DTEX

EN · 2026



Explosive Demolition

Urban · industrial structures · earthquake zones

SULAYMANIYAH · IRAQ · 2018

DTEX-TR.COM

the science of explosives,

THE DISCIPLINE OF SAFETY

Bringing down a building with explosives in the middle of a city, with the neighbour only a few metres away, takes calculation, experience and discipline. DTEX combines explosives engineering with its own structural analysis software and field measurement.



SULAYMANIYAH · 2018 — PREPARING COLUMN CHARGES

01 — DTEX IN NUMBERS

Measurable confidence.

In the city, in earthquake zones and in industrial plants, every blast is based on structural analysis and blast design. Operations are run by our own internationally and NATO-certified, licensed team.

25+

YEARS

Explosives engineering and field experience of the founding team

7

COUNTRIES

Field work: Türkiye, Iraq, Azerbaijan, Georgia, Ukraine · Consultancy: Jordan, Saudi Arabia

7 m

NEAREST BUILDING

Distance between the demolished building and its neighbour in İskenderun

0

DAMAGE

No recorded damage to surrounding structures in our documented demolition projects

CONTENTS

In this catalogue

02 Who we work for 06

03 What sets us apart: DTEX-CAE 08

04 Method 14

05 İskenderun · neighbour 7 metres away 16

06 Kartal · four buildings in the city 18

07 Hassa · one after another in the earthquake zone 20

08 Bridges, silos and cooling towers 22

09 Beyond borders 24

10 Our projects 26

11 What we deliver 32

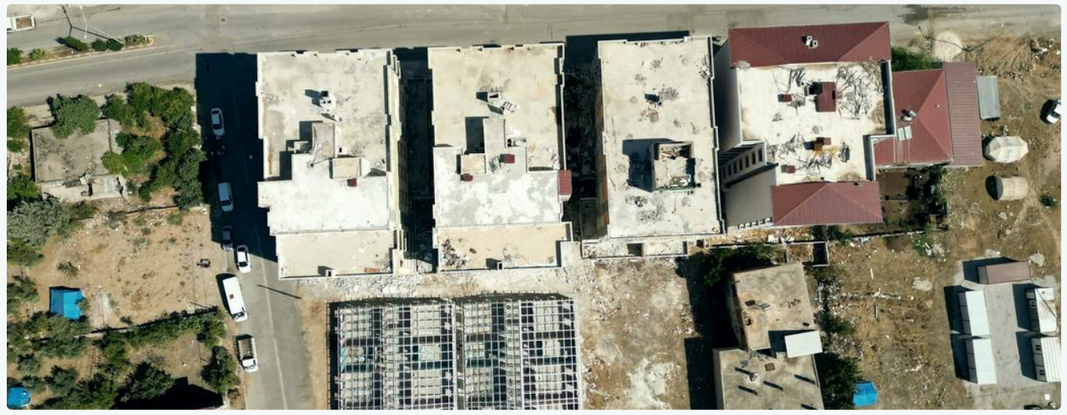
12 Work with us 34

One team, four different needs.



01 Demolition contractors

We take on the blasting phase: design, permits and licences, charging, firing and measurement. You focus on the site and the debris.



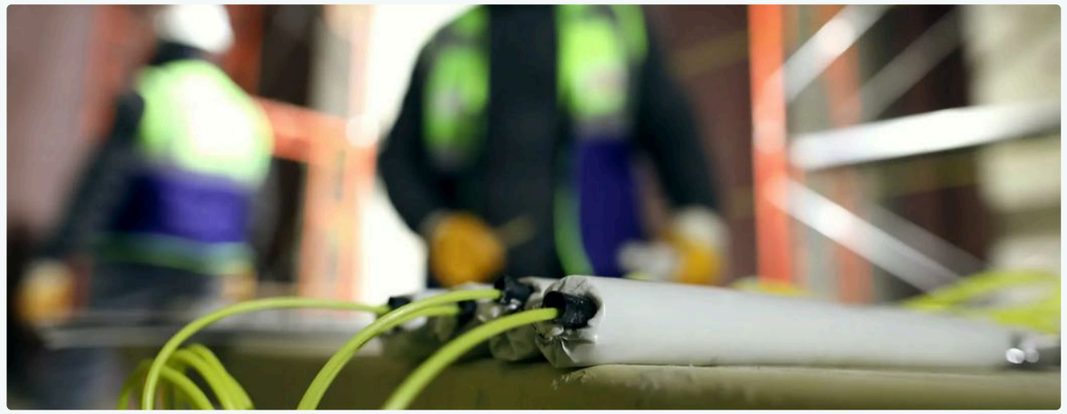
02 Public authorities and municipalities

Safe, documented demolition of earthquake-damaged and high-risk buildings and in urban regeneration areas; consultancy on tender and technical specification preparation.



03 Industrial and energy plants

A demolition method tailored to the structural system for silos, towers, hyperbolic structures such as cooling towers, bridges and industrial plants.



04 Explosives manufacturers and suppliers

An engineering and execution partner for the safe, permitted use of explosives in urban demolition.

Whatever you need, design and execution come from one hand.

03 — WHAT SETS US APART · DTEX-CAE

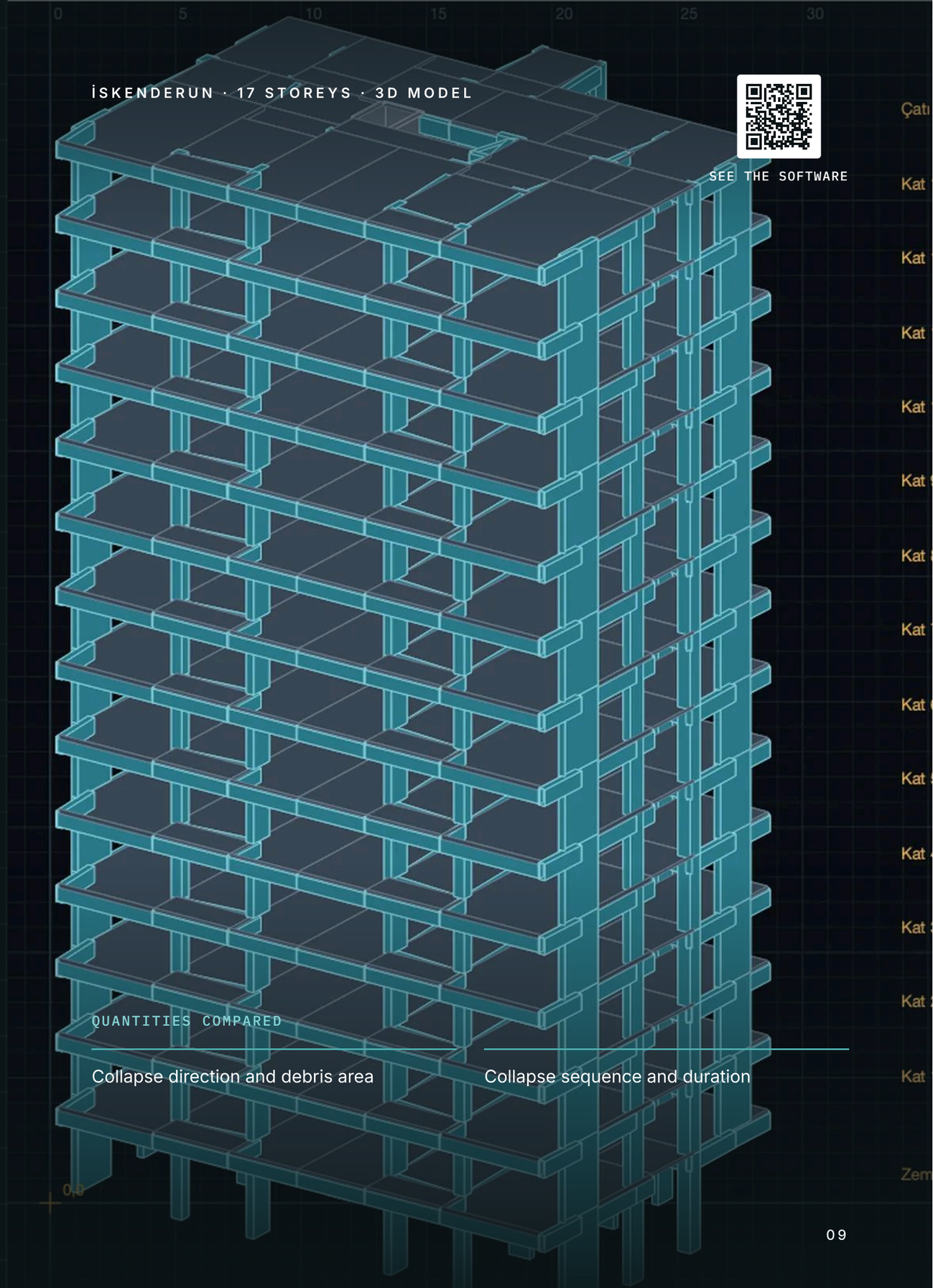
We design with our own software.

DTEX-CAE is an AEM-based collapse analysis software developed by DTEX, with all rights owned by DTEX. We design our demolitions with it: which members to cut, the delay sequence, the collapse direction and the debris area are calculated before the blast.

İSKENDERUN MODEL · SINGLE RUN

20,082	287,992	1,551,206	≈190 h
BLOCKS	SPRINGS	TIME STEPS	COMPUTING TIME

AEM	Applied Element Method: the structure is modelled as separable elements; cracking, separation and collapse are computed.
3D MODEL	Columns, beams, shear walls, slabs and reinforcement; cutting and pre-weakening scenarios.
FIELD	In İskenderun, the analysis results are being compared with the actual collapse.



Same camera, same second.

On the left, drone footage of the blast in İskenderun; on the right, the DTEX-CAE model of the same building. The model plays from the same angle as the field camera and in real time; the collapse direction matches the field record.





LEFT: FIELD · RIGHT: DTEX-CAE MODEL · SAME CAMERA ANGLE · REAL TIME

FIELD · İSKENDERUN · 2023

In the middle of the city, with the nearest building 7 metres away.

17	7 m	12.0 s	
STOREYS	NEAREST BUILDING	SIMULATED	WATCH THE VIDEO

QUANTITIES COMPARED

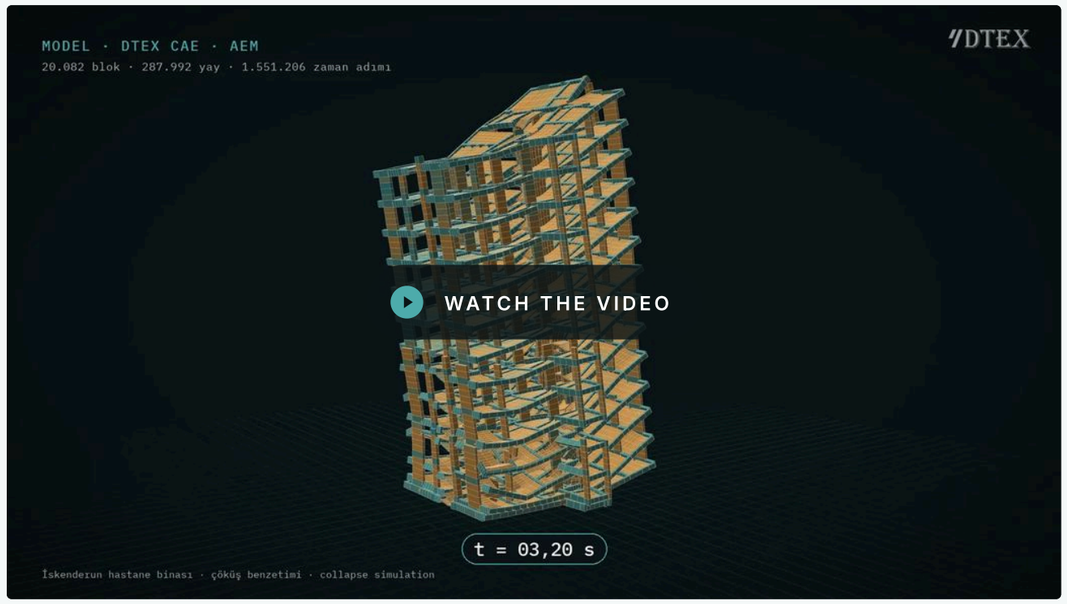
- Collapse direction and debris area
- Collapse sequence and duration

Model output; field back-analysis. The model comes from run R2 and the footage from the blast of the same building.

03 — DTEX-CAE · SAMPLE ANALYSES

Which member, when, and in which direction?

DTEX-CAE answers the questions of demolition design with numbers: which columns and walls to cut, the delay sequence, the direction the structure will fall and where the debris will spread. The views on this spread are taken from the DTEX-CAE model of the İskenderun hospital building.



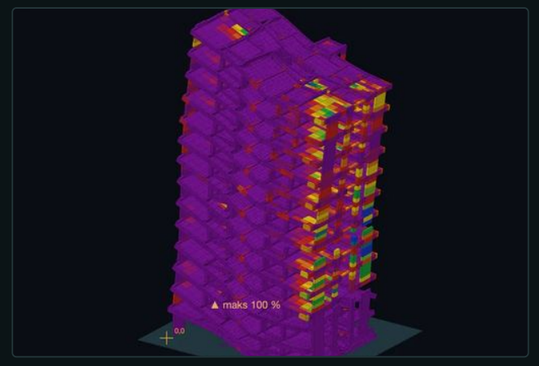
DTEX-CAE · COLLAPSE MODEL · ORBITING CAMERA

COLLAPSE SEQUENCE · ANALYSIS FRAMES



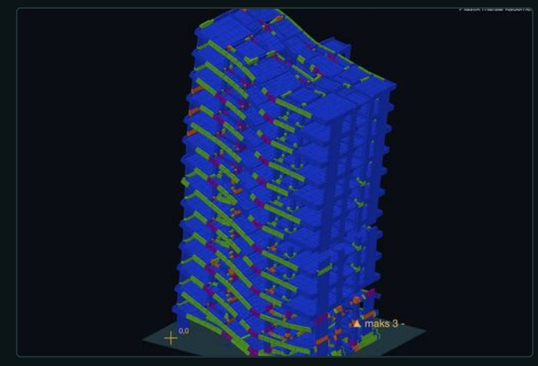
0 s | 2 s | 3.2 s | 4.4 s | 6 s

RESULT VIEWS · İSKENDERUN MODEL



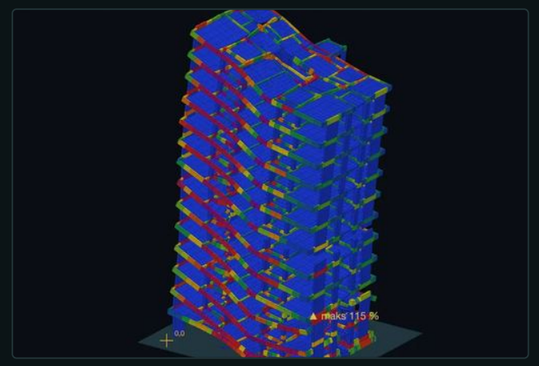
Concrete damage / cracking

Cracking and the spread of damage through the members.



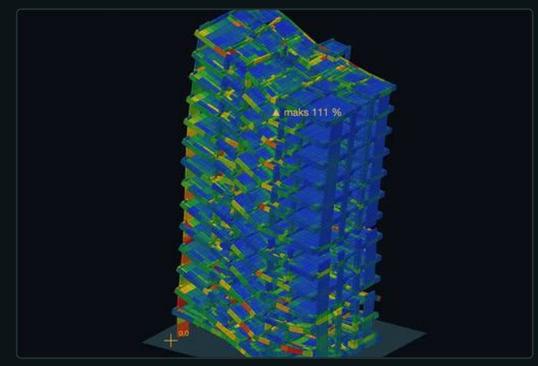
Plastic hinges

Points where sections yield and rotation concentrates.



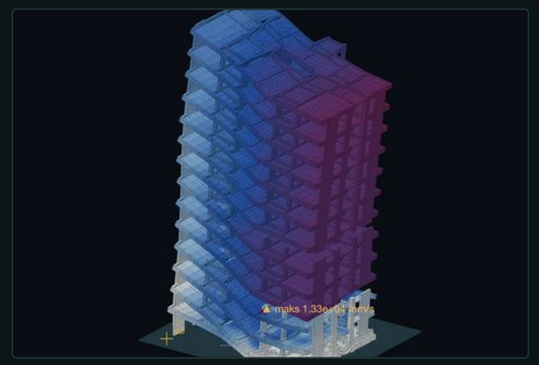
Reinforcement stress

Stress ratio in the reinforcement; bars approaching yield and rupture.



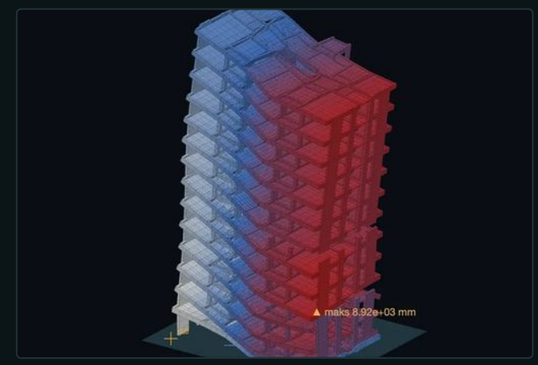
Concrete stress

Distribution of the concrete stress ratio through the structure.



Sudden member removal

Dynamic redistribution of load the moment a member is removed.



Displacement

Displacement of every element during the collapse.

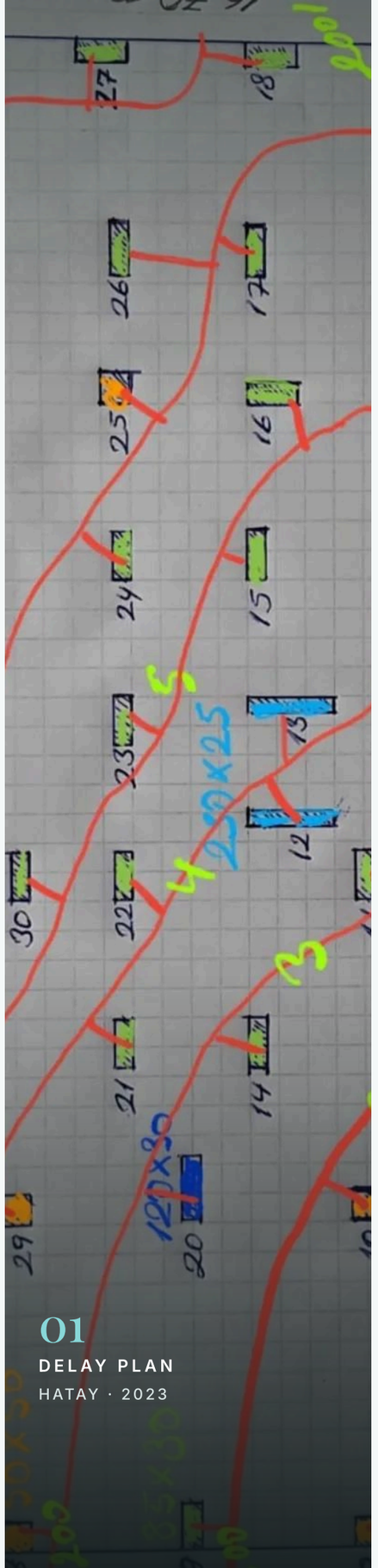
Structural Analysis and Blast Design

01 **Survey and digital model**
The structural system and damage are built into a three-dimensional model.

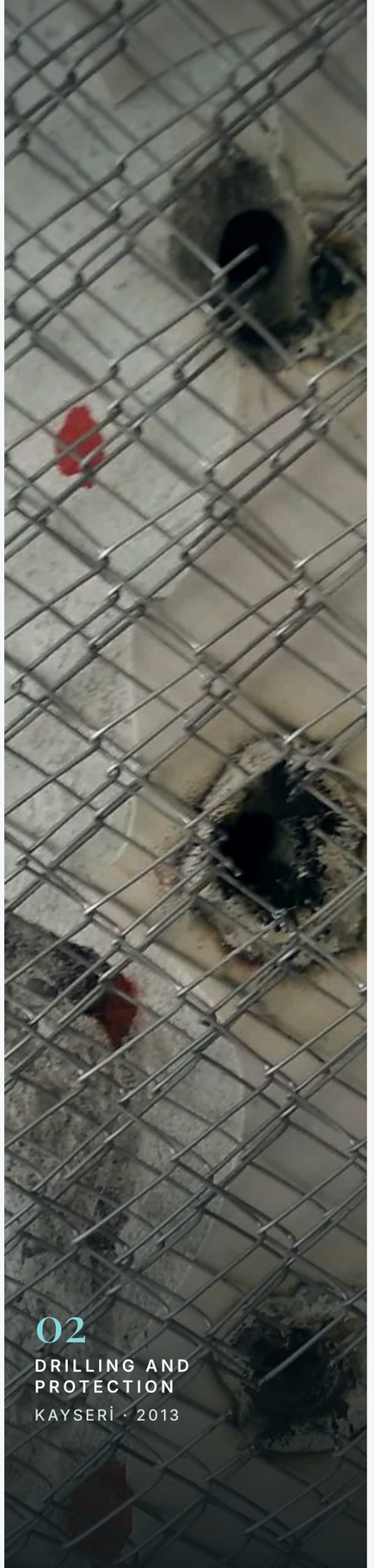
02 **Structural analysis**
DTEX-CAE identifies the critical members, the collapse direction and the debris area.

03 **Permits, licences and safety**
We prepare the permit documentation and obtain the permits and licences.

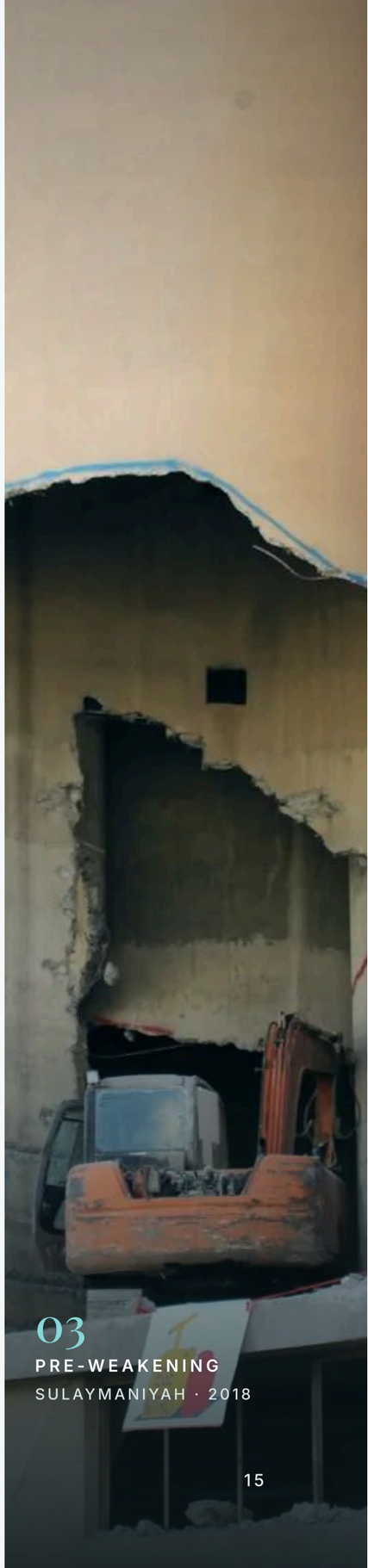
04 **Blast and measurement**
Millisecond-delay initiation; vibration is recorded by seismograph.



01
DELAY PLAN
HATAY · 2023



02
DRILLING AND PROTECTION
KAYSERİ · 2013



03
PRE-WEAKENING
SULAYMANIYAH · 2018

HOSPITAL BLAST

SYNCHRONISED DEMOLITION

The neighbour 7 metres away.

An earthquake-damaged 17-storey building was brought down by progressive collapse in the middle of the city.

17
STOREYS

7 m
NEAREST BUILDING

≈ 5 s
COLLAPSE TIME





06 — URBAN REGENERATION

In the city, all at once.

As part of urban regeneration, 4 buildings were brought down progressively in a single blast. Debris spread stayed within 10 metres; no damage occurred to surrounding buildings.

4
BUILDINGS

17
STOREYS

12 m
NEAREST BUILDING

AFTER THE BLAST · SURROUNDING BUILDINGS STANDING



THE BLAST · AERIAL VIEW

07 — EARTHQUAKE ZONE

In the earthquake zone, one after another.

In Hassa, numerous earthquake-damaged buildings were demolished with explosives: adjoining buildings, two buildings in a single blast and high-rises. The recorded vibration stayed below one third of the DIN 4150-3 limit for sensitive structures.

1.646 mm/s
PEAK VECTOR SUM

31.9%
OF THE DIN 4150-3 LINE 3 LIMIT



AFTER THE BLAST · THE NEIGHBOURING BUILDING STILL STANDING

ADJOINING

TWO BUILDINGS

HIGH-RISE



22

BALANCED-CANTILEVER BRIDGE PIER

08 — SPECIAL STRUCTURES

Bridges, silos, cooling towers.

For bridges, silos, towers and hyperbolic structures such as cooling towers, the hole pattern, charges and delay plan follow the structural system. Example: the C50 concrete pier of a balanced-cantilever bridge was brought down with 660 holes and delays spread over 3.1 seconds; vibration measured at 250 metres was 0.38 mm/s.

660
HOLES · 13 ROWS

C50
CONCRETE GRADE

0.38
mm/s · AT 250 m



CHARGING · BRIDGE PIER · 2018



MOTORWAY BRIDGE · GEBZE 2014



SILO · SULAYMANIYAH 2018



TOWER FALLING · AERIAL VIEW



Beyond borders.

SULAYMANIYAH · IRAQ	Grain silo complex: 64 reinforced-concrete silos; silos 42 m, towers 55 m
NAKHCHIVAN · AZERBAIJAN	Silo complex: elevator tower and silo row
FIELD WORK AND CONSULTANCY	Field work: Iraq, Azerbaijan, Georgia, Ukraine · Consultancy: Jordan, Saudi Arabia

WATCH THE SULAYMANIYAH BLAST

Field-proven references.

Scan the QR code with your phone camera to watch the demolition.

01 **State hospital**
İSKENDERUN · 2023
17 storeys · neighbour 7 m away · progressive collapse

02 **Earthquake-damaged buildings**
İSKENDERUN · 2023
17 storeys + 4 basements · synchronised demolition

03 **Adjoining buildings**
HASSA · 2023
Earthquake zone · demolition between two buildings

04 **Two buildings in one blast**
HASSA · 2023
Earthquake zone · two buildings in one blast

05 **High-rise**
HASSA · 2023
Earthquake zone · progressive implosion

06 **Hospital building**
DONETSK · UKRAINE · 2025
Neighbour 15 m away · progressive implosion

07 **Four residential blocks**
KARTAL · ISTANBUL · 2013
17 storeys · neighbour 12 m away · in one blast

Every structure different; the same discipline.

14 PROJECTS · 11 VIDEOS

08 **Military housing · 10 buildings**
SARIGAZİ · ISTANBUL · 2012
The first urban regeneration project carried out with explosives in Türkiye

09 **Reinforced-concrete building**
KAYSERİ · 2013
Demolition with column drilling, wrapping and protection

10 **Grain silo complex**
SULAYMANIYAH · IRAQ · 2018
Silos 42 m · 64 reinforced-concrete silos

11 **Concrete silo tower**
SULAYMANIYAH · IRAQ · 2018
55 m · directional felling

12 **Grain silo complex**
NAKHCHIVAN · AZERBAIJAN · 2014
Elevator towers · progressive implosion

13 **Bridge pier · balanced cantilever**
TÜRKİYE · 2018
C50 concrete · 660 holes · 0.38 mm/s at 250 m

14 **Motorway bridges**
GEBZE · 2014
O4 motorway · 2 bridges

FEATURED VIDEOS

Our most-watched demolitions.

The most-watched records on our YouTube channel. Click the image or scan the QR code.



İSKENDERUN · SHORT
State hospital



HASSA · SHORT
From the street



SULAYMANIYAH · SHORT
42 m silos



İSKENDERUN · SHORT
Hospital tower, aerial



NAKHCHIVAN · SHORT
Two silo towers in one blast



SEISMIC · SHORT
Seismic survey with explosives

PROMO FILM · 2:21



Collapse, by engineering design.

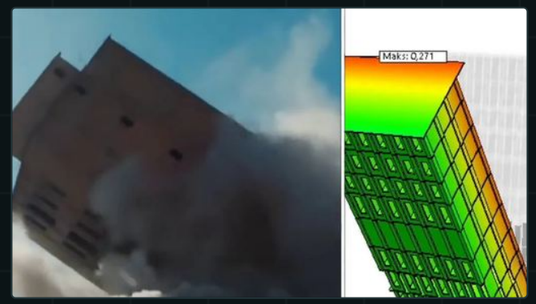
Explosive demolition, DTEX-CAE collapse analysis and real field footage from our work in Türkiye, Iraq, Azerbaijan and Ukraine.

WATCH THE FILM

STRUCTURAL ANALYSIS VIDEOS



DTEX-CAE · VIDEO
Structural analysis and explosive demolition



SULAYMANIYAH · VIDEO
Planning, analysis and execution

All videos

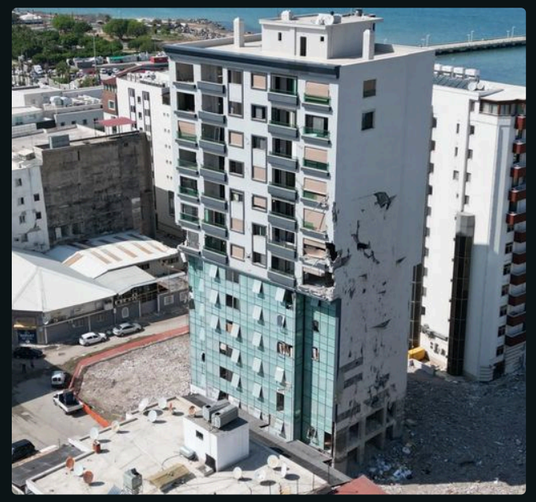
All 33 videos are in the video archive of the digital catalogue and on our YouTube channel: @dtexdemolition

YOUTUBE

FROM THE FIELD

From preparation to debris.

Pre-blast preparation, protection, charging and collapse: selected field images from our projects.



İSKENDERUN · 2023 · BEFORE THE BLAST



KARTAL · 2013 · DUST SUPPRESSION AFTER THE BLAST



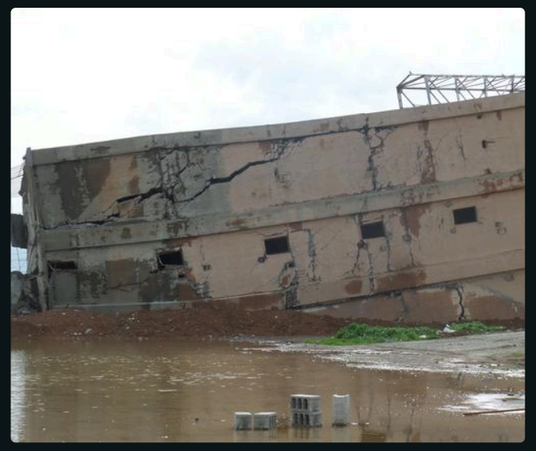
NAKHCHIVAN · 2014 · COLUMN CHARGES AND FIRING LINE



SARIGAZİ · 2012 · COLLAPSE



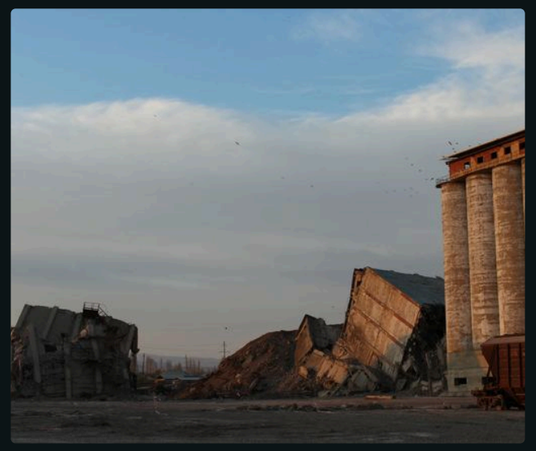
SULAYMANIYAH · 2018 · SILO TOWER BEFORE THE BLAST



SULAYMANIYAH · 2018 · AFTER THE BLAST



NAKHCHIVAN · 2014 · SILO COMPLEX



NAKHCHIVAN · 2014 · PROGRESSIVE COLLAPSE



KARTAL · 2013 · FOUR BLOCKS, ONE BLAST



SARIGAZİ · 2012 · PROTECTIVE SCREENS

What you hold at the end of the project.

01 **Structural survey and digital model**
The structural system, damage and surrounding buildings are built into a three-dimensional model.

02 **DTEX-CAE structural analysis report**
Critical members, collapse direction, collapse sequence and debris area.

03 **Demolition design**
Hole pattern, charges and delay plan.

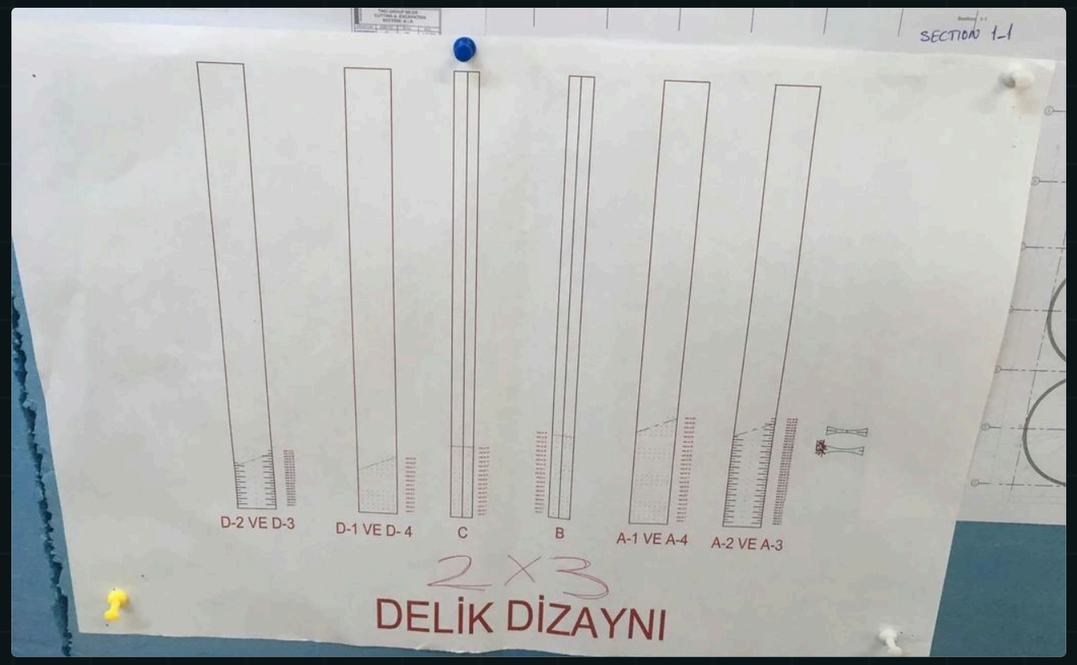
04 **Stability report and risk analysis**
The current condition of the structure and the blast risks are reported.

05 **Permit documentation and licences**
Permit documentation is prepared; DTEX obtains the permits and licences.

06 **Protection and safety plan**
Covers, screens, exclusion zone and evacuation.

07 **Charging, initiation and blast management**
By DTEX's internationally and NATO-certified, licensed team.

08 **Vibration and air overpressure report**
Assessed against DIN 4150-3 and USBM RI 8507.



DESIGN DRAWING · SILO DEMOLITION · JORDAN

MEASUREMENT STANDARDS

DIN 4150-3
Vibration limits for structures

USBM RI 8507
Vibration and air overpressure

LICENSED TEAM

All operations are run by our own internationally and NATO-certified, licensed personnel.

Every step documented; every blast measured.

25+

YEARS OF FOUNDING-TEAM INDUSTRY EXPERIENCE

Technical specification and tender consultancy

For public authorities and private companies that use explosives, we prepare the technical specification and tender documents for explosives procurement, blasting and demolition service tenders, and support a correct, like-for-like evaluation of the bids.

- Technical specification: scope, method, safety, measurement and acceptance criteria
- Tender documents and contract conditions
- Bid evaluation and independent technical opinion
- Execution and supplier inspection

5+ ACADEMIC EXPERTS

6 TECHNICAL SERVICE AREAS

We take on the blasting phase.

- Structural survey, digital model and structural analysis
- Stability report, risk analysis, permits and licences
- Charge design, protection and firing
- Vibration measurement and compliance report
- Technical specification and tender consultancy

Let's talk about your project.

Send us the number of storeys, the structural system, the distance to neighbouring buildings and photographs, and we'll decide the method together.

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info@dtex-tr.com

ALL VIDEOS

VIDEO ARCHIVE

From the field, on our own record.

Blast records from our projects. Scan the QR code with your phone camera or click the title.

33 VIDEOS · YOUTUBE @DTEXDEMOLITION

İSKENDERUN · VIDEO
State hospital

İSKENDERUN · SHORT
State hospital

İSKENDERUN · SHORT
Hospital tower, aerial

HATAY · VIDEO
Earthquake-damaged high-risk buildings

HASSA · VIDEO
Adjoining buildings

HASSA · VIDEO
Two buildings in one blast

HASSA · VIDEO
Collapse and debris

HASSA · VIDEO
20-storey high-rise

HASSA · SHORT
8-storey building

HASSA · SHORT
City-centre demolition

HASSA · SHORT
From the street

HASSA · SHORT
From the safety perimeter

DTEX IN THE PRESS · SHORT
Demolition in the earthquake zone

DONETSK · VIDEO
Demolition in a dense urban area

KARTAL · VIDEO
Building demolition

KARTAL · VIDEO
Four blocks in one blast

KARTAL · SHORT
Explosive demolition

SARIGAZİ · VIDEO
Housing blocks

SARIGAZİ · SHORT
Housing blocks, aerial

SULAYMANIYAH · VIDEO
Grain silo

SULAYMANIYAH · VIDEO
Grain silo, second record

SULAYMANIYAH · VIDEO
Concrete silo tower

SULAYMANIYAH · VIDEO
Planning, analysis and execution

SULAYMANIYAH · SHORT
42 m silos

NAKHCHIVAN · VIDEO
Grain silo

NAKHCHIVAN · VIDEO
Silo elevator

NAKHCHIVAN · VIDEO
Grain silo, second record

NAKHCHIVAN · SHORT
Two silo towers in one blast

DTEX-CAE · VIDEO
Structural analysis and explosive demolition

DRILLING AND BLASTING · VIDEO
Pattern and charge design

MINING AND QUARRYING · VIDEO
Controlled blasting

MINING AND QUARRYING · VIDEO
Vibration control

SEISMIC · SHORT
Seismic survey with explosives

DTEX

the SCIENCE of explosives, the DISCIPLINE of safety

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WEB YOUTUBE

All operations are run by DTEX's own internationally and NATO-certified, licensed personnel.

DTEX SAVUNMA MADENCİLİK MÜHENDİSLİK TİCARET LİMİTED ŞİRKETİ

Adalet Mah. Manas Bul. Folkart Towers No: 47B İç Kapı No: 2601, Bayraklı / İzmir, Türkiye

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