager	Ongoing	
Safety Inspection	Monthly	Supervisors workers safety ombudsman	Ongoing	
Top Management Inspection	Monthly	General Manager HSE Manager Fabrication/Quality/	Oct. 2009	
Internal HSE Audit (auditing the Dep. Managers)	Once a year	HSE Manager	2010-04-01	

● Always performed
 ● Sporadical performed
 ● Not performed yet

HSE Performance Indicators:

1 Indicator of LTIR

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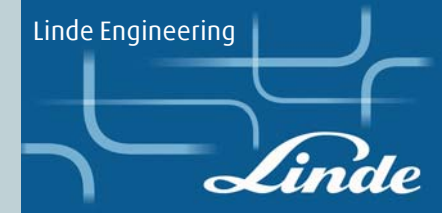
- **LTIR of CRYO AB Administration and Engineering Personnel.**
- **LTIR of CRYO AB Fabrication Personnel.**
- **Measurement: By means of safety metrics reporting**

LTIR						
	2008		2009		2010	
	Target	Outcome	Target	Outcome	Target	Outcome
Administration & Eng.	0	7,3	0	0	0	-
Fabrication	15	22,3	10		8	-

HSE Performance Indicators:

2. Leading Indicators

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Items	WHAT to Achieve
Risk Assessments	Risk Assessments are to be completed or regularly updated, documented and implemented

Measurement: Target fulfilment to be expedited by HSE Manager and to be reported to the responsible HSE Manager LE Division.

New workshops in full operation during Sept/Oct. 2009

New Risk assessments, heeded.

Process Plant Project, documentation Engineering and Construction site, at hand.

**Thank you for
your attention**

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CRYO AB, Gotenburg, Sweden