

SWIM and Horizon 2020 Support Mechanism

Working for a Sustainable Mediterranean, Caring for our Future

Design of Long Term Solutions for Solid Waste Management Landfill Closure Program

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Landfill Closure Program

What does landfill closure mean?

- Final cover and environmental systems to be placed on and over the landfill once it stops accepting waste.
- Final cover provides long-term protection against vectors, while reducing infiltration and soil erosion.
- Long-term protection of ground and surface water resources.

Landfill Closure Program

Closure objectives

- Minimize post-closure leachate generation (protect environment).
- Minimize post-closure maintenance.
- Allow site to return to some beneficial use as quickly as possible.
- Make site aesthetically acceptable.
- Accommodate settlement.
- Prevent wind blown litter.
- Suppress fire dangers.
- Monitor performance of engineered controls.

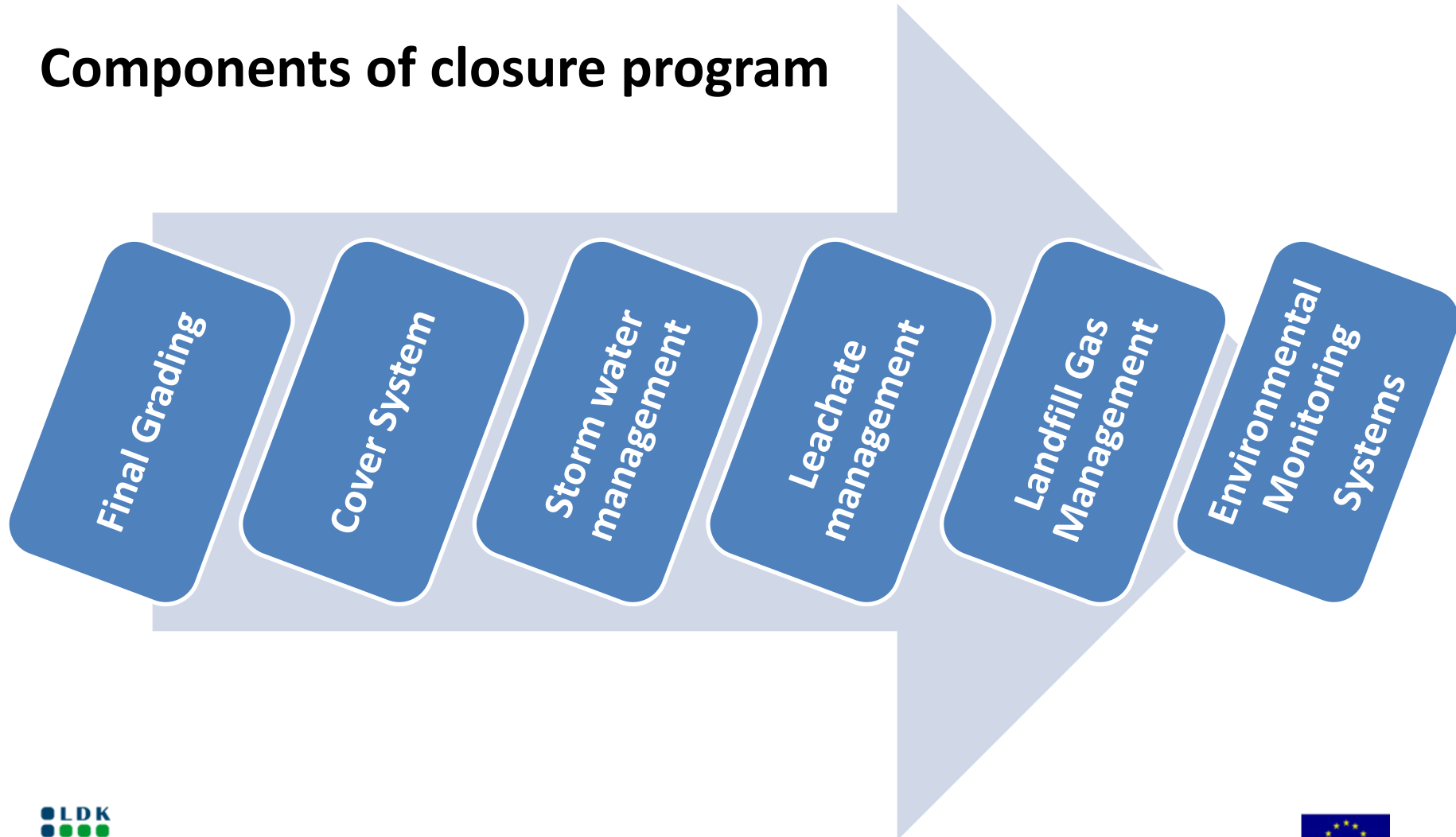
Landfill Closure Program

Closure plan

- Notification of closure.
- Report years site in operation and quantity of waste in place.
- Schedule for completion of closure works.
- Identify site sensitivity / receptors.
- Site cleanup.
- Address storm water, leachate, landfill gas, and erosion control measures.
- Final contours and cover system design concept.
- Buffer zones and compliance boundaries.
- Water balance / long term-leachate generation.

Landfill Closure Program

Components of closure program

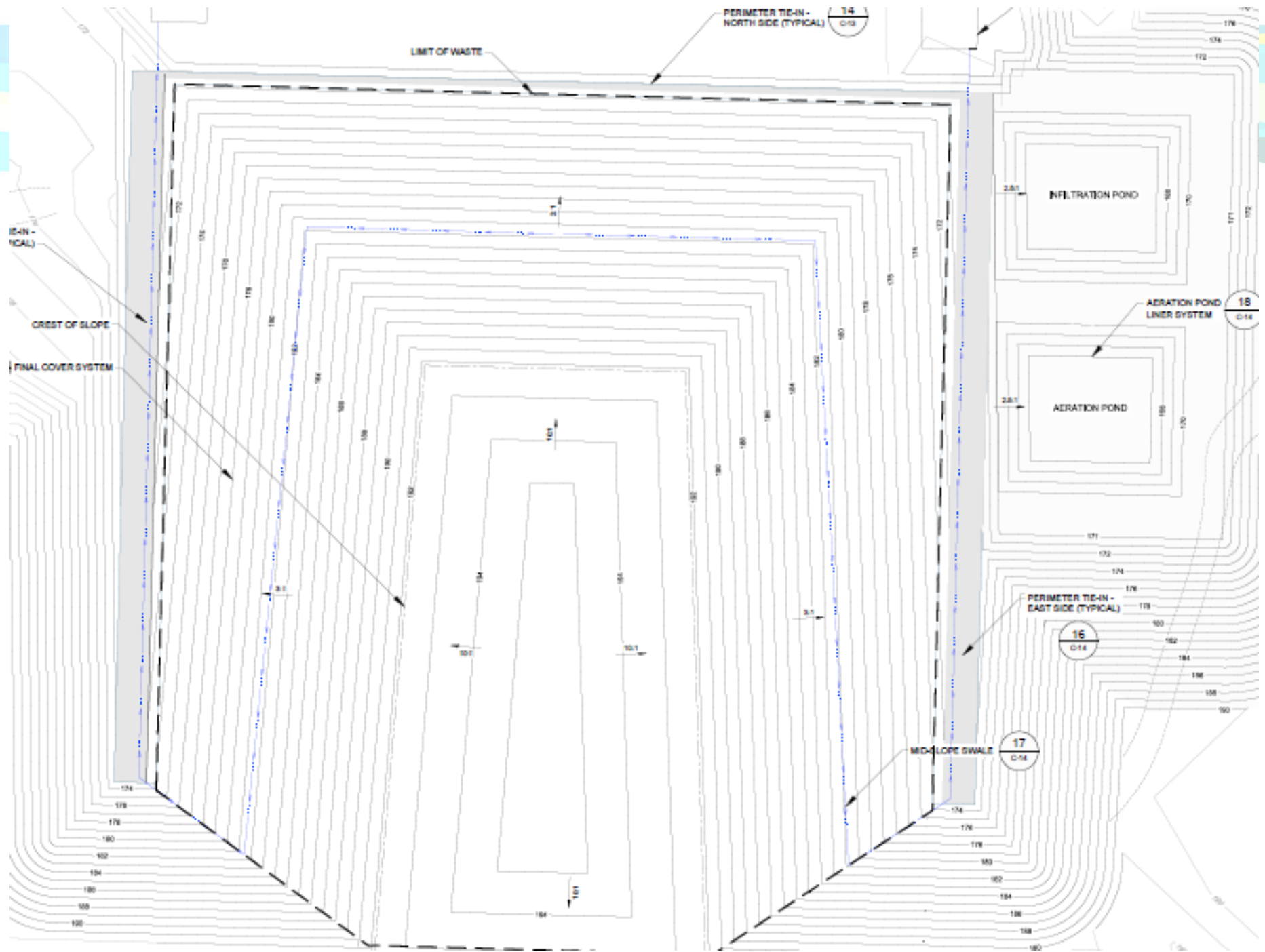


Landfill Closure Program

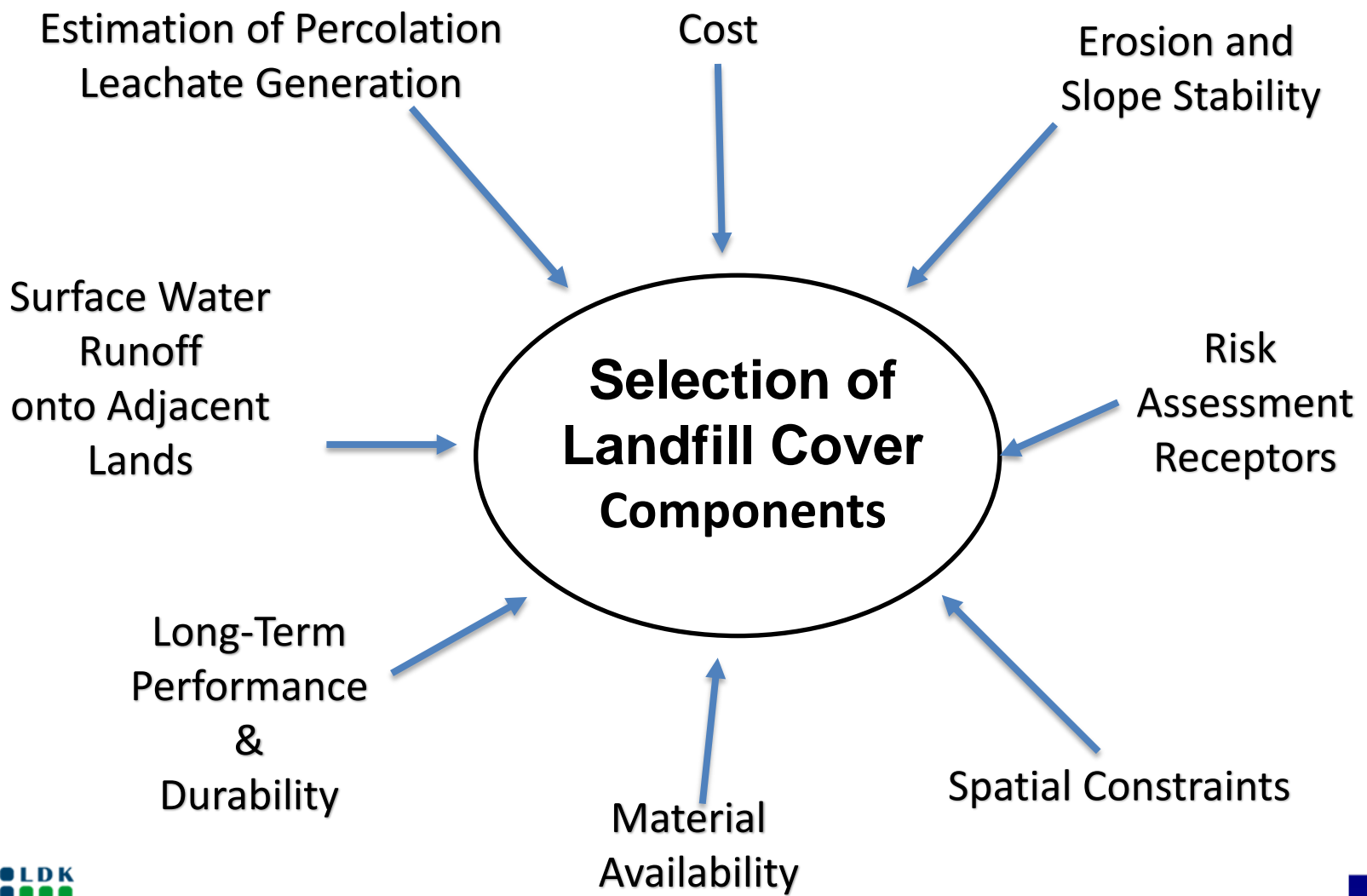
Grading

- Grading a key component in landfill closure often not given its due.
- Slopes typically between 5 and 33 percent.
- Settlement of 10 percent (or more) of total waste height should be expected. Differential settlement common.
- Crest slope critical.
- Drainage from slopes.





Landfill Closure Program



Landfill Closure Program

Types of cover systems

- Numerous types of landfill cover systems have been developed.
- Suitable cover system options are site specific based upon numerous factors.

