TUBO – Revolution in conveying systems

Grain Conveying

Innovations for a **better world.**

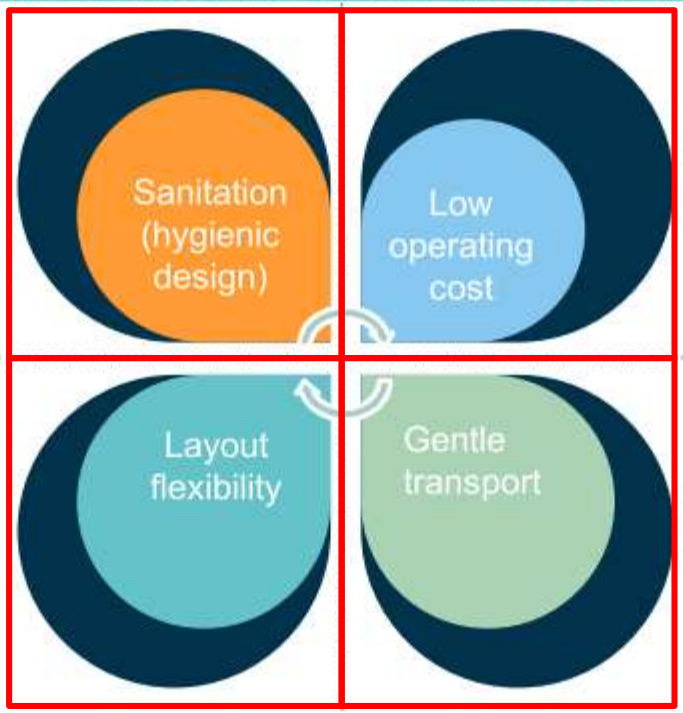
BÜHLER

TUBO – Revolution in conveying systems

Why a new conveyor?
Focus on 4 key conveyor concerns

machine safety – no risk of explosions (Atex regulation)
- example brewing: customers demand for safe vertical transport without risk of explosion, problematic with elevators

- Fully enclosed system
- No dead zones / no material accumulations
- Tube emptied after transport -> no cross-contamination
- Drive mechanics outside product stream
- Cleaning TUBIT for best sanitation



- Reduced friction, no pulling cord inside conveyor and transport in product chambers
- Lower energy consumption than pneumatic transport
- Reduced conveying height with multidimensional layout

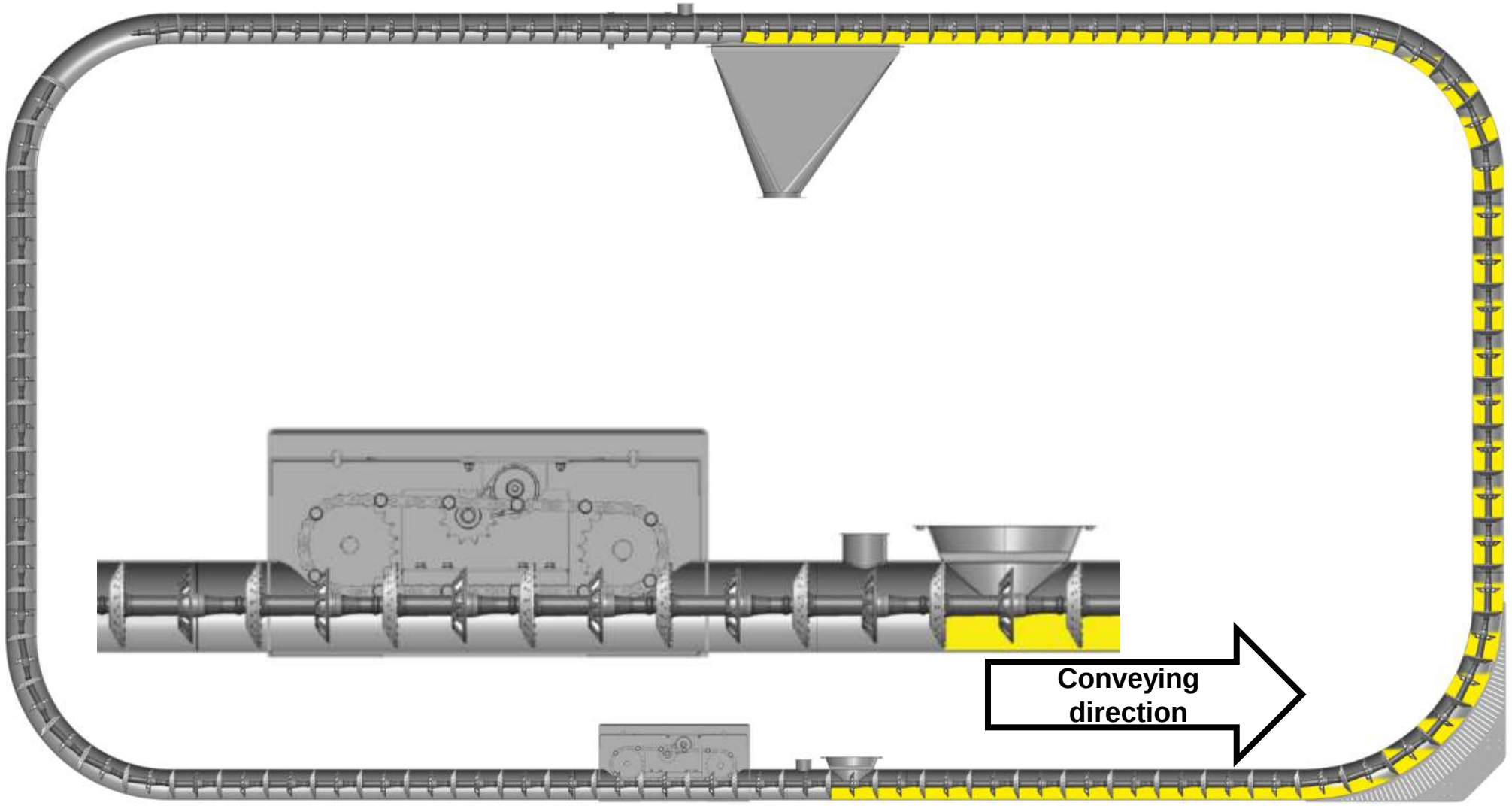
- Reduced installation dimension, less floor space and/or lower building height
- One TUBO replacing several conveyors (1-3 conveyors / approx. 4-6 90-degree bends possible with TUBO)
- Easy and fast installation, tubing system only

- Low conveying speed
- Transport in product chambers reduces internal friction
- No stress on product from drive mechanics
- Less product hand-overs with multidimensional layout

➔ TUBO addresses all 4 concerns – like no other solution in the market

Unique machine concept

TUBO
made by
Bühler
(patent granted*)



TUBO – Revolution in conveying systems

TUBO details

- Vertical and horizontal conveying
- A-B, collection and distribution function
- Up to 100ft distance / up to 750 bu/h (wheat)
- Fully 3D capable

Products released to sales

- Wheat, wheat grist, flour, semolina
- Barley, malt and malt-grist
- White and brown rice
- Coffee, green beans, roasted beans and ground coffee

Examples of tested products

Grains
- Paddy, rice, wheat, maize, barley, rape-seeds, soy beans, feed pellets

Extruded product
- Corn flakes, honey rings, chocolate flakes

Nuts
- Peanuts, cashew nuts, walnuts, almonds

Coffee beans
- Green beans, roasted beans

Pasta
- Several short goods

Powders
- Flour, semolina, break-stock, ground coffee, milk powder

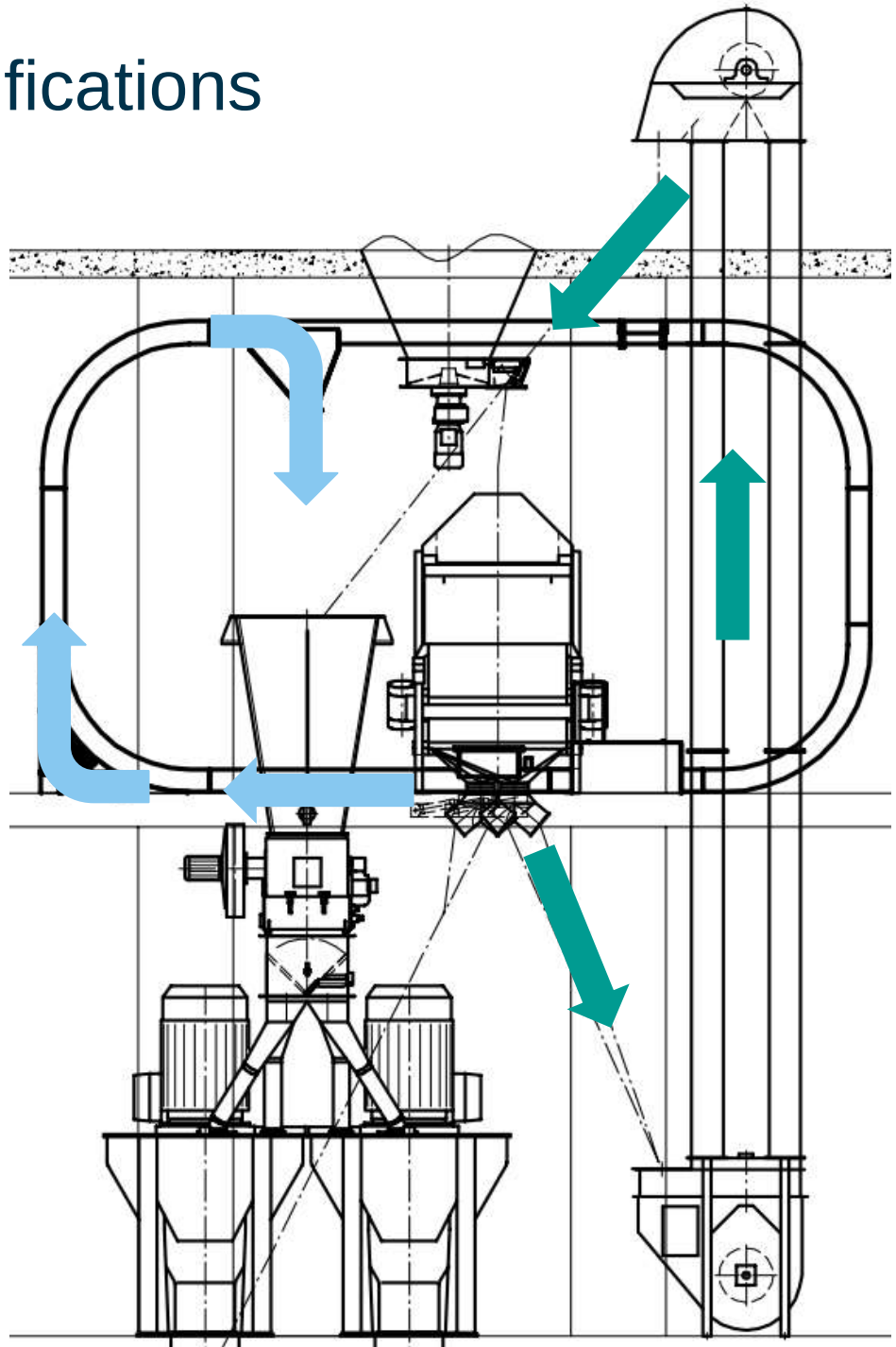
Layout flexibility

Feed mill Burgholz

1. TUBO installation

Flexible – Easy and Cost Efficient Plant modifications

- Modification of an existing plant
- Normally done with elevators
  - 2 times penetration of shop floor for elevator
  - Penetration of shop floor for piping
- Implemenation with TUBO on one floor



Multi-Options!

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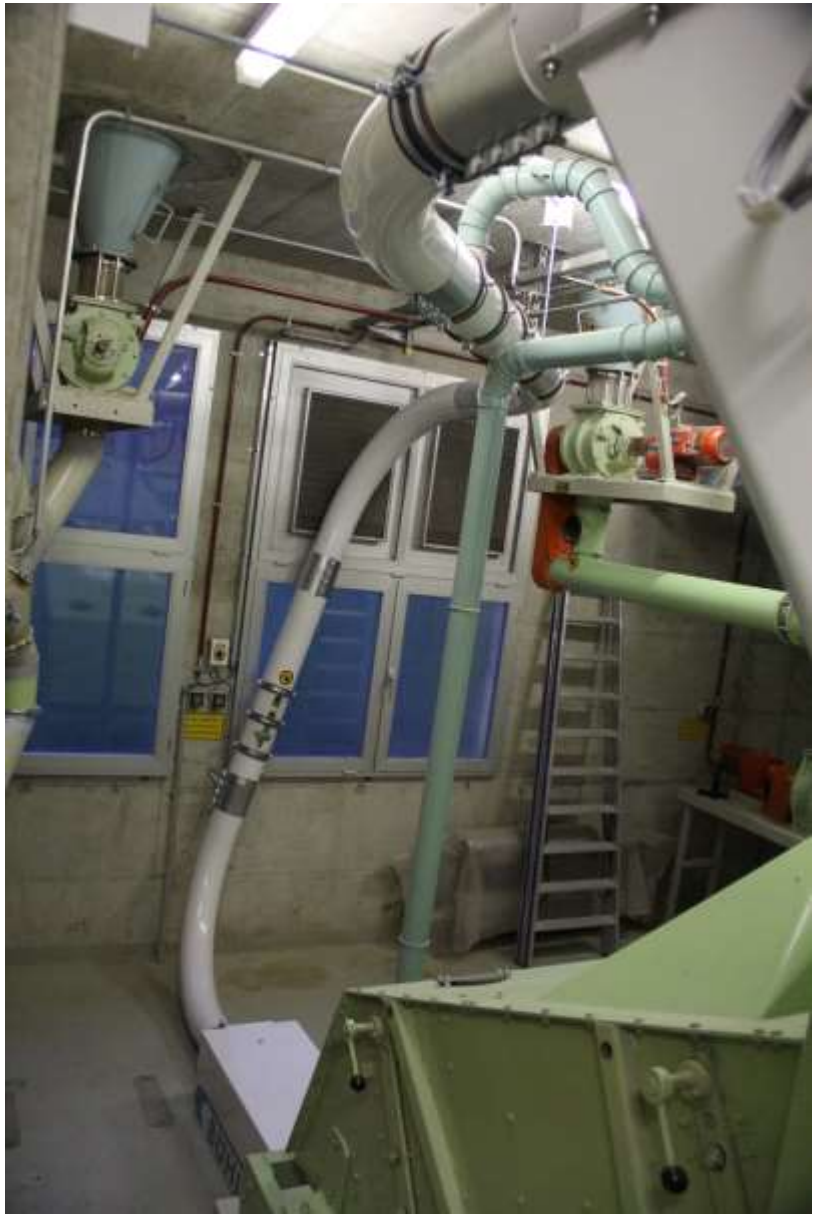


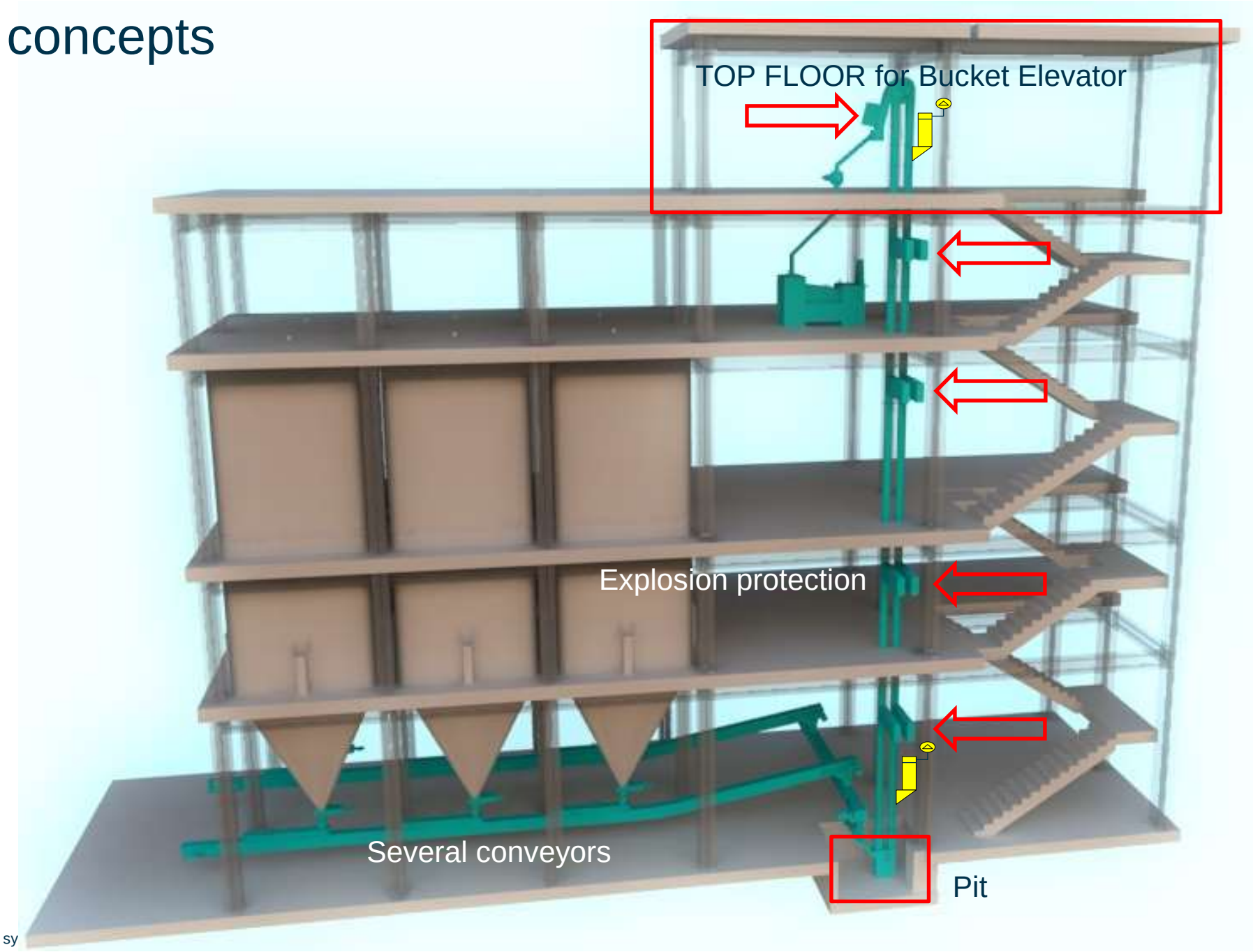
Multi-Options!

- Flexible layout
- Several inlets and outlets

New plant concepts for mills

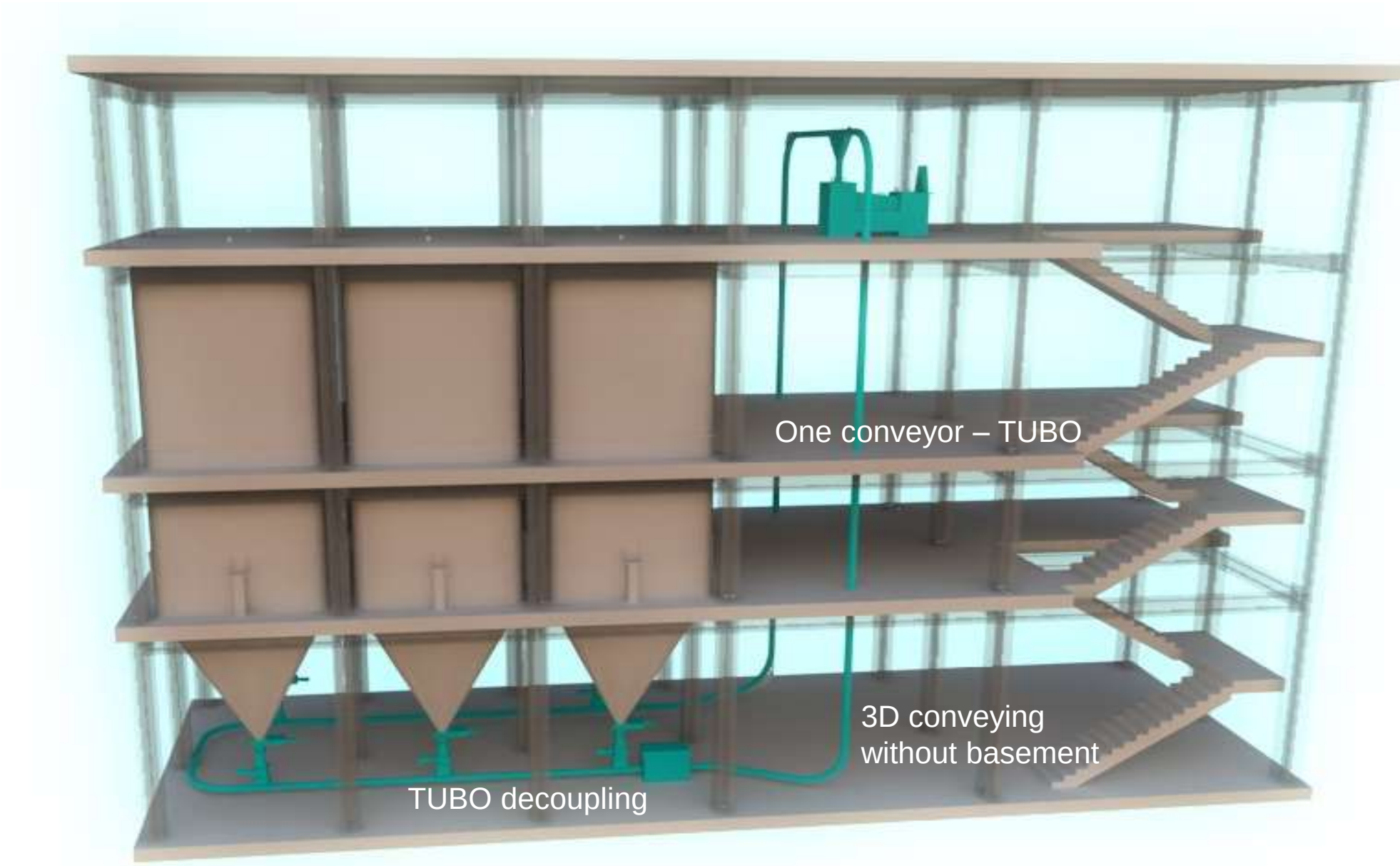
TUBO – New plant concepts

Known System.



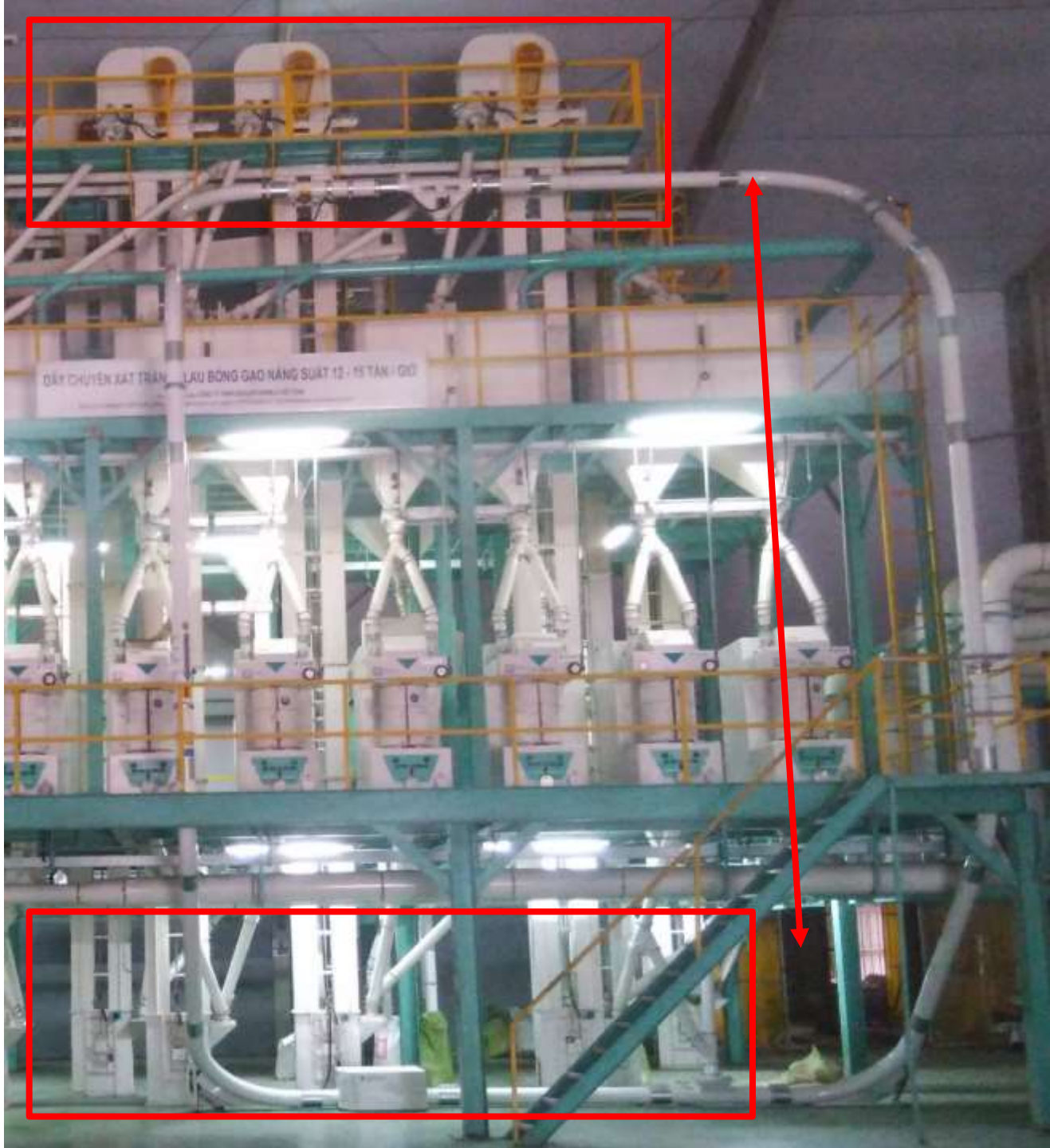
TUBO – New plant concepts

No Top Floor.
No Bucket Elevator pit.
Little Aspiration compared.
No Ex. Protection.



New concepts

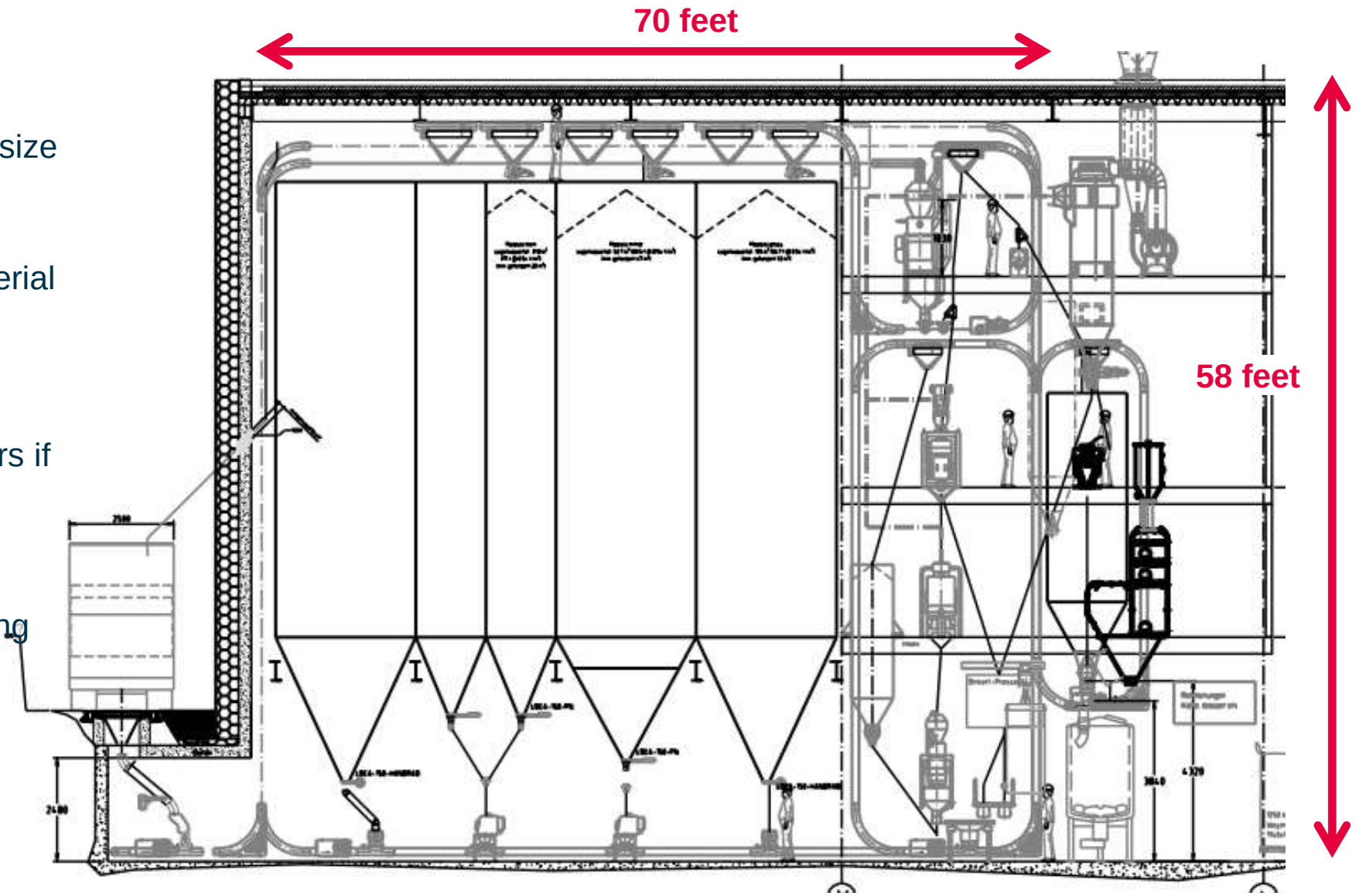
- By-pass of one rice mill in Vietnam
- Lower heigths than elevators
- Additional possible savings at the bottom (depending on height)



Silo Example Realised in Switzerland

Brewery Locher Switzerland – 1st Plant with total TUBO equipment

- Complete malt silo with only one size TUBO
- Distribution and collection of material
- Number of TUBOs: 7 units.
- Number of conventional conveyors if this solution had been chosen:
  12 units
- Additional TUBO benefit in brewing
  ➔ no risk of explosion!



Prevention of active/passive explosion protection

www.event.buhlergroup.com