

JUMBO BLOCK® Präsentation

Lösungen für eine resiliente Wasserversorgung

November 2023





Über uns

Team

Produktvorstellung

JUMBO BLOCK ®, mit Ortbeton vergleichbar

Wie Ortbeton, nur schneller

Der JUMBO BLOCK ®

Modulbauweise

Statik

Flexible Lösung

Chancen

Planerische Freiheit

Beispiele

Kommunen

Regenwasserrückhaltung

Retentionsraum trotz Bebauung

Industrie und Chemie

Agrar

Smarte Lösung

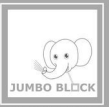
Wasserstandsdaten und IoT mit IOTA Technologie

Umwelt- und Naturschutz

Nachhaltigkeit und Auswirkungen auf die Umwelt

Anpassung an den Klimawandel

Zusammenfassung





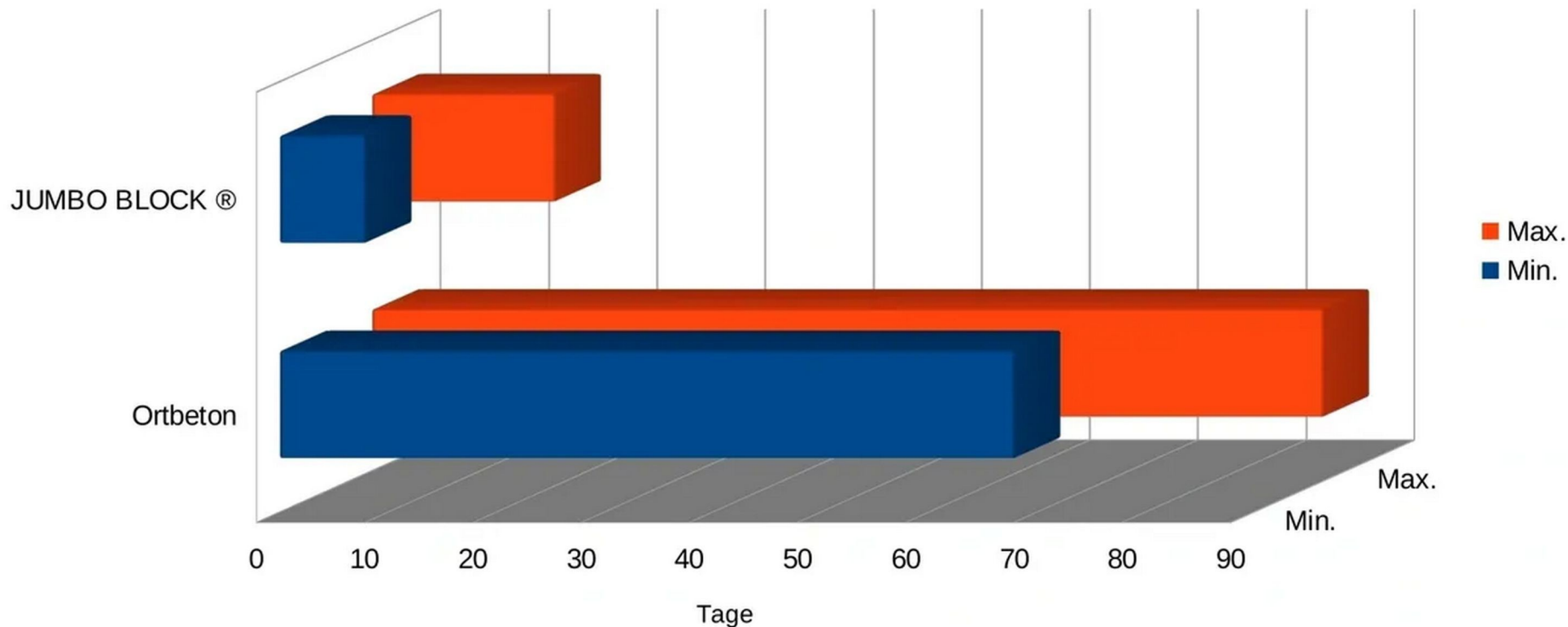
JUMBO BLOCK ® ist mit Ortbeton vergleichbar.

- Bewehrter Beton !
- Hohe Tragfähigkeit !
- Hohe Belastbarkeit !
- Langlebigkeit !



BAUZEIT ORTBETON VS JUMBO BLOCK ®

Vergleichbarer Speicher 1362 m³ / 98 JUMBO BLOCK ®

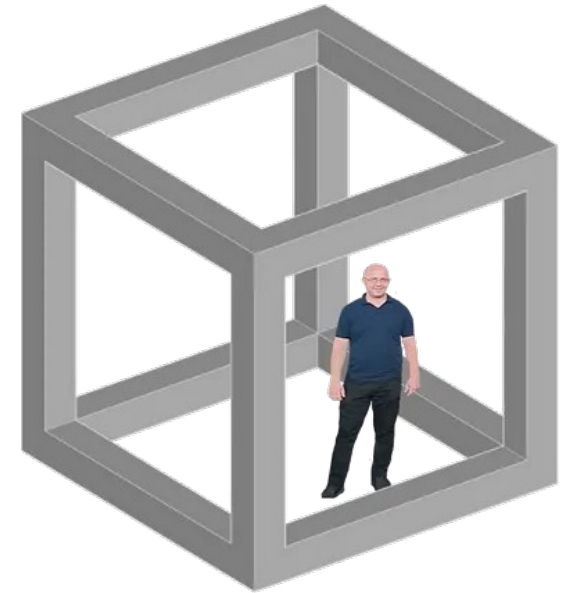


Beispiel aus einem Projekt

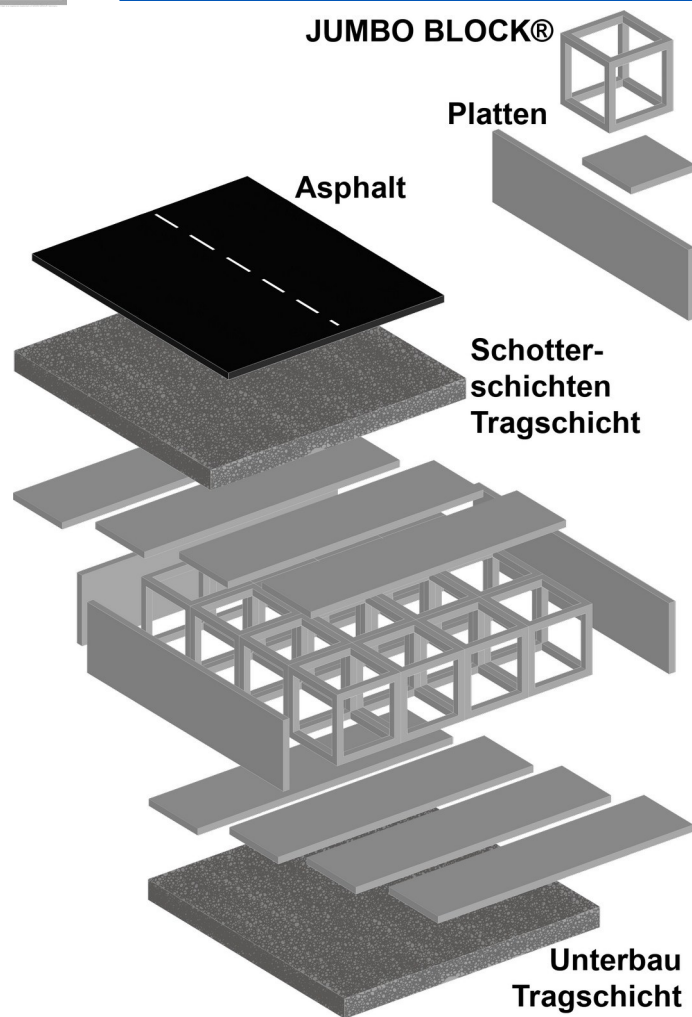


Kennzahlen

- Belastbarkeit SLW 60
- Blockkantenlänge
2,5 m x 2,5 m x 2,5 m
- Material
Vorrangig grüner Beton
(CO2-reduzierter Beton)
- Fassungsvermögen
13,9 m³ Wasser
- Flächenvolumen
2.224 Liter/m² Wassersäule



Formenbau Metal Synergy doo



JUMBO BLOCK ® Aufbaubeispiel

- Asphaltdecke
 - Schotter-schichten (Tragschicht)
 - JUMBO BLOCK ® Hohlblock
 - Platten zum Verschließen (min. 2,5 x 2,5 m)
-
- Bei Wasserspeicherung Platten unten
 - Bei Wasserspeicherung Abdichtungen, Geo-Baustoffe oder Folien bei wassergefährdenden Stoffen
 - Bei Versickerung keine Abdichtung und offener Boden

Über 4 Tonnen Stabilität



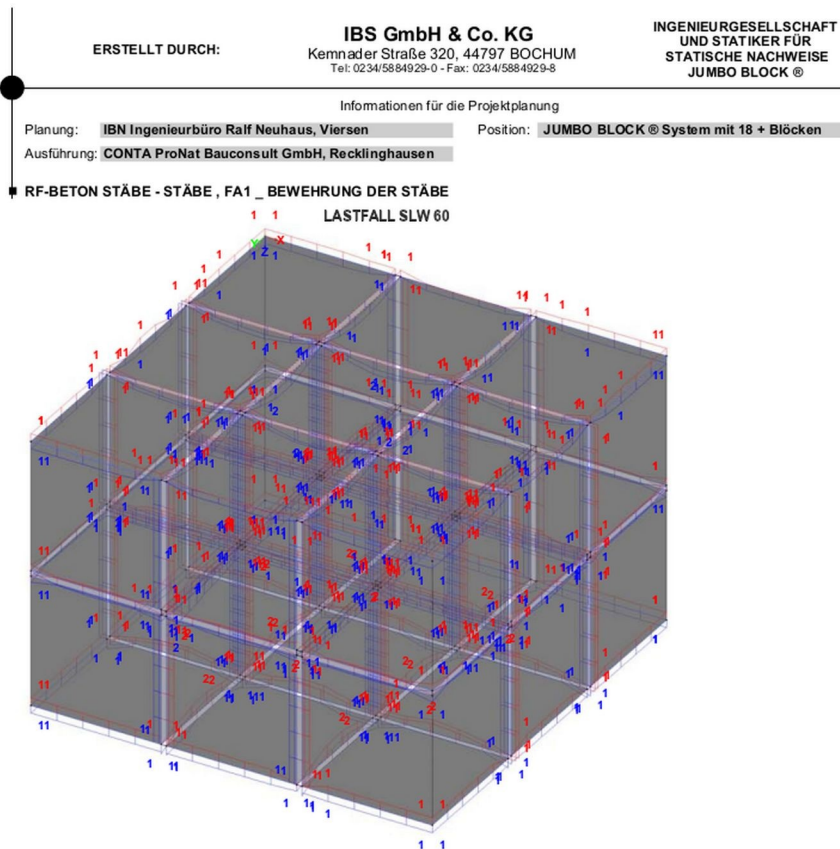
Große Projektreferenzen

Frankfurt, Germany

- Westside Tower
- Henninger Turm
- Wohnbebauung
Stresemannallee

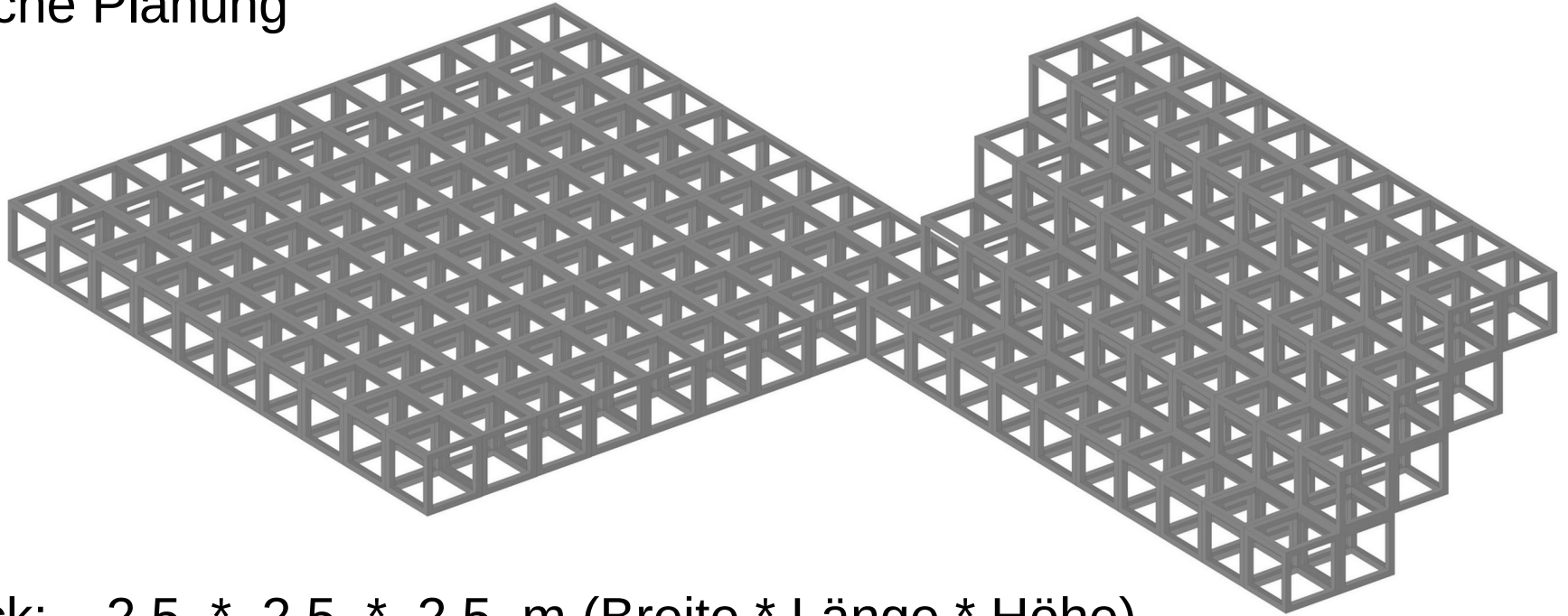
Offenbach, Germany

- Wohnbebauung Hafengold





Einfache Planung

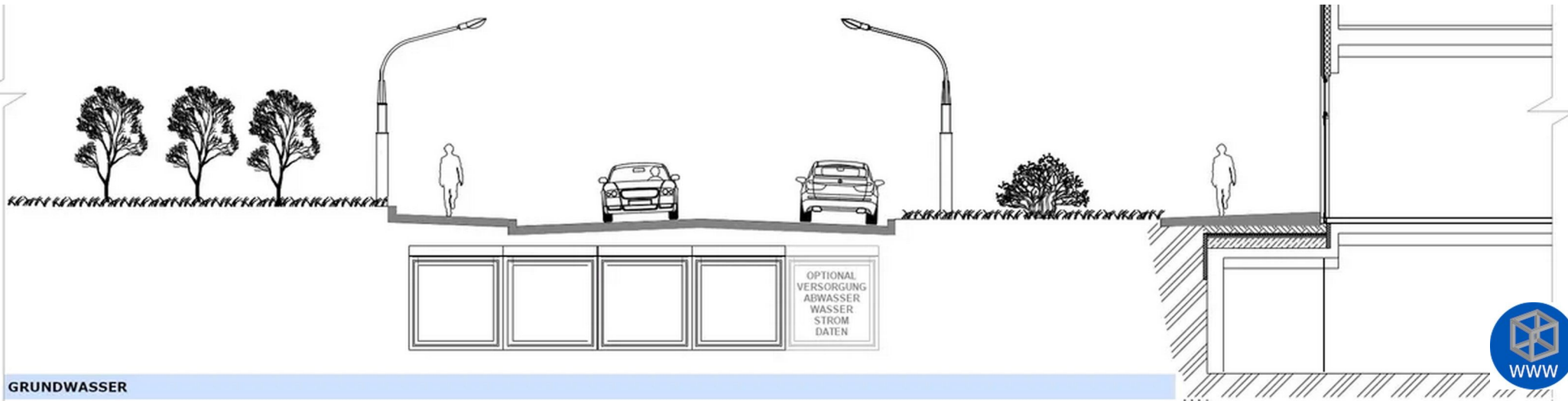


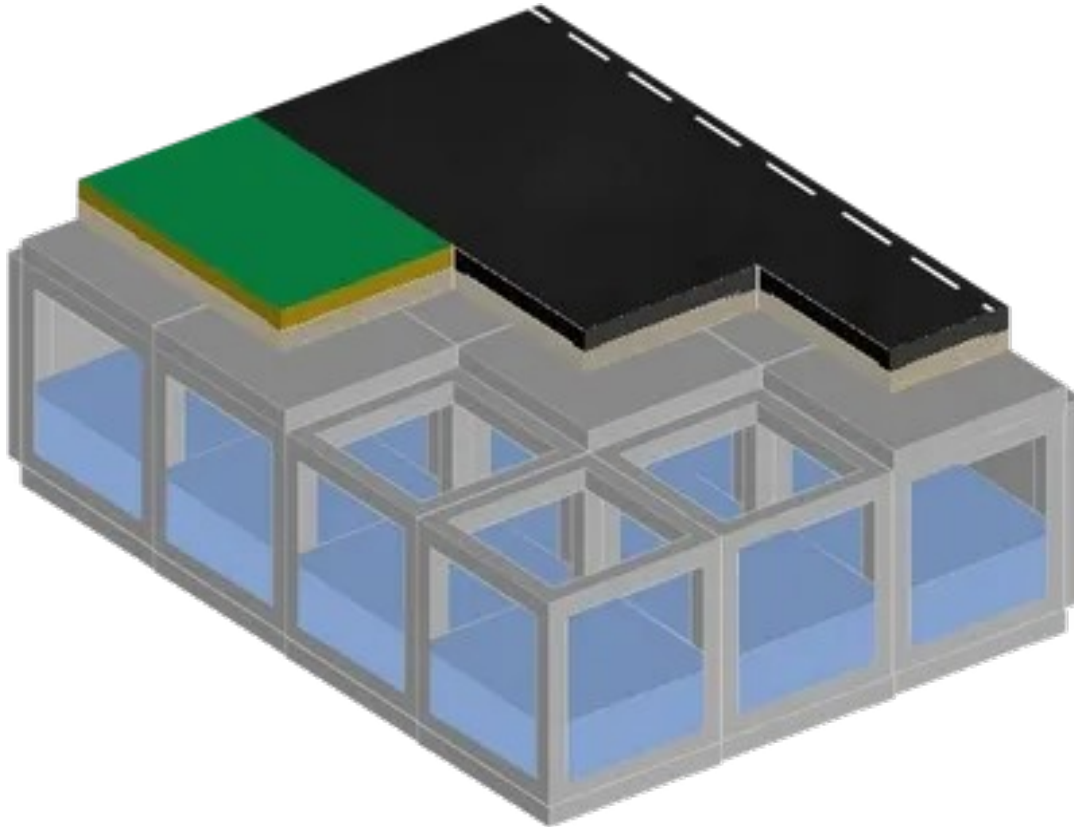
- Block: $2,5 * 2,5 * 2,5$ m (Breite * Länge * Höhe)
- Platten: $2,5 * 2,5 - 10,0 * 0,125 - 0,25$ m (Breite * Länge * Stärke)



Planerische Freiheit

- Überbaubar und verkehrstauglich
- Bis zu 80% Bauzeitreduktion
- Reduziert Straßenarbeiten
- Einbau der Kanalisation, von Versorgungsleitungen, usw.





Regenwasserrückhaltung Innerstädtische Retention

- Unter Strassen
- Unter Plätzen
- Unter Bebauungen
- Unter Freiflächen
- ...



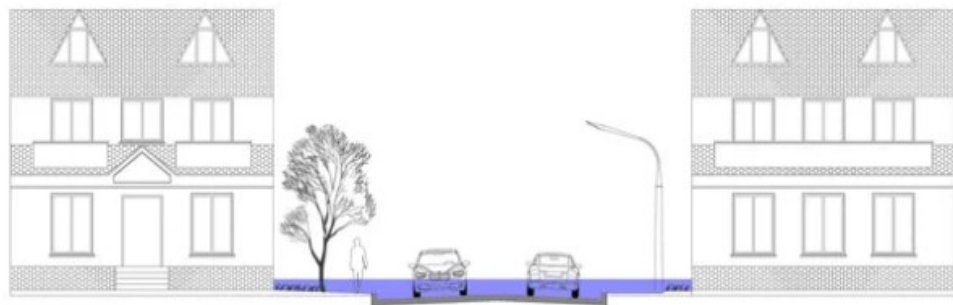


Abbildung 1

Fallbeispiel einer Überflutung

Rechenbeispiel Gasse 15 m breit, 2,5 m tief. Versiegelte Fläche (z.B. Stadt, Altstadt usw.)

Theoretisches Volumen in dieser Gasse auf 2,5 m Tiefe: $19,8 \text{ m}^3$ Regenwasser, bei dargestelltem Wasserstand.



Abbildung 2

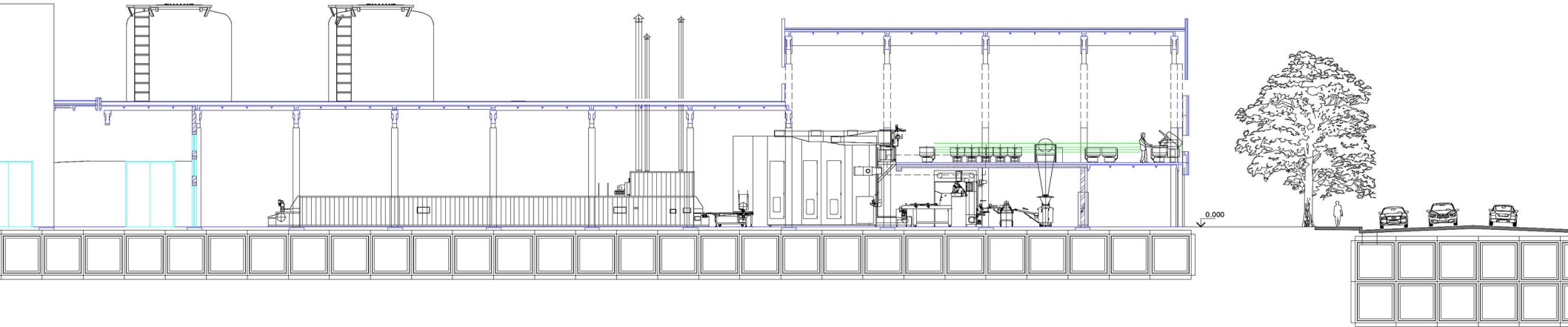
Beispiel der JUMBO BLOCK®
Wirkungsweise bei einer Überflutung wie in Abbildung 1 dargestellt.

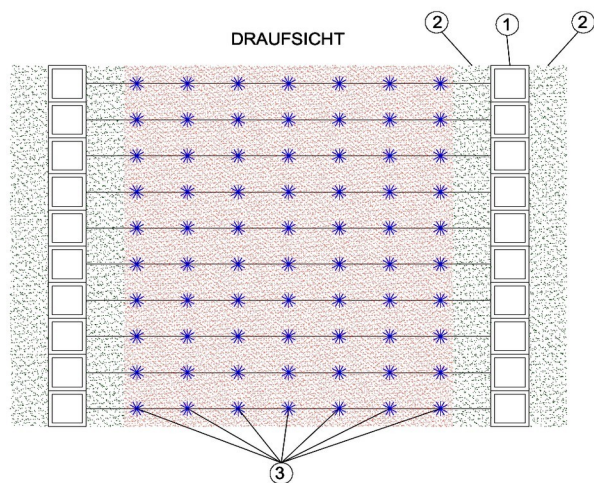
Benötigtes Retentionsvolumen: $19,8 \text{ m}^3$
Verfügbares Retentionsvolumen: $55,6 \text{ m}^3$
bei einer Reihe von 4 Blöcken

Überflutungswahrscheinlichkeit: 0%



Löschwasserspeicher, Versickerungs- und Wasserspeicher





Lösung gegen Bodenerosion
und Wasserknappheit

Beispiel in Form einer unterirdischen Bewässerung.

Jegliche Form der Entnahme
und der Verteilung ist möglich!



Wasserstandsdaten und IoT mit IOTA Technologie



1. Überwachung des Wasserstands
2. Datenanalyse und Prognosen
3. Automatisierte Steuerung
4. Intelligente Wartung
5. Transparenz und Vertrauen
6. Nutzen für Kommunen und Infrastrukturbetreiber

Übertragung zum Beispiel per Long Range Wide Area Network (LoRaWAN)



- Nachhaltige Materialnutzung
- Recycling und Wiederverwertung
- Umweltfreundliche Rückbaubarkeit
- CO2-reduzierter grüner Beton
- Verzicht auf Kunststoffe
- Schutz des Bodenökosystems
- Vorzug umweltfreundlicher Geobaustoffabdichtungen
- Energiesparende IoT-Systeme
- Bis zu 80% Bauzeitreduzierung
- Hoher Lebenszyklus



ANPASSUNG AN DEN KLIMAWANDEL

- Regenwasserrückhaltung
- Speicherung und Versickerung
- Reduzierung und Vermeidung von Flächenversiegelung
- Erhöhung des Grundwasserspiegels
- Bewässerung und Notbewässerung sensibler Ökosysteme



Wasserknappheit und Überflutungen verhindern!

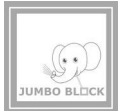
- Frei konfigurierbar
- Einfach und schnell installiert
- Bis zu 80% Bauzeitreduzierung
- Umweltfreundlich
- Rückbaubar, Wiederverwertbar
- Hoher Lebenszyklus
- Abdichtung mit Geobaustoffen
- Kostengünstig



Vielen Dank für Ihre
Aufmerksamkeit.

Es war uns eine große
Freude, diese Präsentation
mit Ihnen zu teilen.

Wir hoffen, sie hat Ihnen
gefallen.



Impressum

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Geschäftsführer/Inhaber: Andreas Zanni e.K.
Registergericht: Amtsgericht Bochum
Handelsregisternummer: HRA 7687
USt-ID: DE340292357



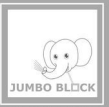


JUMBO BLOCK® Presentation

Solutions for a resilient water supply

November 2023





About us

Team

Product presentation

JUMBO BLOCK ®, comparable with in-situ concrete

Like in-situ concrete, only faster

The JUMBO BLOCK ®

Modular construction

Statics

Flexible solution

Opportunities

Planning freedom

Examples Municipalities

Rainwater retention

Retention space despite buildings

Industry and chemicals

Agriculture

Smart solution

Water level data and IoT with IOTA technology

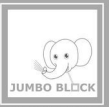
Environmental & nature conservation

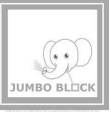
Sustainability and environmental impact

Adaptation to climate change

Summary

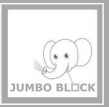






JUMBO BLOCK ® is comparable to in-situ concrete.

- Reinforced concrete !
- High load capacity!
- High resilience !
- Longevity !

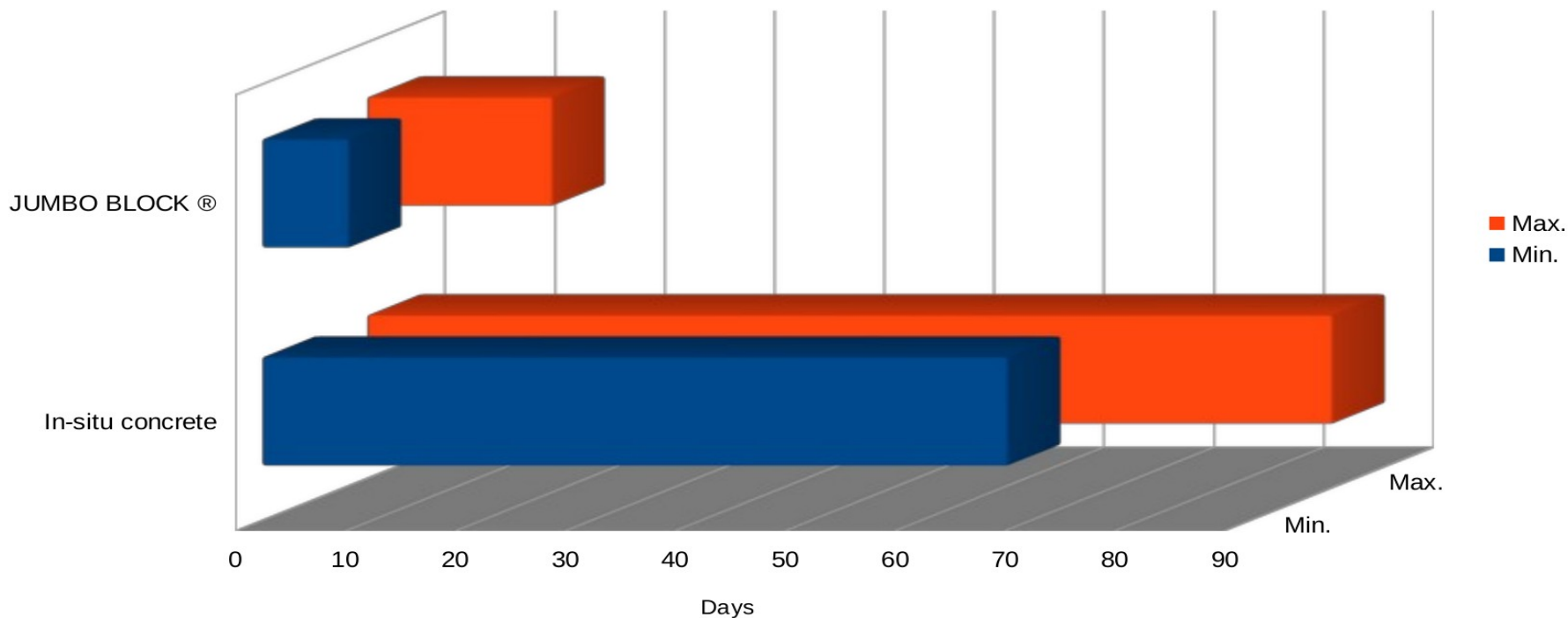


TIME SAVINGS



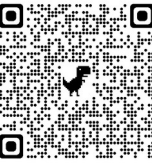
CONSTRUCTION TIME IN-SITU CONCRETE VS JUMBO BLOCK ®

Comparable water storage 1362 m³ / 98 JUMBO BLOCK ®



Example from a project





Metrics



Mold making Metal Synergy doo

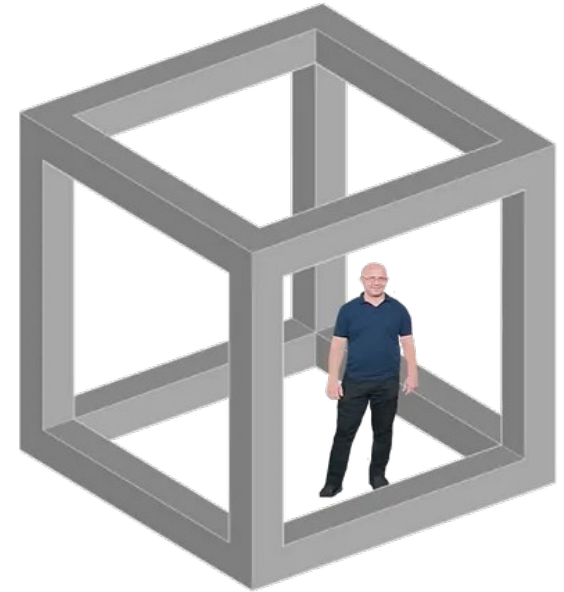
- Load capacity SLW 60

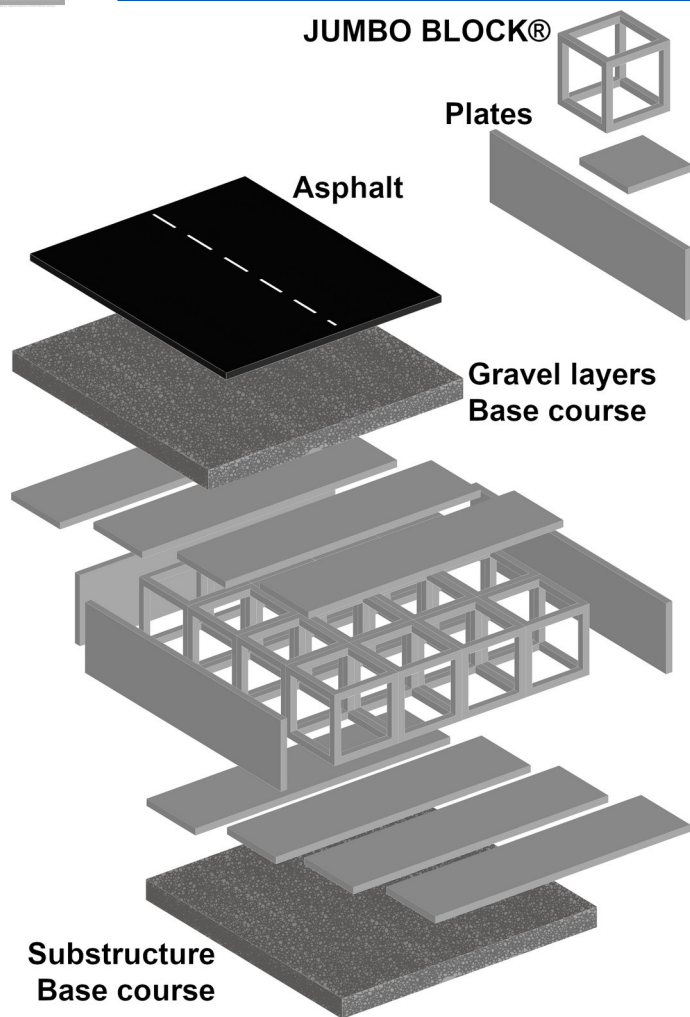
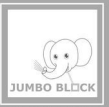
- Block edge length
2.5 m x 2.5 m x 2.5 m

- Material
Mainly green concrete
(CO2-reduced concrete)

- Capacity
13.9 m³ of water/block

- Volume on area
2,224 litres/m² water column





JUMBO BLOCK ® Installation example

- Asphalt surface
- Gravel layers (base course)
- JUMBO BLOCK ® hollow block
- Plates for sealing (min. 2.5 x 2.5 m)
- In case of water storage plates at the bottom
- For water storage waterproofing, geo-building materials or foils for water-polluting substances
- In case of infiltration no sealing and open soil

Over 4 tonnes stability



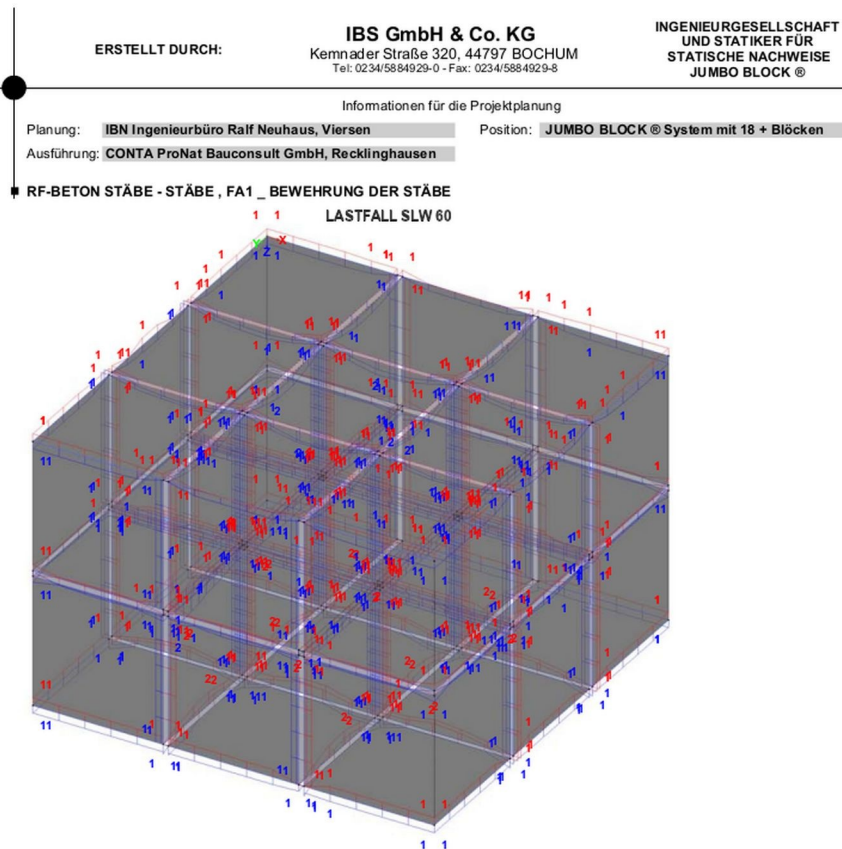
Impressive project references

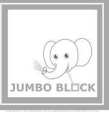
Frankfurt, Germany

- West Side Tower
- Henning Tower
- Residential development
Stresemannallee

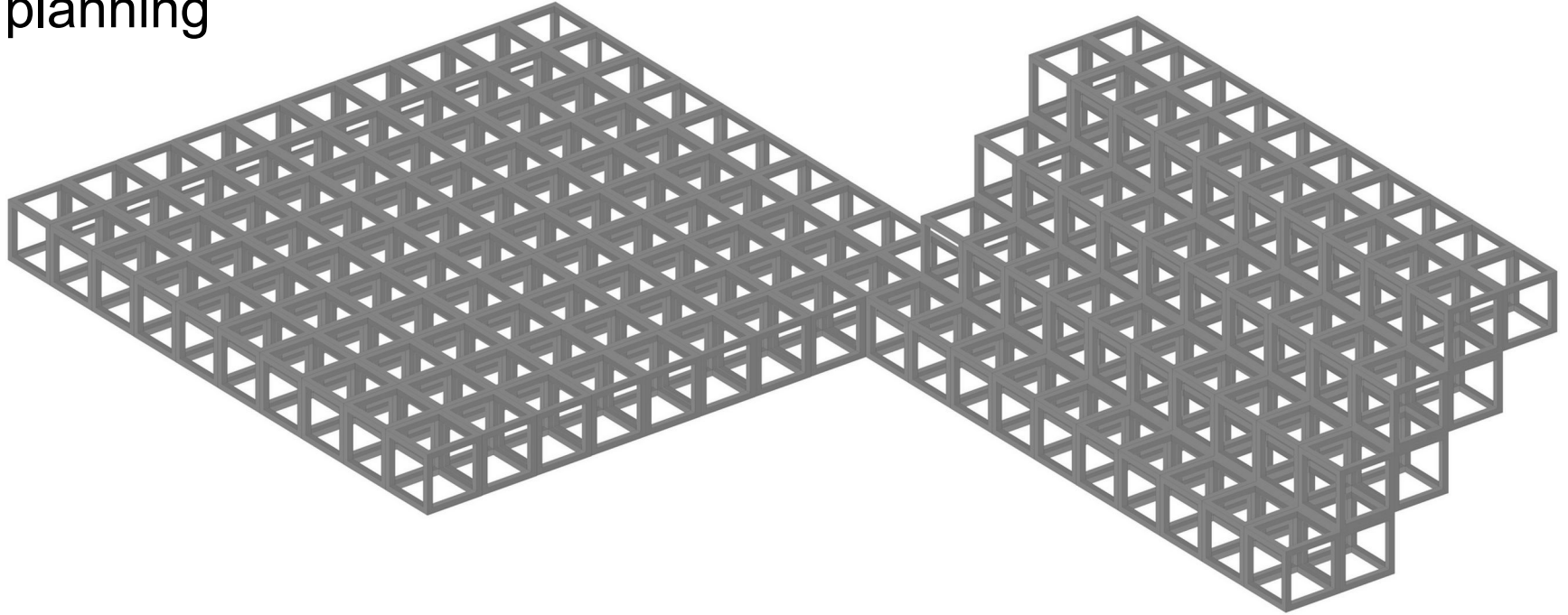
Offenbach, Germany

- Hafengold residential
development





Easy planning

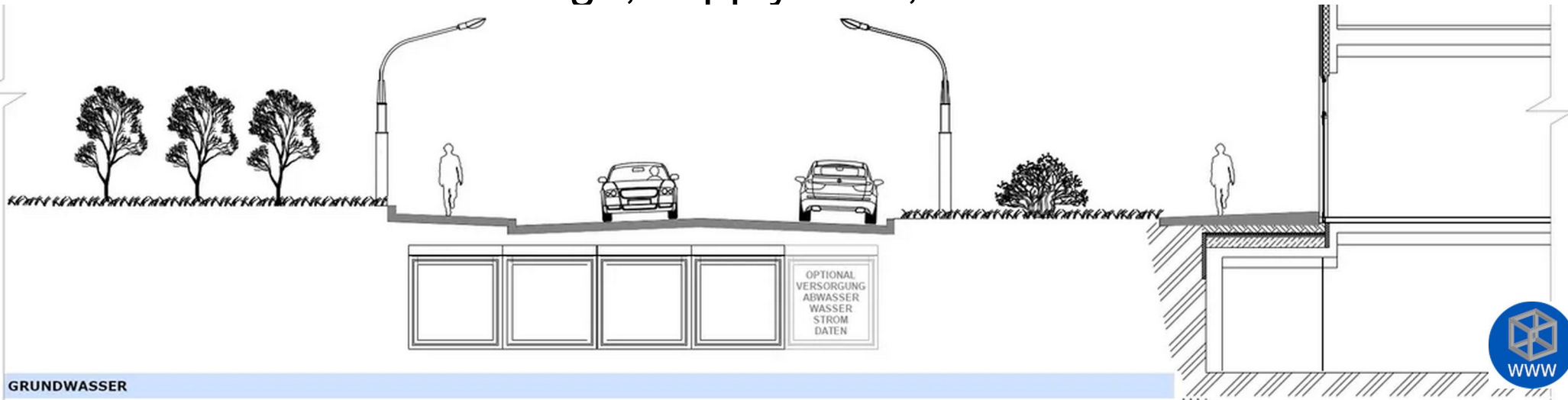


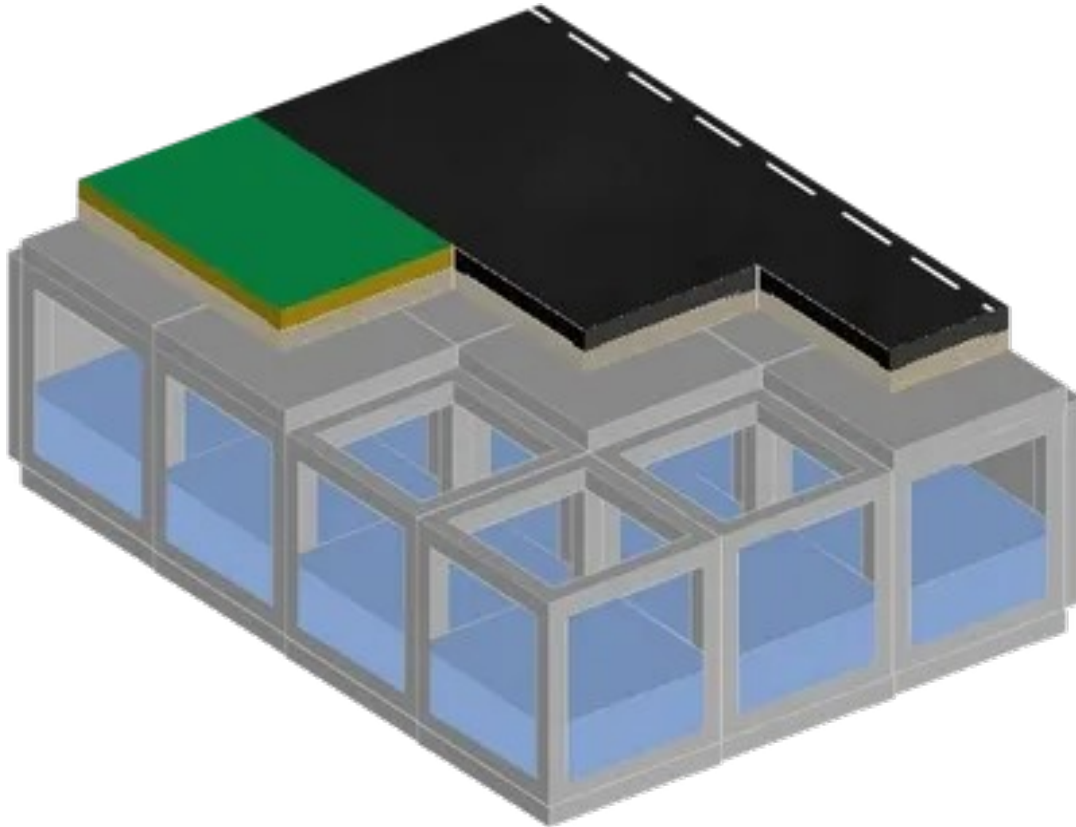
- Block: 2.5 * 2.5 * 2.5m (width * length * height)
- Plates: 2.5 * 2.5 - 10.0 * 0.125 - 0.25m (width * length * thickness)



Planning freedom

- Can be built over and is roadworthy
- Up to 80% reduction in construction time
- Reduces road works
- Installation of sewerage, supply lines, etc.





Rainwater retention

Inner-city retention

- Under streets
- Under squares
- Under buildings
- under open spaces
- ...



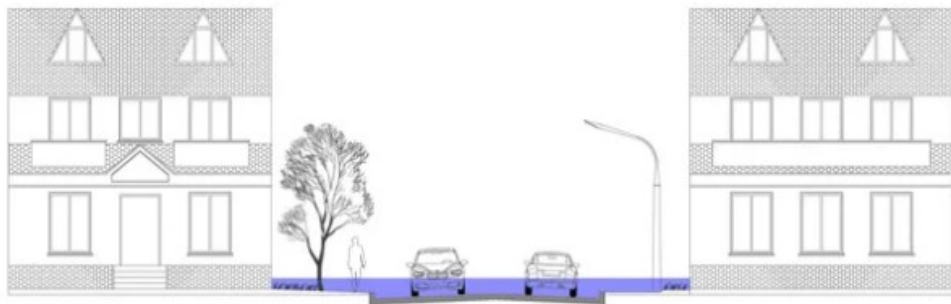


Figure 1

Case study of a flood

Calculation example alley 15 m wide, 2.5 m deep. Sealed area (e.g. city, old town, etc.)

Theoretical volume in this alley at a depth of 2.5 m: 19.8 m^3 rainwater, with the water level shown.

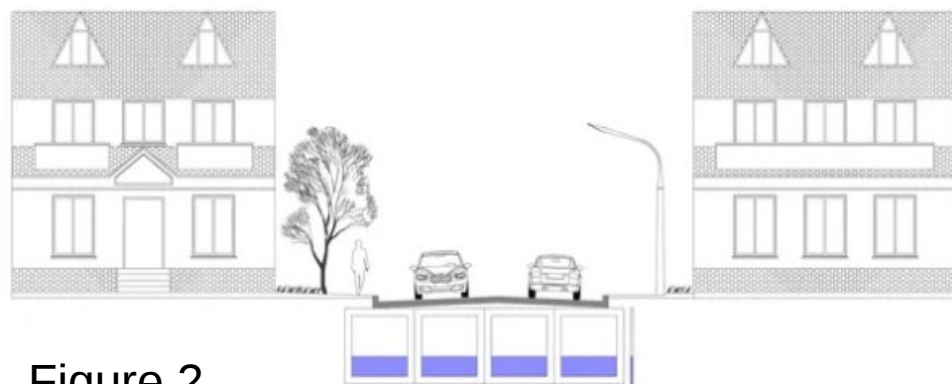


Figure 2

Example of the JUMBO BLOCK[®] mode of action in the event of flooding as shown in Figure 1.

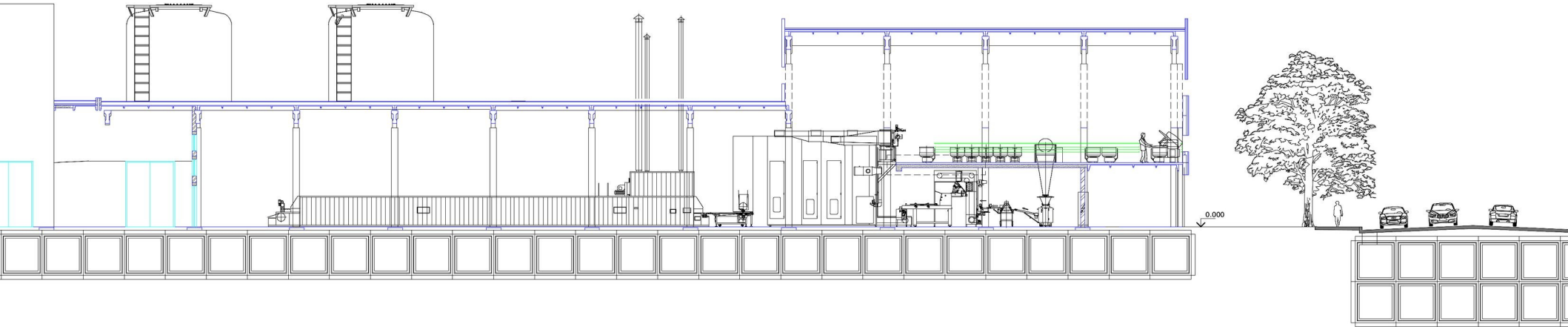
Required retention volume: 19.8 m^3

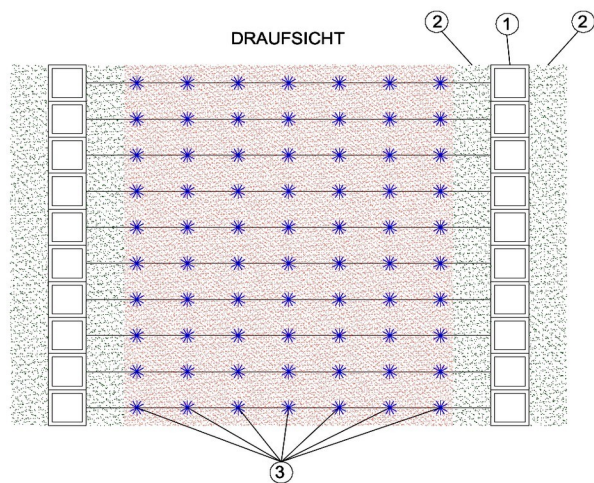
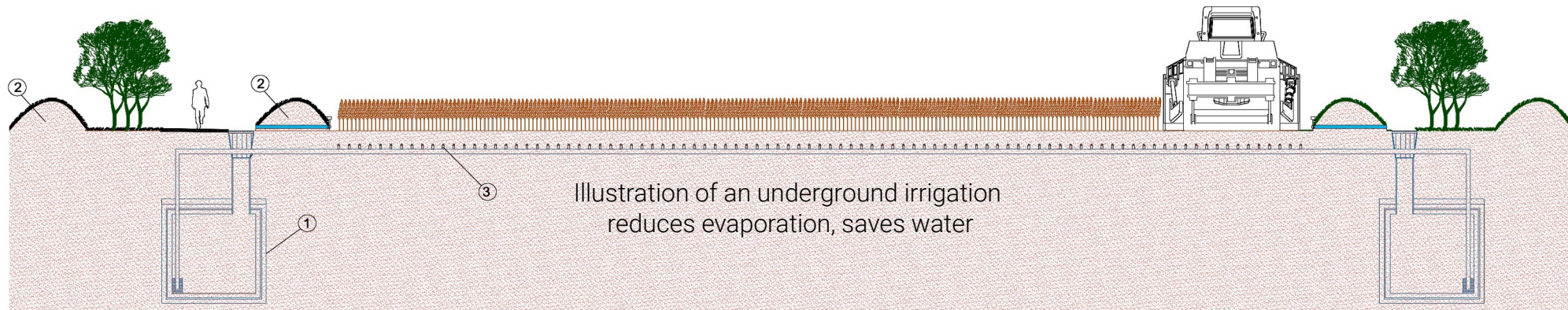
Available retention volume: 55.6 m^3 in a row of 4 blocks

Flood probability: 0%



Fire water storage, Infiltration and water storage





Solution to soil erosion
and water scarcity

Example in the form of underground irrigation.

Any form of withdrawal
and distribution is possible!



Water level data and IoT with IOTA technology



1. Water level monitoring
2. Data Analysis and forecasts
3. Automated control
4. Intelligent maintenance
5. Transparency and trust
6. Benefits for municipalities and infrastructure operators

Transmission, for example via Long Range Wide Area Network (LoRaWAN)

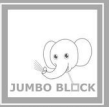


- Sustainable material usage through recycling and reuse
- Environmentally friendly recyclability
- CO2-reduced green concrete
- Avoidance of plastics
- Protection of the soil ecosystem
- Preference for environmentally friendly geosynthetic sealants
- Energy-saving IoT systems
- Up to 80% reduction in construction time
- Long life cycle



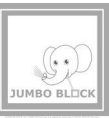
ADAPTATION TO CLIMATE CHANGE

- Rainwater retention
- Water storage, and infiltration
- Reduction and avoidance of surface sealing
- Increase in groundwater level
- Irrigation and emergency watering of sensitive ecosystems



Prevent water scarcity and flooding!

- Freely configurable
- Easy and quick to install
- Up to 80% reduction in construction time
- Environmentally friendly
- Recyclable, reusable
- High life cycle
- Sealing with geoconstruction materials
- Inexpensive

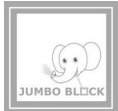


Thank you for your attention.

It has been a great pleasure
for us to share this
presentation with you.

We hope you enjoyed it.





Imprint

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Commercial register number: HRA 7687
VAT ID: DE340292357



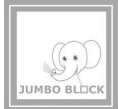


JUMBO BLOCK® Prezentacija

Rješenja za otporno vodosnabdijevanje

Novembar 2023





O nama

Timu

Prezentacija proizvoda

JUMBO BLOCK®, uporediv sa in situ betonom

Kao beton na licu mjesta, samo brže

JUMBO BLOCK®

Modularni dizajn

Statika

Fleksibilno rješenje

Mogućnosti

Sloboda planiranja

Primjeri općina

Zadržavanje kišnice

Prostor za zadržavanje uprkos razvoju

Industrije i hemije

Poljoprivredni

Pametno rješenje

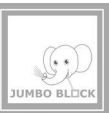
Podaci o nivou vode i IoT s IOTA tehnologijom

Životna sredina i očuvanje prirode

Održivost i utjecaj na okoliš

Prilagođavanje klimatskim promjenama

Sažetak



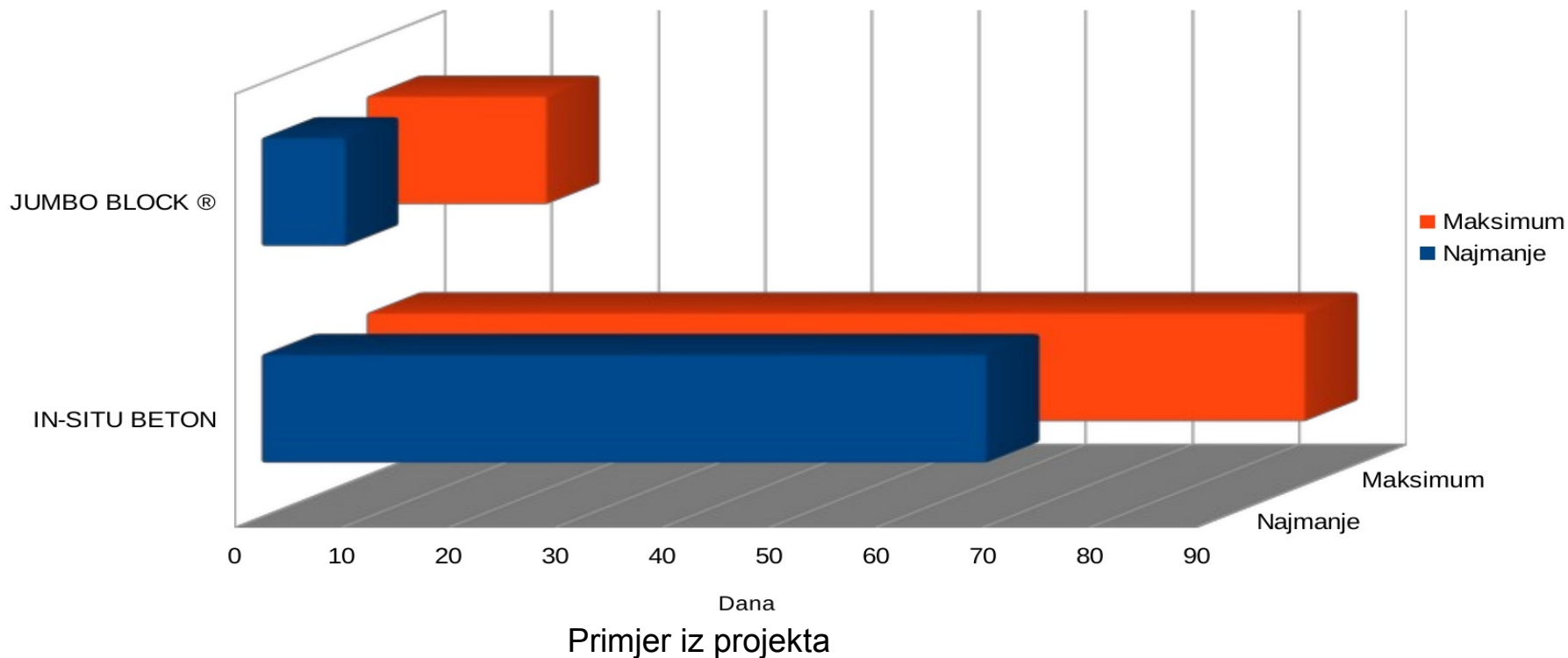


JUMBO BLOCK ® je uporediv sa in situ betonom.

- Armiranog betona !
- Visok kapacitet nosivosti!
- Visoka otpornost!
- dugovečnost!



VRIJEME IZGRADNJE IN-SITU BETON VS JUMBO BLOCK ®

Uporedivi rezervoar za vodu 1362 m³ / 98 JUMBO BLOCK ®

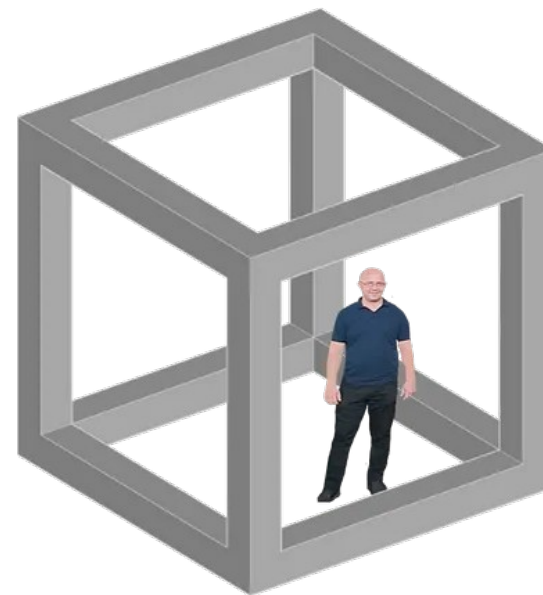


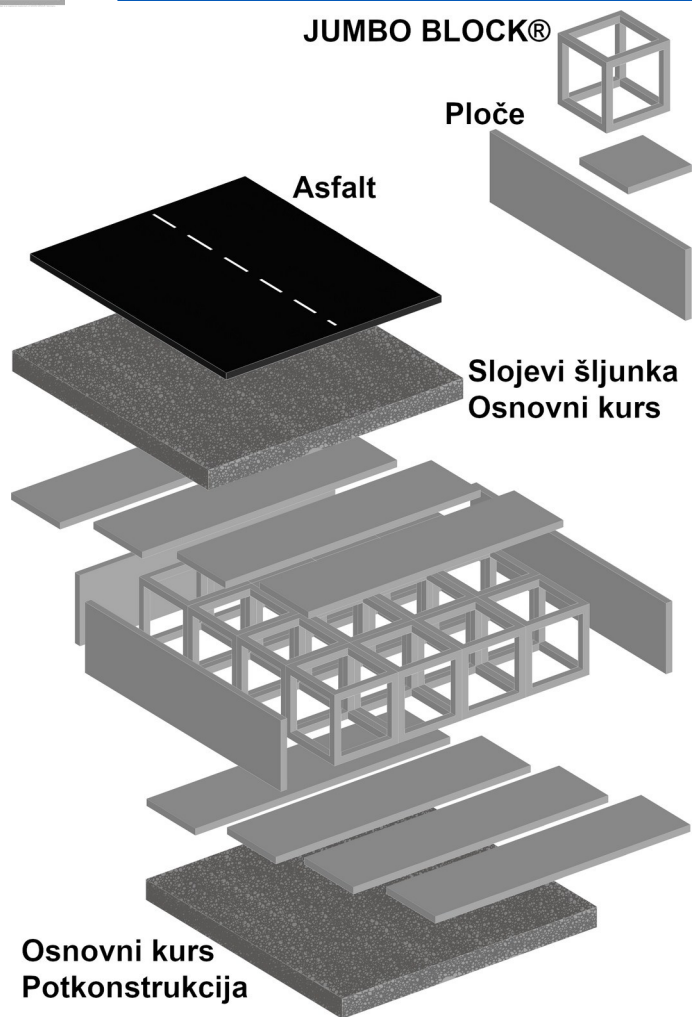
Metrika

- Nosivost SLW 60
- Dužina ruba bloka
2,5 mx 2,5 mx 2,5 m
- Materijal
Uglavnom zeleni beton
(beton sa smanjenim CO2)
- Kapacitet
13,9 m³ vode
- Površinska zapremina
2.224 litara/m² vodenog
stupca



Izrada kalupa Metal Synergy doo





JUMBO BLOCK ® primjer montaže

- asfaltni kolovoz
 - Slojevi šljunka (osnovni sloj)
 - JUMBO BLOCK ® šuplji blok
 - Ploče za zatvaranje (min. 2,5 x 2,5 m)
-
- Sa pločama za skladištenje vode ispod
 - U slučaju skladištenja vode, brtve, geograđevinski materijali ili folije u slučaju tvari koje zagađuju vodu
 - U slučaju curenja, bez zaptivanja i otvorenog tla

Preko 4 tone stabilnosti



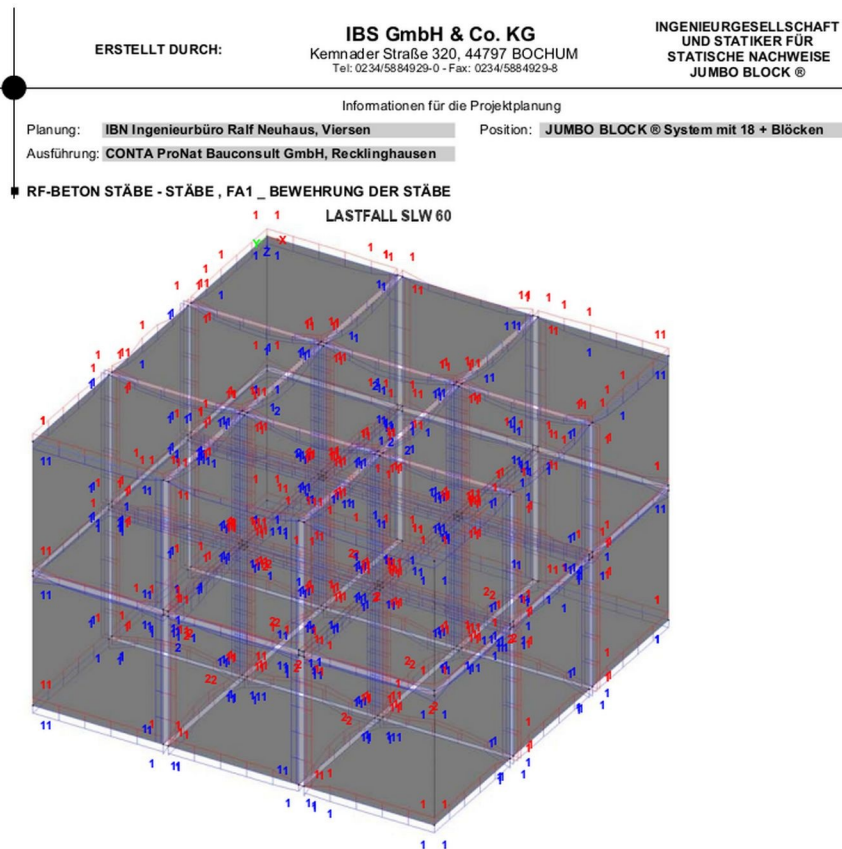
Velike reference projekta

Frankfurt, Njemačka

- West Side Tower
- Henning Tower
- Stambeni razvoj
Stresemannallee

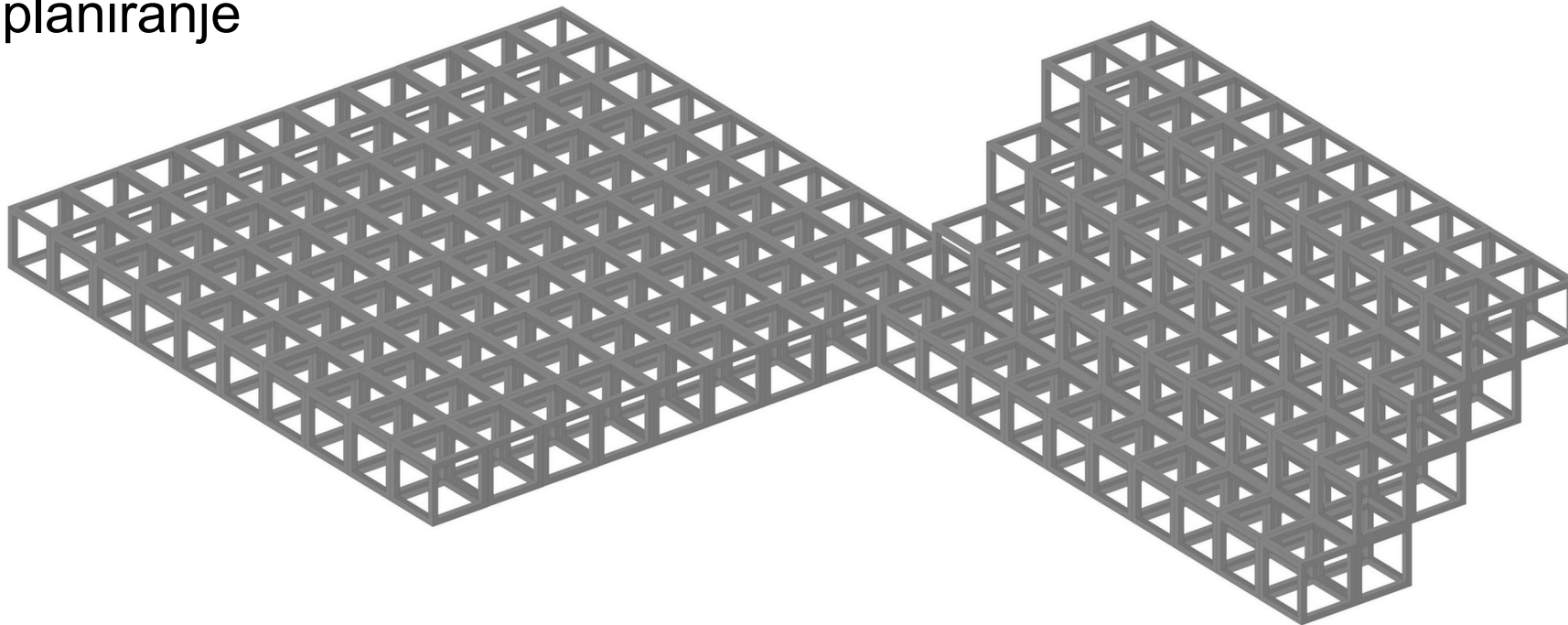
Offenbach, Njemačka

- Hafengold stambeni razvoj





Lako planiranje

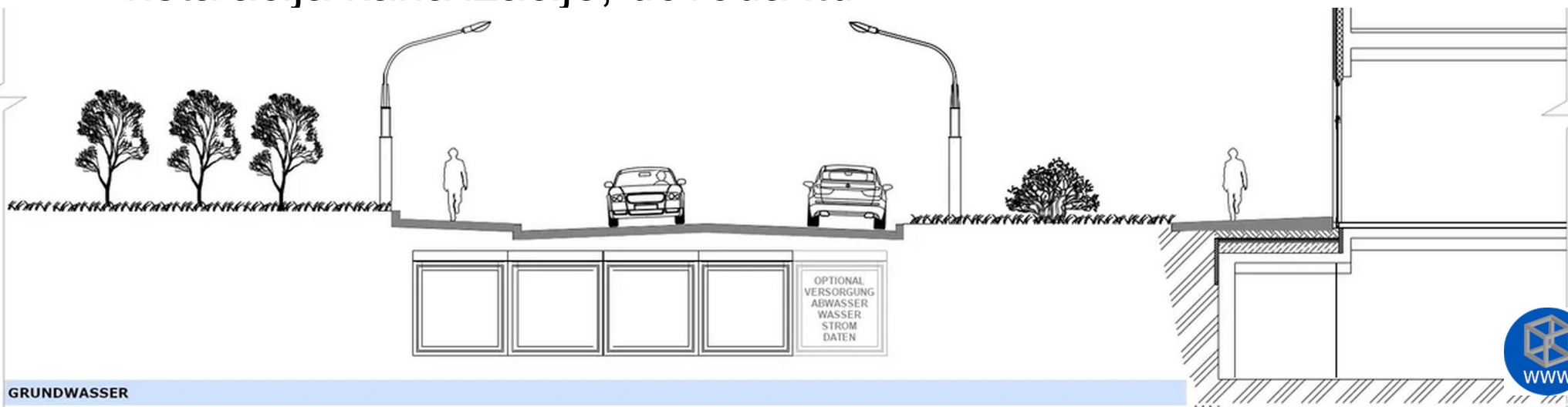


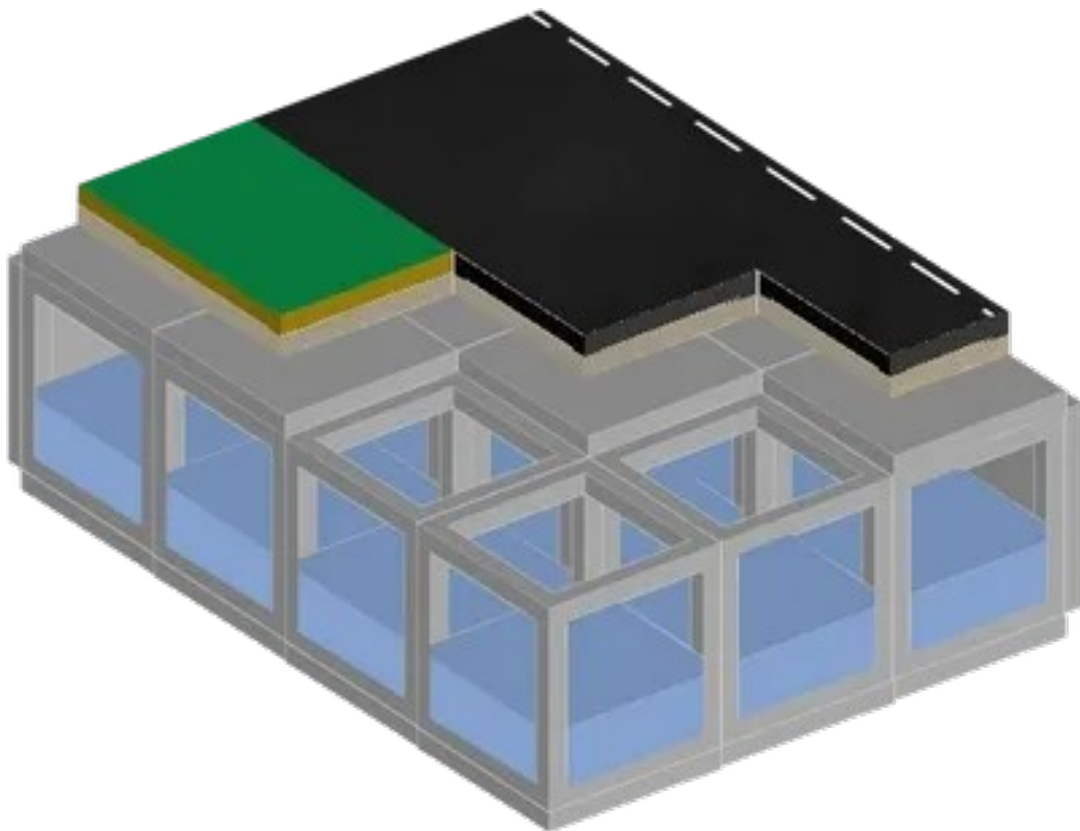
- Blok: 2,5 * 2,5 * 2,5 m (širina * dužina * visina)
- Ploče: 2,5 * 2,5 - 10,0 * 0,125 - 0,25 m (širina * dužina * debljina)



Sloboda planiranja

- Može se nadgraditi i sposoban je za put
- Do 80% smanjenje vremena izgradnje
- Smanjuje radove na putu
- Instalacija kanalizacije, dovoda itd.

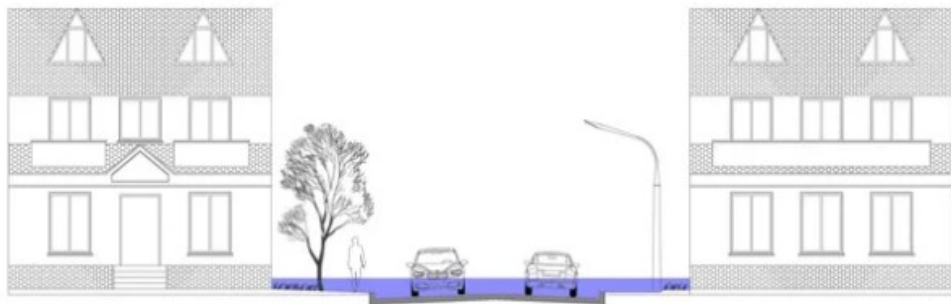




Zadržavanje kišnice Zadržavanje u unutrašnjosti grada

- Ispod ulica
- Pod trgovima
- Pod zgradama
- pod otvorenim prostorima
- ...



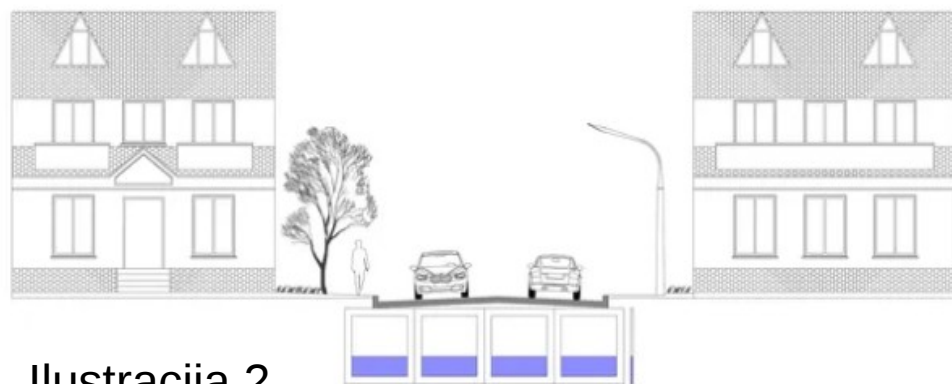


Ilustracija 1

Studija slučaja poplave

Primjer proračuna uličica širine 15 m, dubine 2,5 m. Zatvoreno područje (npr. grad, stari grad, itd.)

Teoretski volumen u ovoj uličici na dubini od 2,5 m: 19,8 m³ kišnice, sa prikazanim nivoom vode.



Ilustracija 2

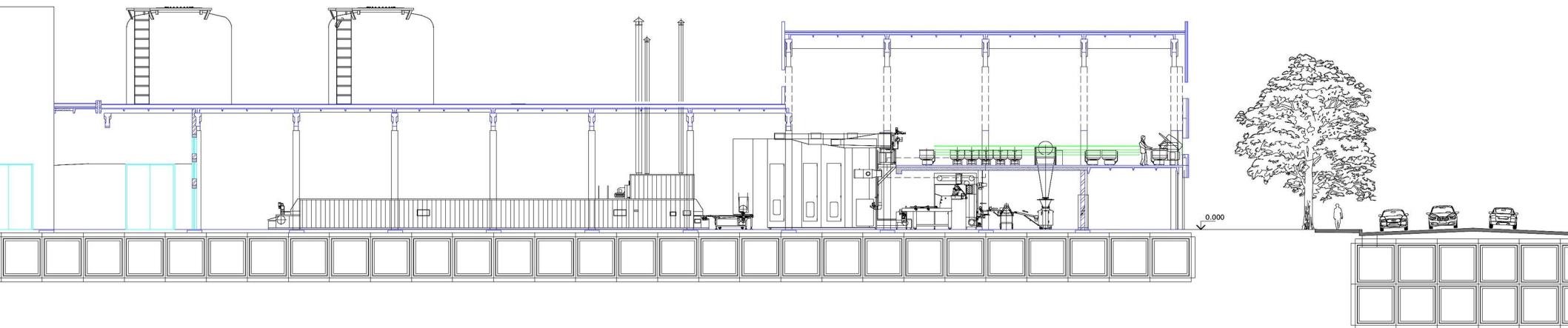
Primjer JUMBO BLOCK ® načina djelovanja u slučaju poplave kao što je prikazano na Ilustracija 1.

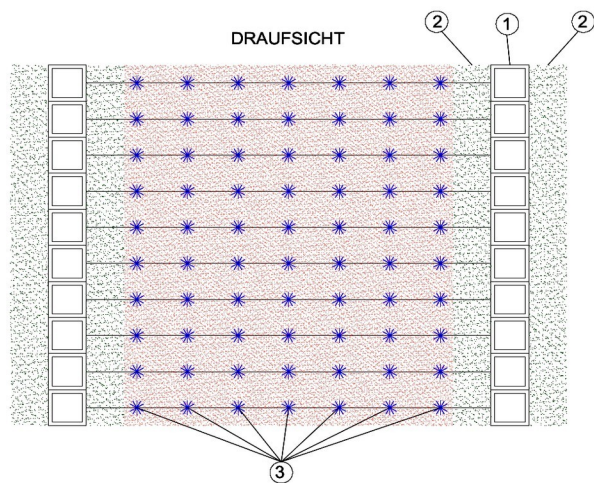
Potrebna retenciona zapremina: 19,8 m³
Raspoloživa retenciona zapremina: 55,6 m³ u nizu od 4 bloka

Vjerovatnoća poplave: 0%



Rezervoar za gašenje, procjeđivanje i rezervoar za vodu





Rješenje za eroziju tla
i nedostatak vode

Primjer u obliku podzemnog navodnjavanja.

Moguć je svaki oblik povlačenja i distribucije!



Podaci o nivou vode i IoT sa IOTA tehnologijom



1. Praćenje nivoa vode
2. Analiza podataka i prognoze
3. Automatsko upravljanje
4. Inteligentno održavanje
5. Transparentnost i povjerenje
6. Pogodnosti za opštine i infrastrukturne operatere

Prijenos, na primjer preko mreže širokog dometa (LoRaWAN)

ZAŠTITA ŽIVOTNE SREDINE I PRIRODE



- Održivo korištenje materijala kroz recikliranje i ponovnu upotrebu
- Ekološki prihvatljiva razgradivost
- Beton sa smanjenom emisijom CO₂
- Odstupanje od plastike
- Zaštita ekosistema tla
- Prednost ekološki prihvatljivih geosintetičkih brtvila
- Ušteda energije putem IoT sistema
- Smanjenje vremena izgradnje do 80%
- Dug životni ciklus



PRILAGOĐAVANJE KLIMATSKIM PROMJENAMA

- Zadržavanje, skladištenje i infiltracija kišnice
- Smanjenje i izbjegavanje površinske zbijenosti
- Povećanje nivoa podzemnih voda
- Navodnjavanje i hitno zalijevanje osjetljivih ekosistema



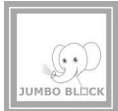
Spriječite nestašicu vode i poplave!

- Slobodno podesivo
- Lako i brzo se instalira
- Do 80% smanjenje vremena izgradnje
- Ekološki prihvatljivo
- Može se reciklirati, reciklirati
- Visok životni ciklus
- Zaptivanje geograđevinskim materijalima
- Jeftin



Hvala vam na pažnji.

Bilo nam je veliko
zadovoljstvo i nadamo se
da ste uživali u
prezentaciji.



Impresum

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PDV ID: DE340292357

