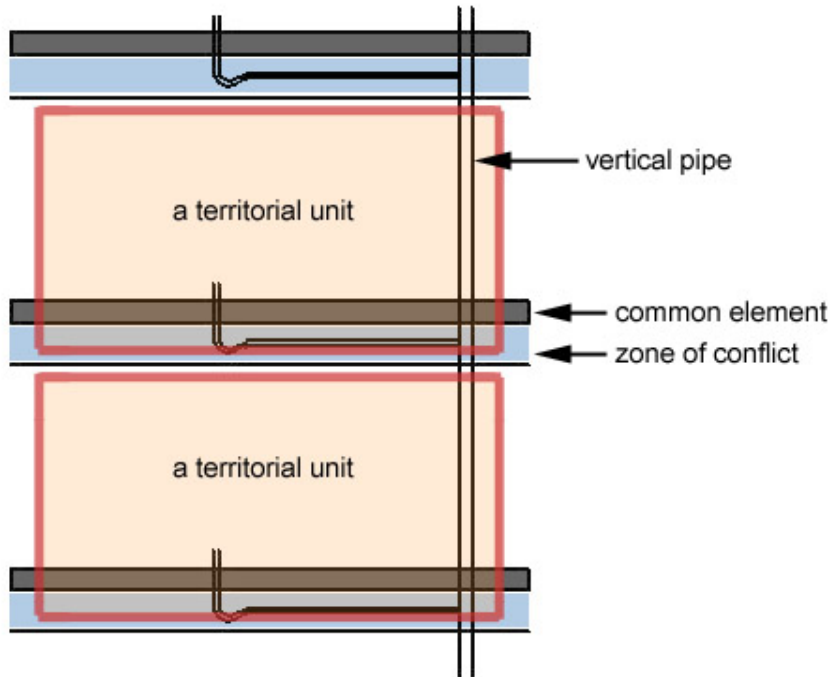


# INFILL INSTALLATION SOLUTIONS

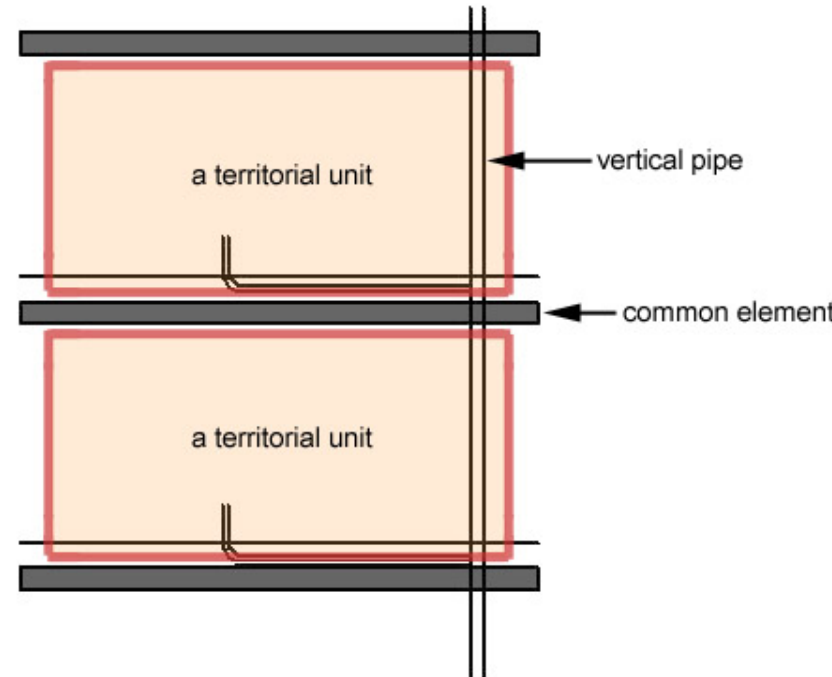
# Utility Systems



Chinese conventional way has problem of conflicts

Diagram courtesy Dr. Qiong Huang, Tianjin University

**BAD**

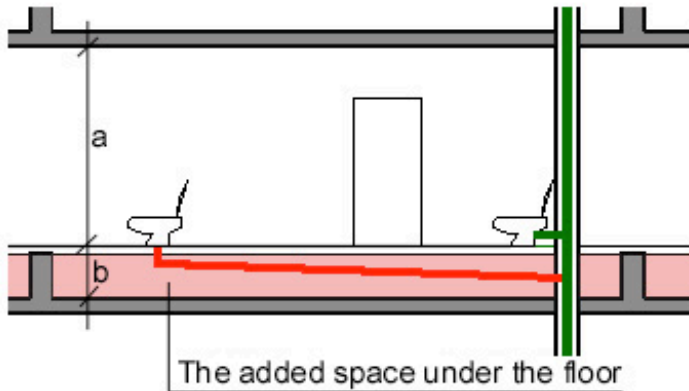


OB way offers clean autonomy of dwelling unit decisions that avoids conflict



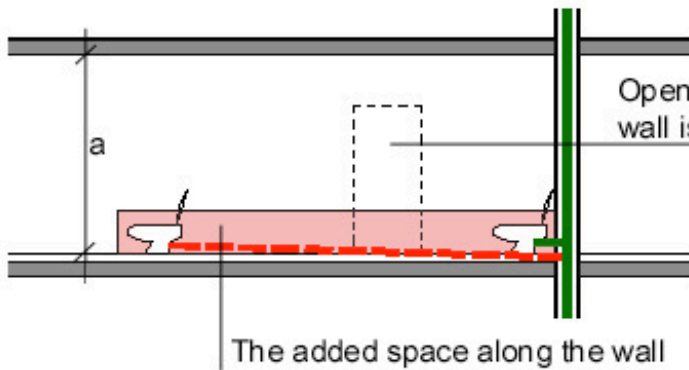
**GOOD**

**A basic principle of open building:** drainage and other utility systems are accessible from the space they serve, not entering another owners' space

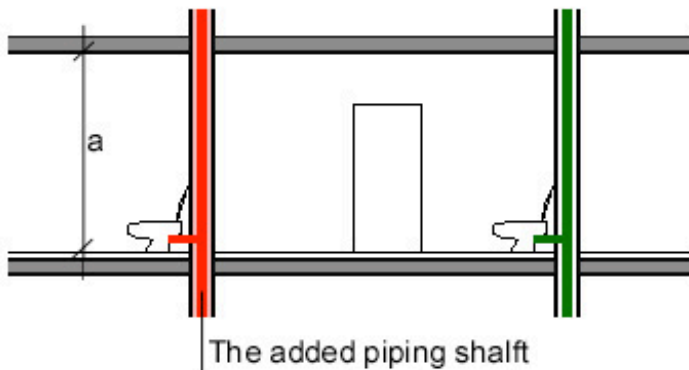


**Add thickness to the floor  
(affects building height)**

- “floor layer”  
(e.g. the Matrix Tile System)
- “raised floor”  
(e.g. S/I housing)
- “floor trenches”
- “upside-down floor”
- Precast slab w/removable top



**Thicker walls  
(affects floor area)**



**More vertical pipe  
shafts (affects floor  
area)**

## A Major Trade-off:

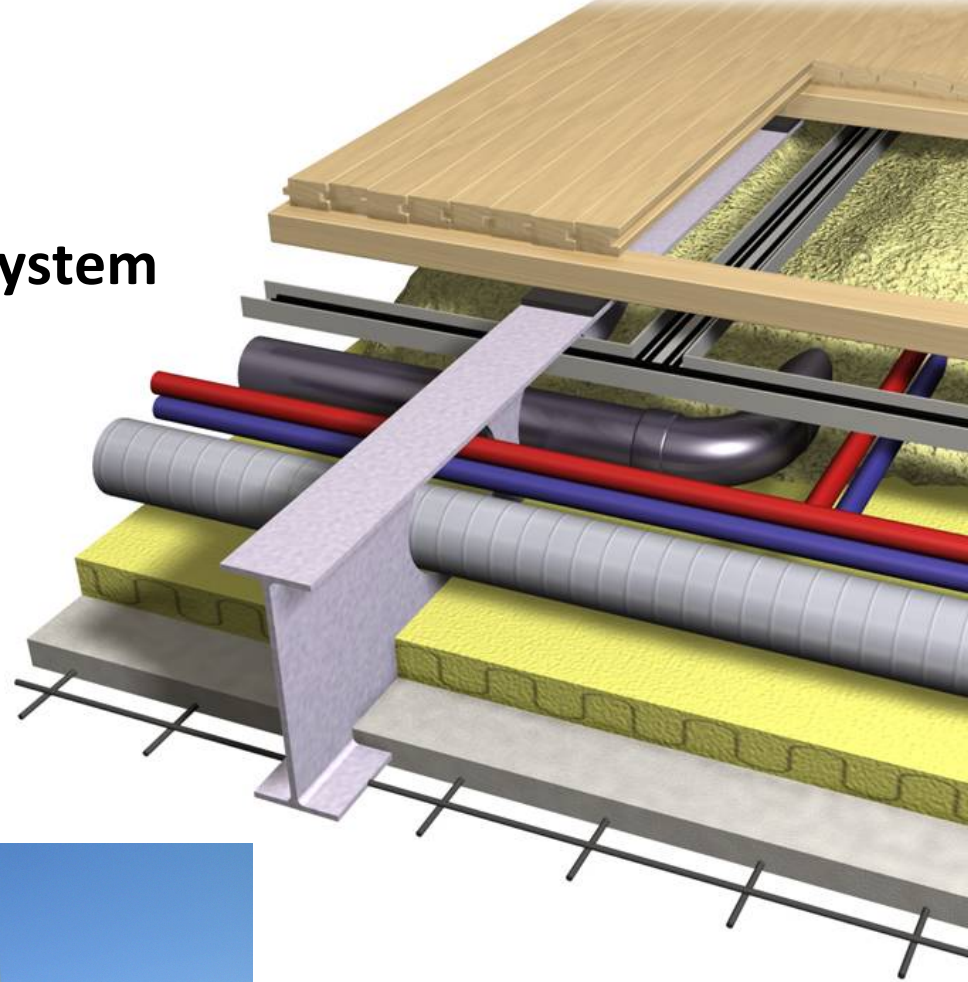
To let us decide floor plans later, we must choose between several ways to organize pipes:

- **vertical** (common parts)
- **horizontal** (belonging to each dwelling unit)

# Structure

## Steel wall and floor system

Architect: Esko Kahri, Helsinki



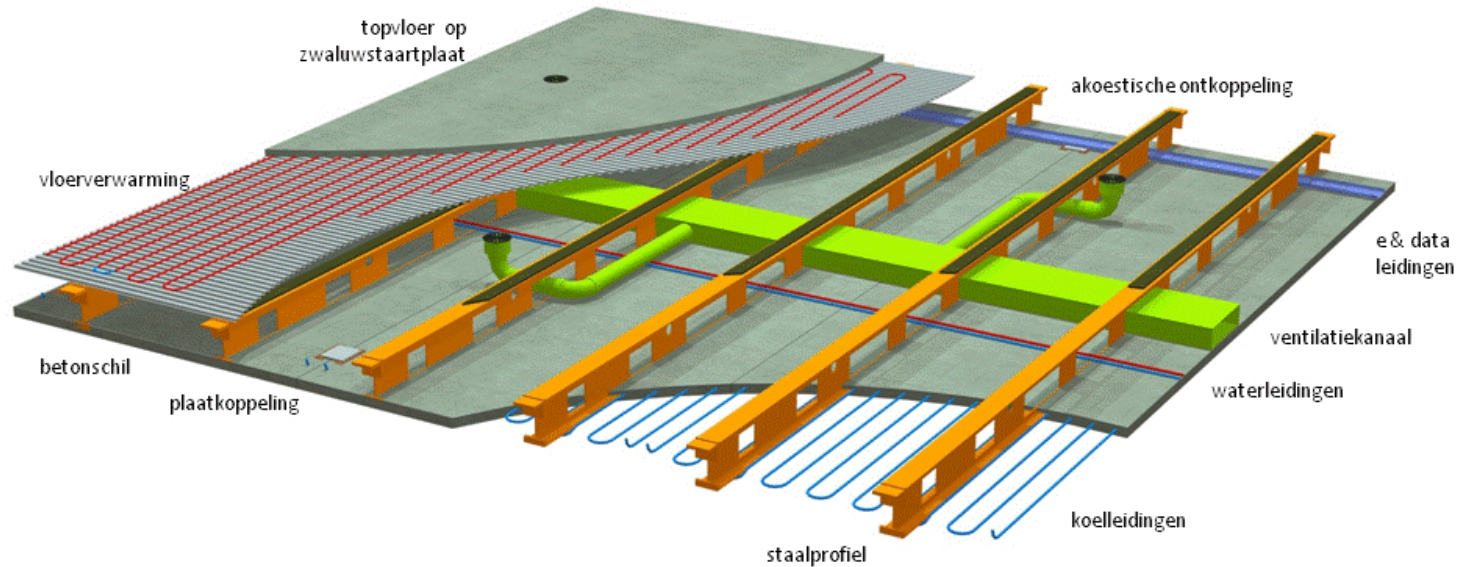


# Structure

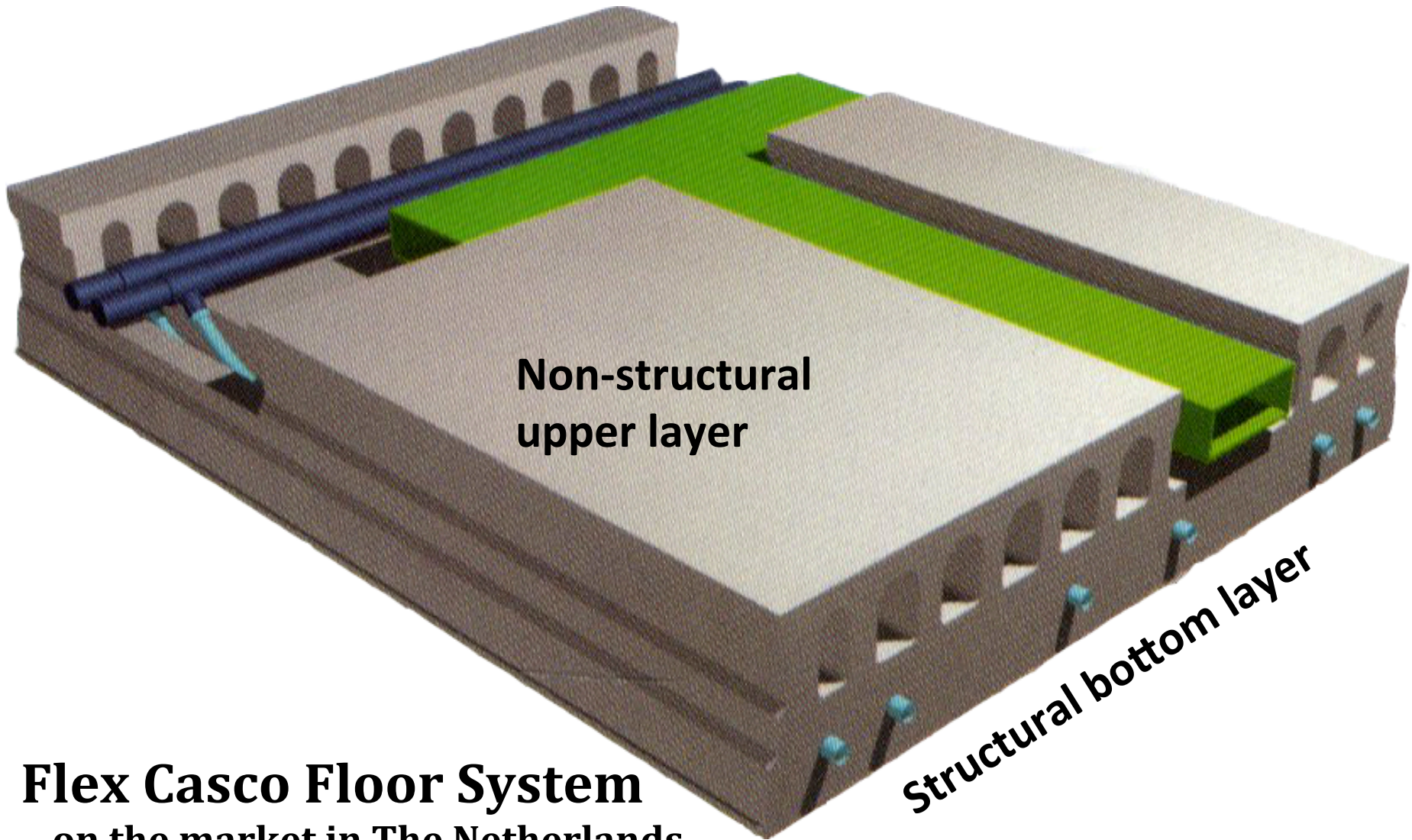
## Slimline Floor System

On the market in the Netherlands

S L I M L I N E  
B U I L D I N G S



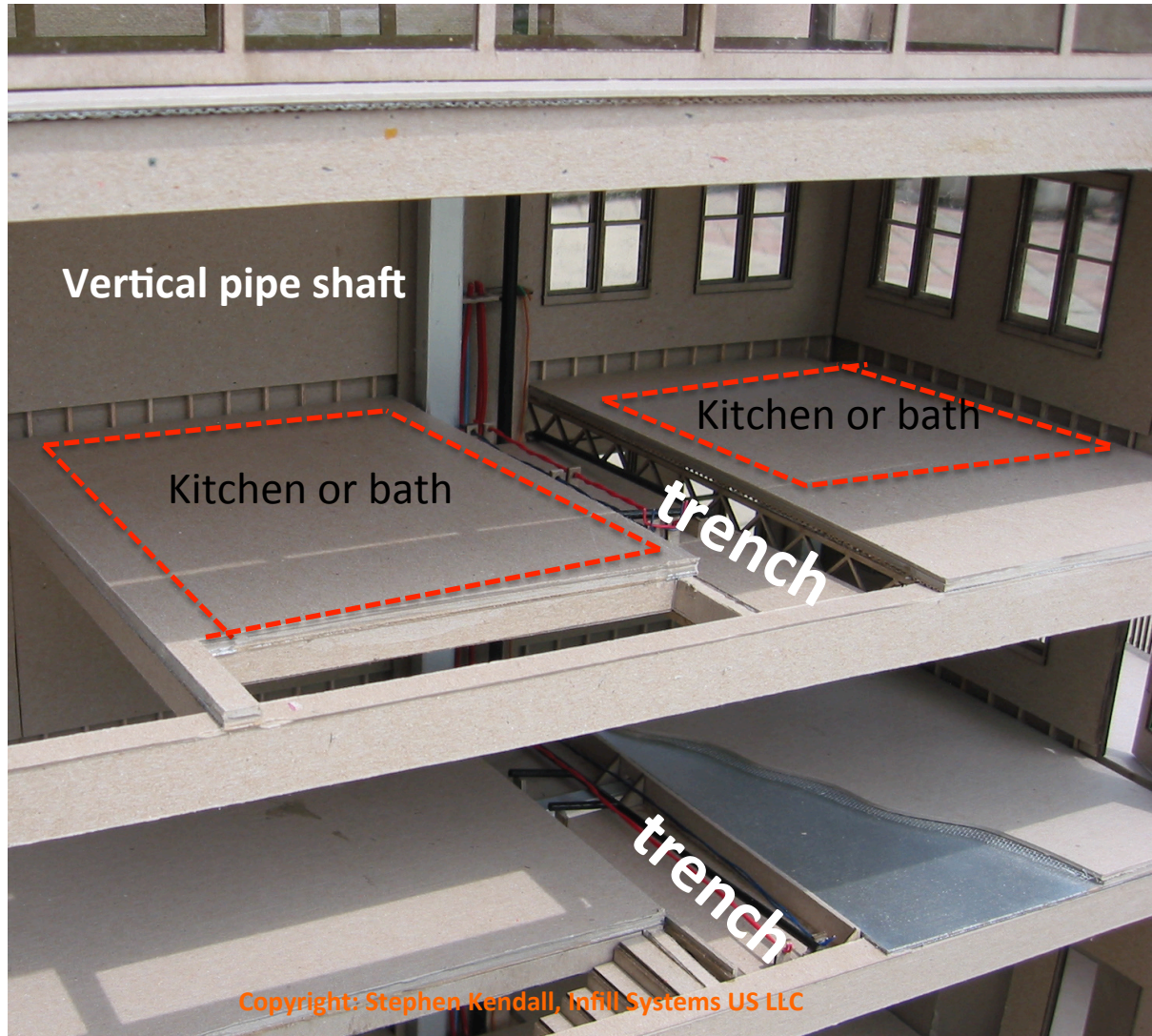
# Structure



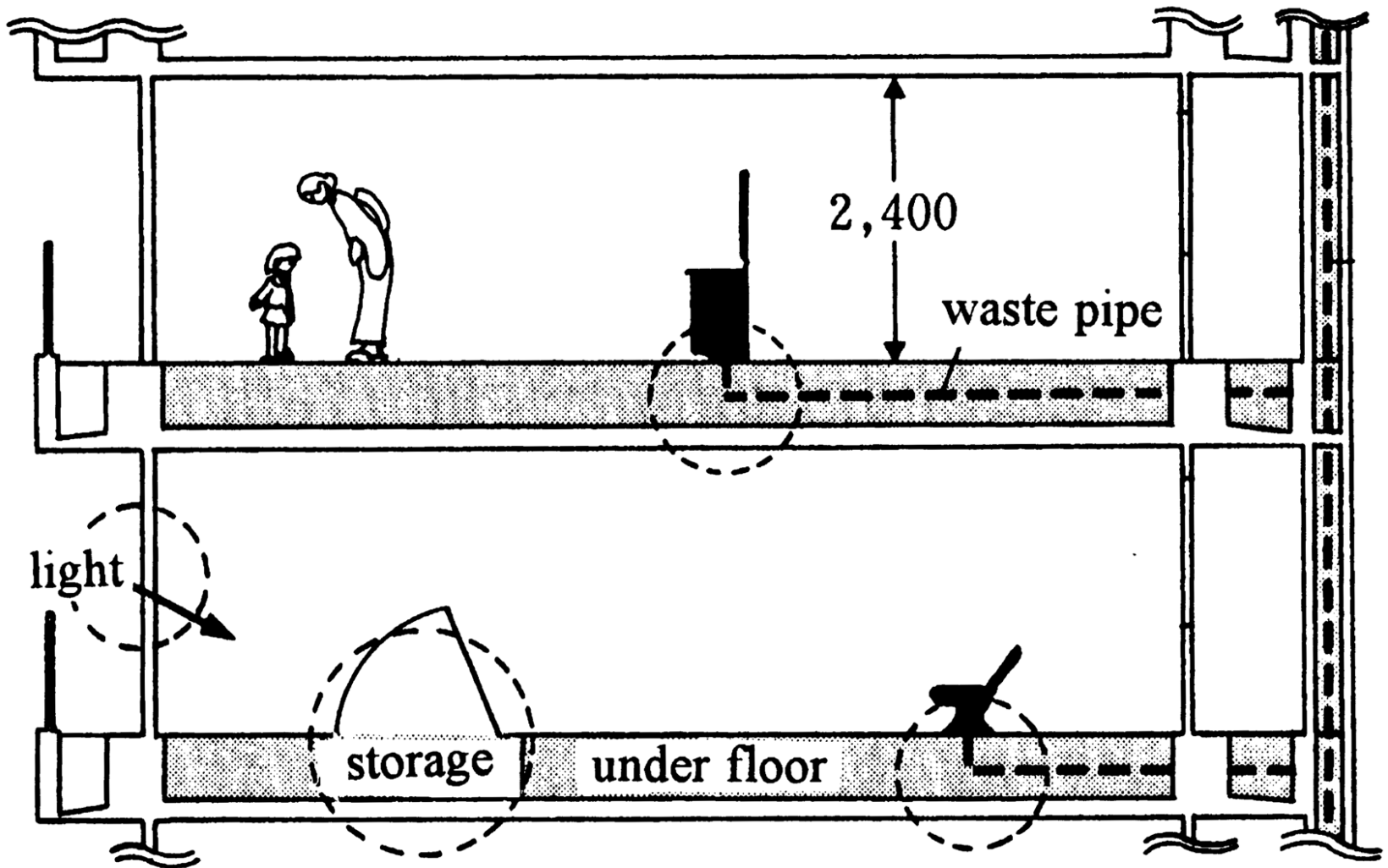
**Flex Casco Floor System**  
...on the market in The Netherlands

# Structure

Conventional framed construction with a “trench” allowing variable floor plans



# The S/I approach to utility systems



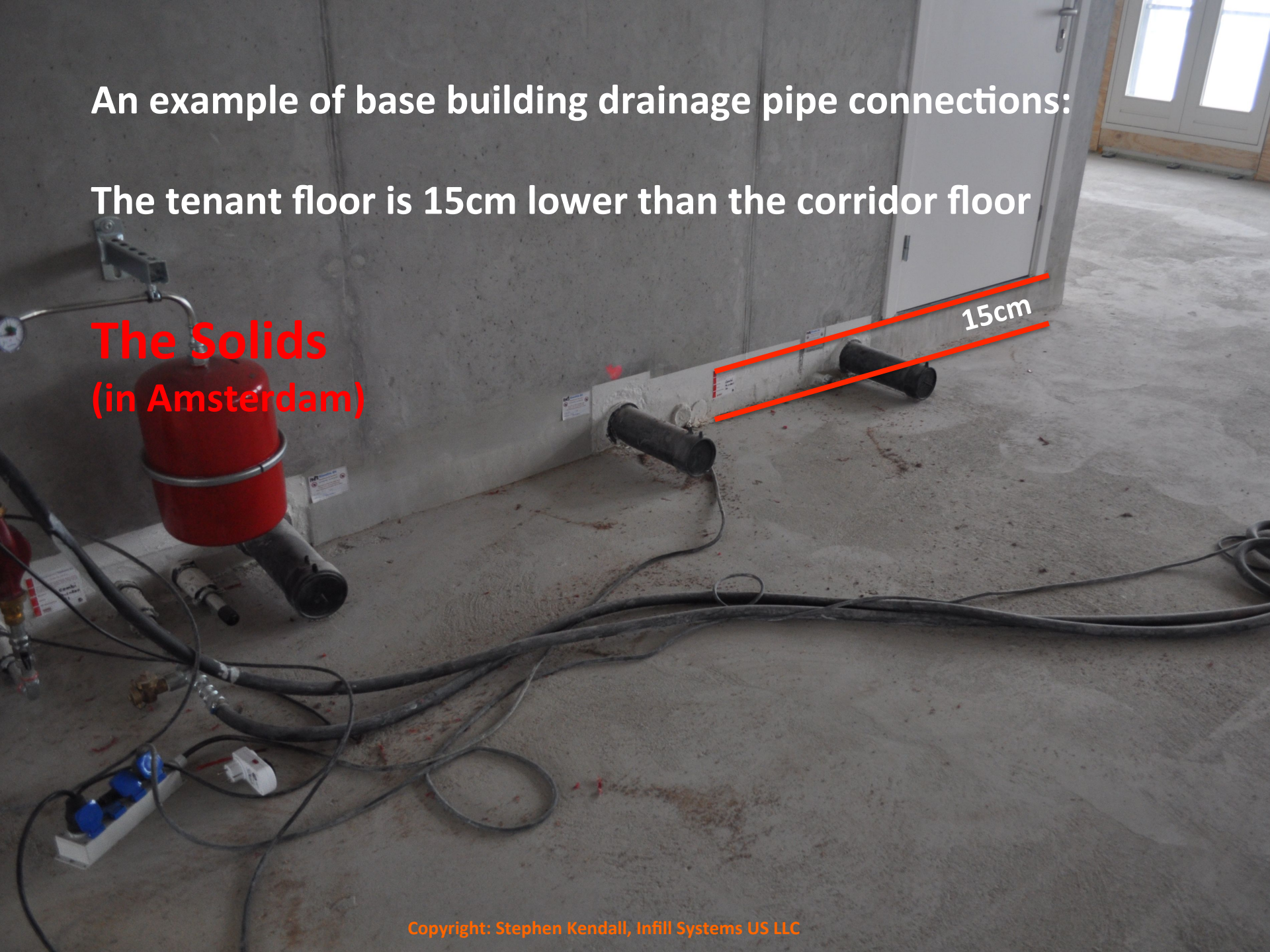


An example of base building drainage pipe connections:

The tenant floor is 15cm lower than the corridor floor

**The Solids**  
(in Amsterdam)

15cm



# Free Plan apartment in Moscow

The tenant floor is 15cm lower than the corridor floor

Ventilation  
ducts running  
through the 10  
floor building

One of several drainage  
pipes for connections of  
kitchen and bathrooms

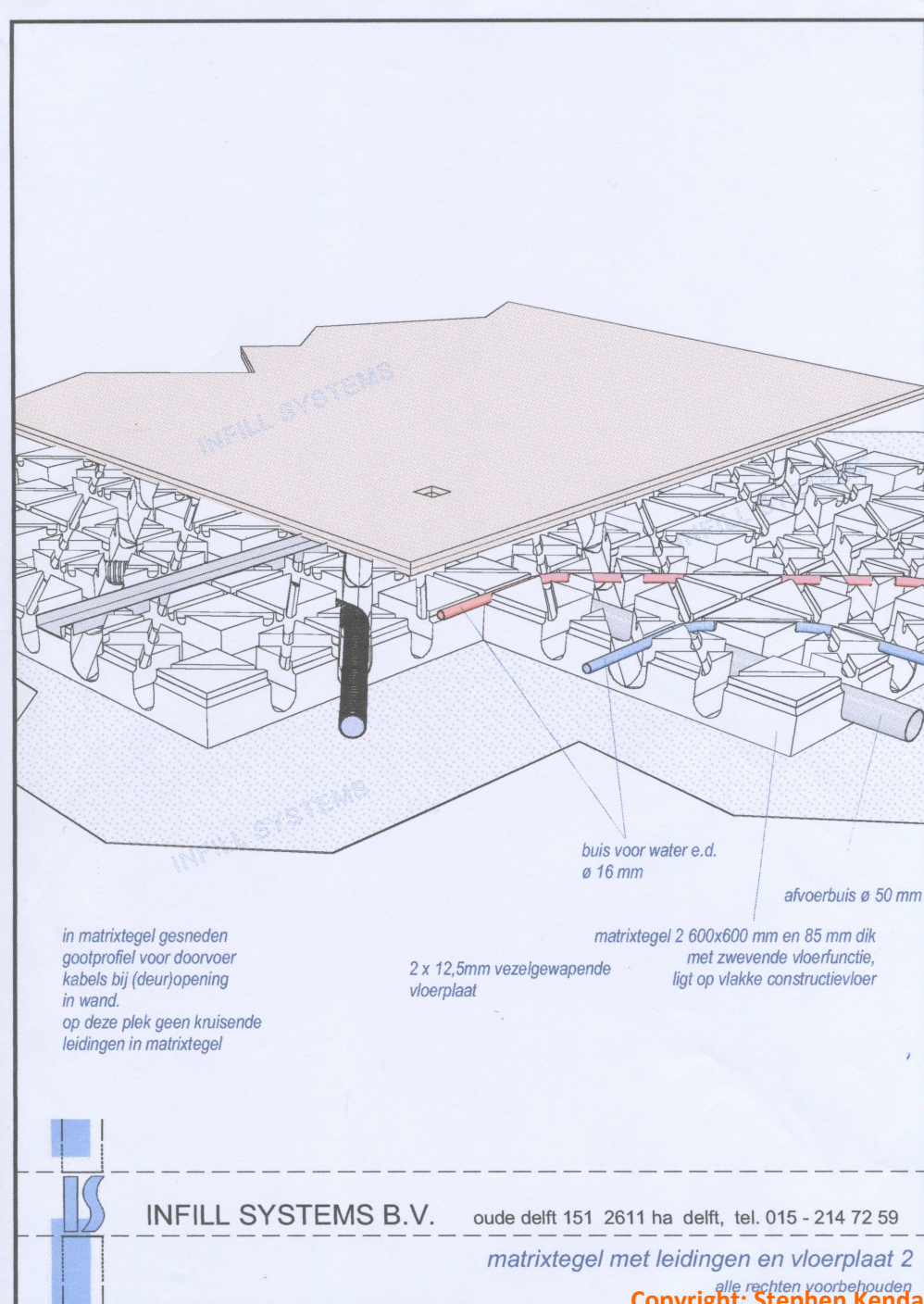
Hot-water lines running to  
perimeter radiators

# Matrix Tile System



## Matrix Tile System Infill Systems BV / The Netherlands

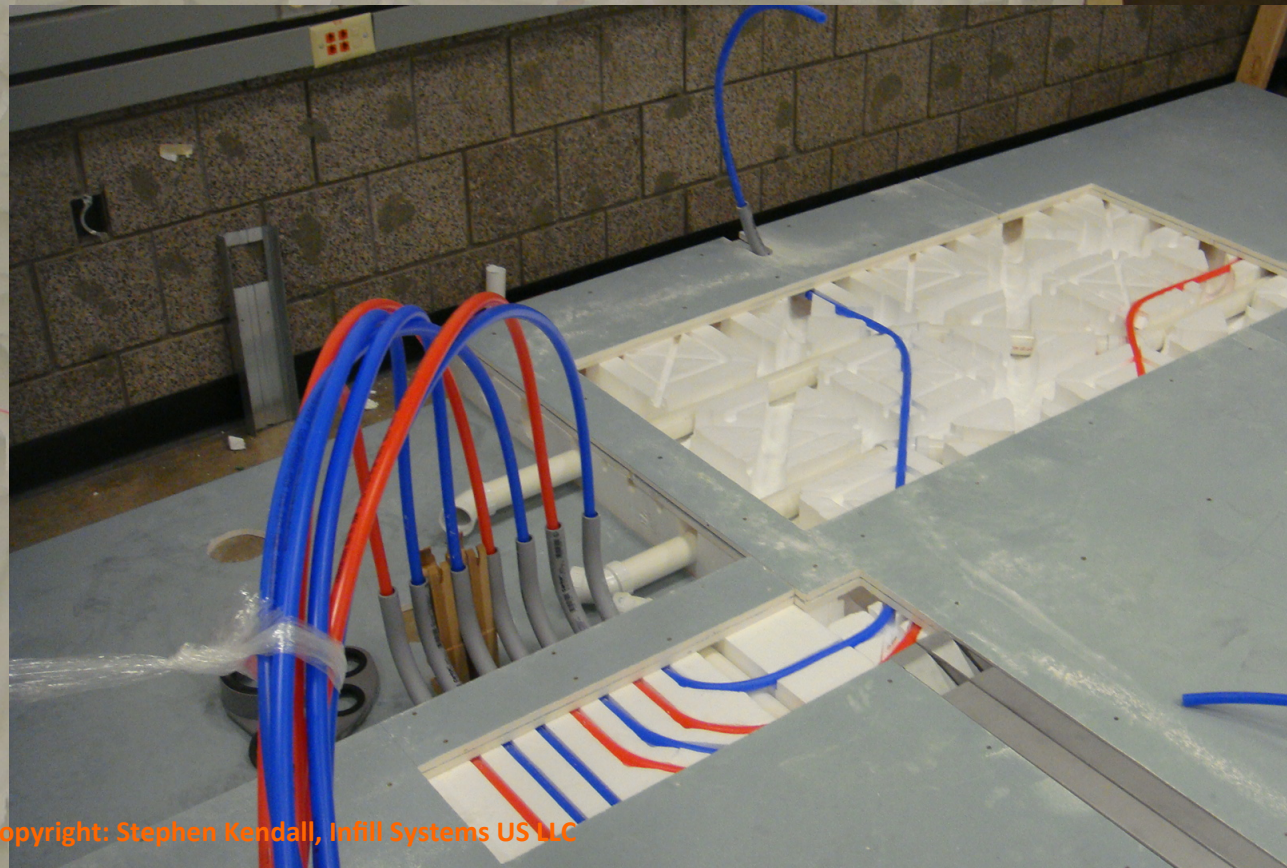
Marketed in North America by Infill  
Systems US LLC



# Matrix Tile System

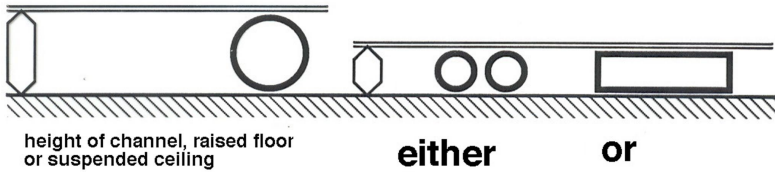
Matrix tiles are made of inexpensive EPS and provide excellent acoustical performance between apartments...

Matrix tiles, “home-run” water piping, 0-slope gray water drain lines, and fireproof floor covering in place, ready for interior partitions and floor finishes.

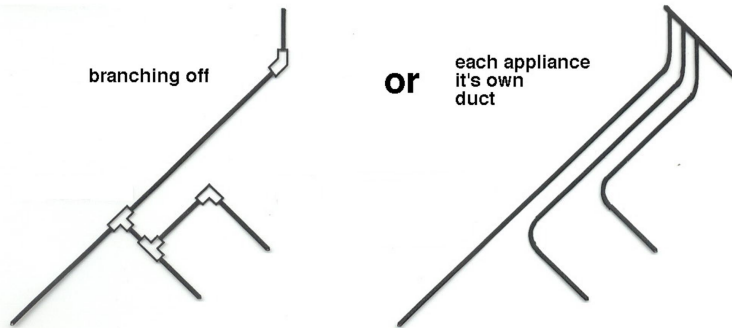


# New principles of utility systems

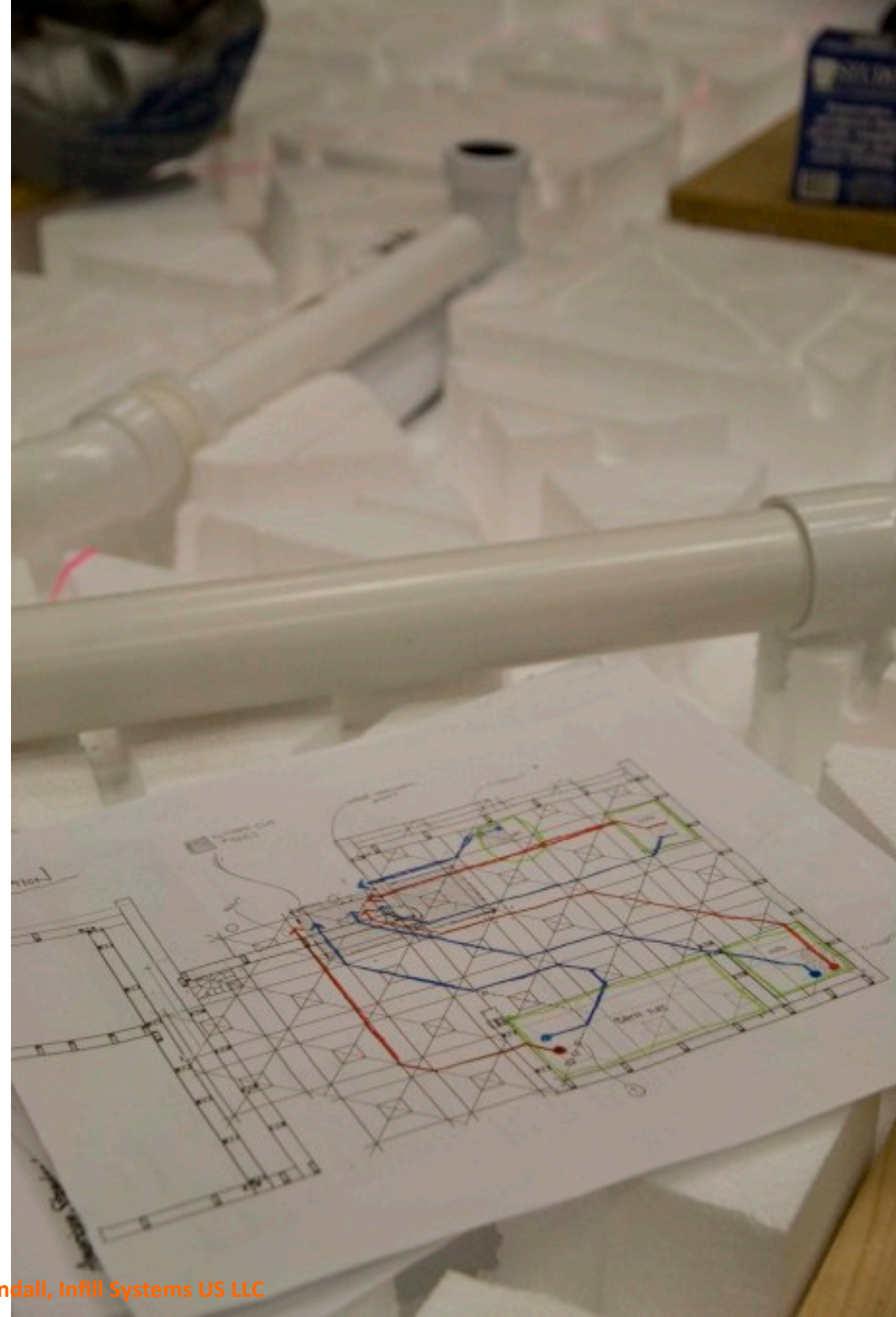
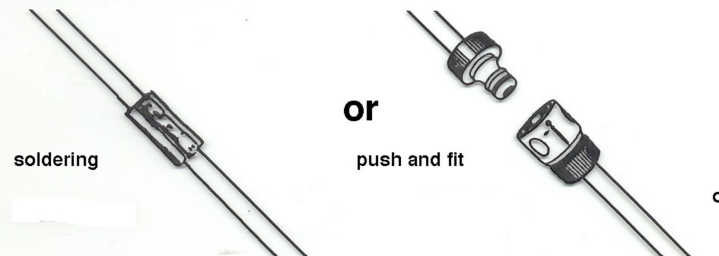
## Space-requirement



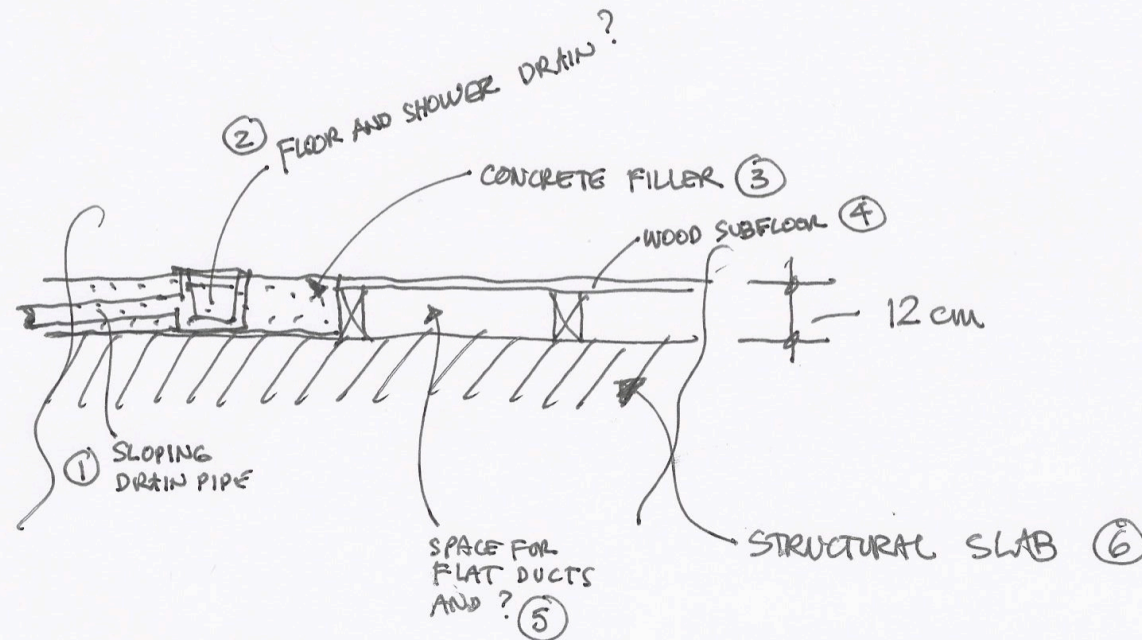
## Flexible fitting



## New fitting techniques



# MATRIX TILE SYSTEM replaces solutions like this...



LANDSBA CO.  
NANING PROJECT



# Another solution in Japan

## NEXT INFILL + Intellex / Tokyo



# A solution in China

## PREFAB INTERIORS

