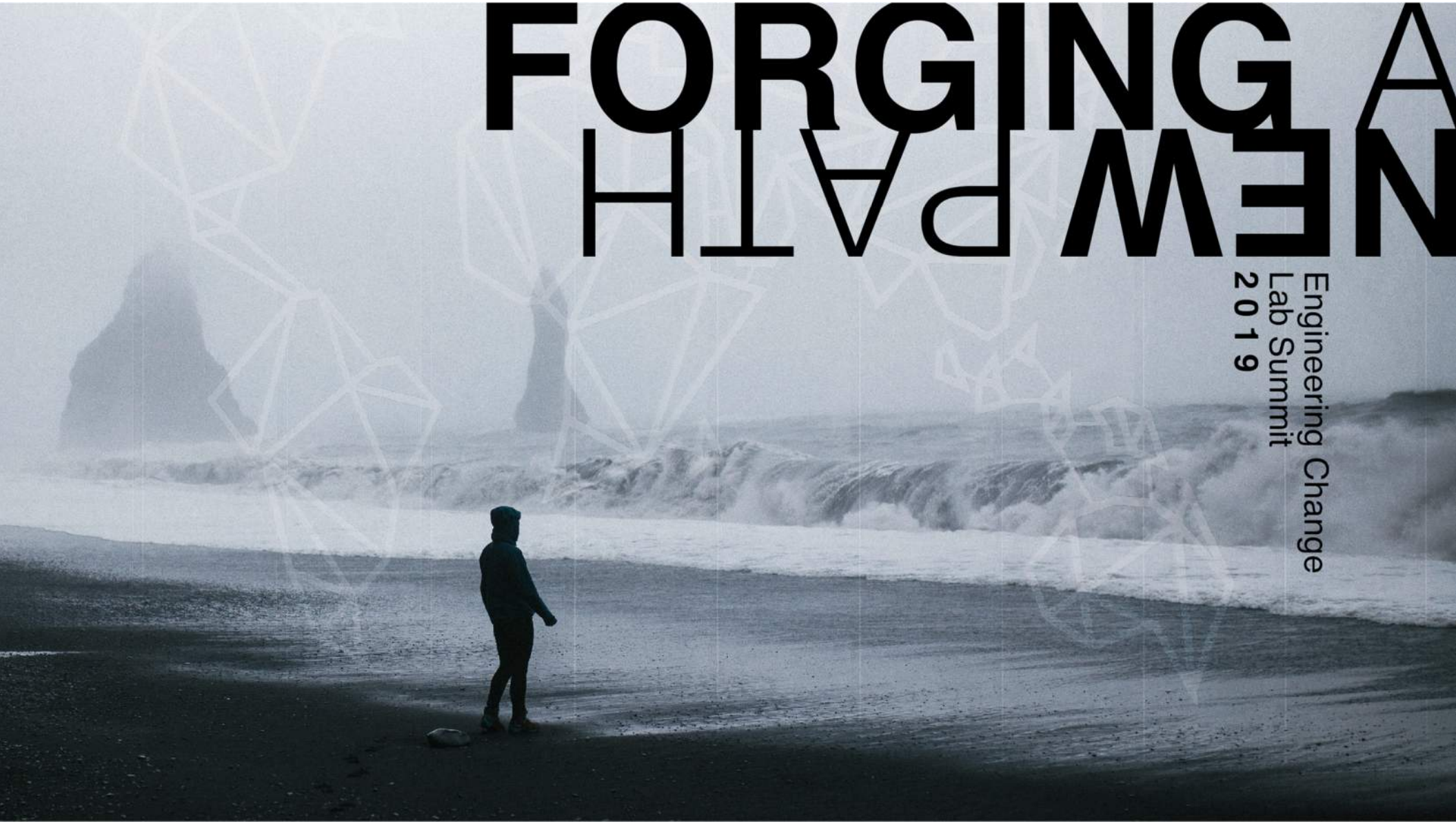


FORGING A NEW PATH

Engineering Change
Lab Summit
2019





MANAGER, EXPERIENCE DESIGN VISUAL STORYTELLER + FUTURIST

Rob Mansperger is the Manager, Experience Design for the Autodesk BID Infrastructure + Generative Design Products with over 20 years of experience designing innovative user experiences for desktop, cloud-based, and mobile products. Rob also provides strategic vision to products and is a published illustrator / cartoonist. Prior to joining Autodesk, Rob designed experiences for a variety of clients, including ECCO® Shoes, Liberty Mutual Insurance, Fidelity Investments, Google, and Microsoft. Rob has been a fervent believer in Agile Design and Development frameworks since 1997.

Rob holds a Bachelor's degree in Illustration from Syracuse University.

ROBERT MANSPERGER

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the **engineering** profession
is at a

crossroads

within the next ten years we are going
to see more change, and at a faster pace
than we ever have. with that change comes
opportunity - opportunity to create value +
differentiation in new ways.

MANAGE RISK
TO ENSURE A MORE

creative
innovative future





automate

REPETITIVE TASKS





design for

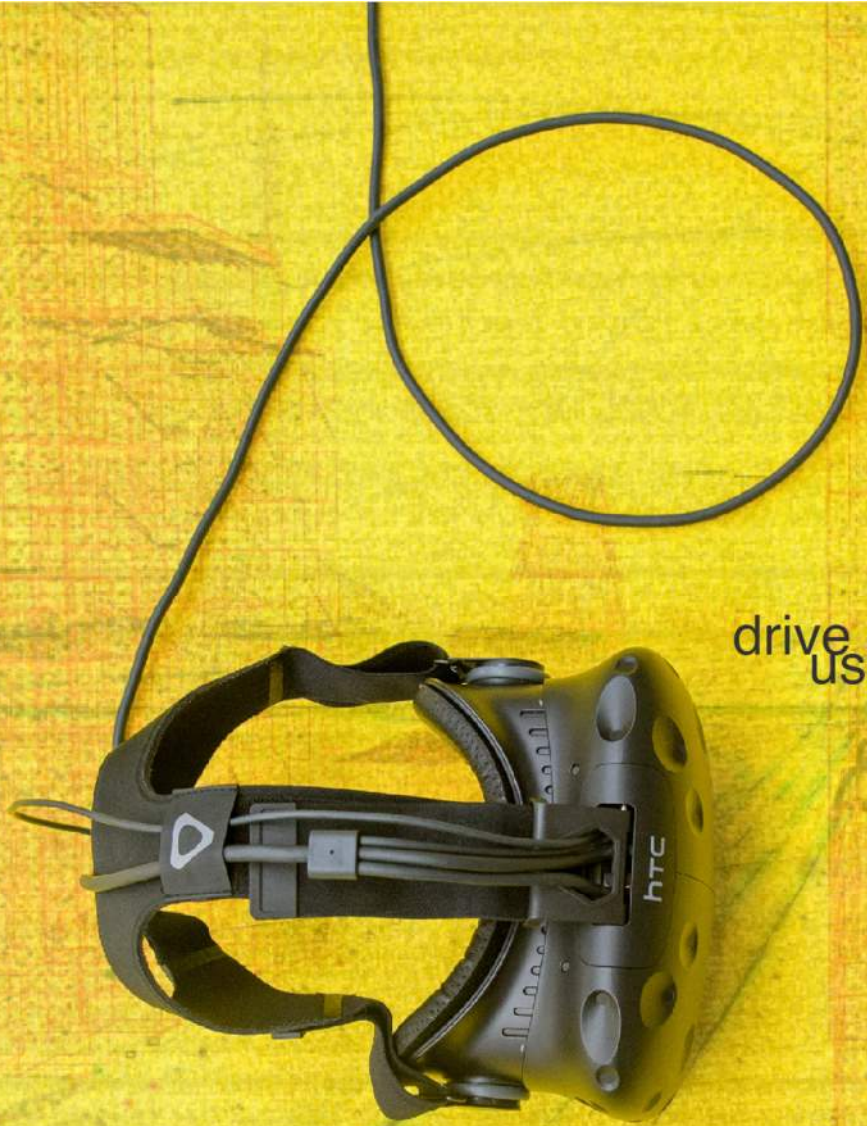
constructibility

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	Excavation	m ³	100	100	10000
2	Concrete	m ³	200	150	30000
3	Reinforcement	kg	5000	10	50000
4	Formwork	m ²	1000	50	50000
5	Labour	man-days	1000	100	100000
6	Transportation	km	1000	100	100000
7	Material	kg	10000	10	100000
8	Equipment	hour	1000	100	100000
9	Site preparation	ha	10	1000	10000
10	Drainage	m	1000	100	100000
11	Lighting	unit	100	1000	100000
12	Signage	unit	100	1000	100000
13	Security	unit	100	1000	100000
14	Insurance	unit	100	1000	100000
15	Contingency	unit	100	1000	100000



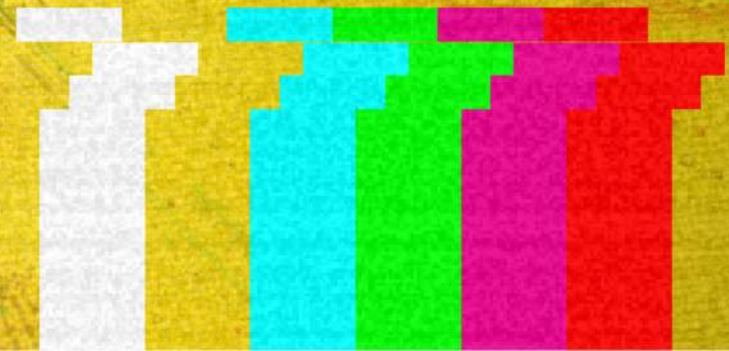
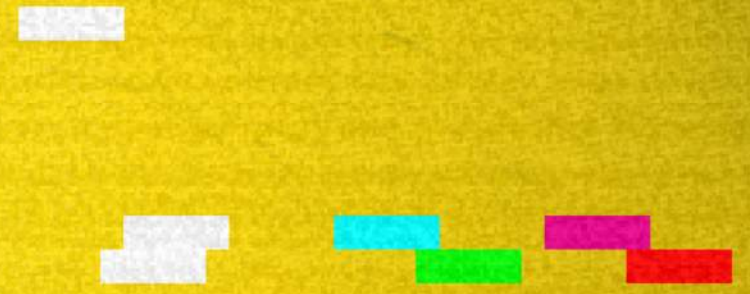
maintain design continuity
through workflows

SUPPORTING COORDINATED
BUT NOT FULLY CONSISTENT
MODELS FOR DIFFERENT
PURPOSES AND AT DIFFERENT
LEVELS OF DETAIL.



drive efficiencies, increase safety + productivity
using

AR + VR + MR



DRONES CAN REACH PLACES WHERE HUMANS CANNOT. PLUS, THEY CAN BE MORE ACCURATE THAN PEOPLE AND CAPTURE SIGNIFICANT AMOUNTS OF DATA AT ONCE. UAVS ARE WIDELY USED FOR DIFFERENT WORKS CONNECTED EITHER WITH HARD-TO-REACH PLACES OR DANGEROUS WORKING CONDITIONS.

drones provide

accurate data acquisition
+ safer access to sites





rethin

how we educate
engineers

“ Engineers will address the complex societal challenges of the 21st century by building a new generation of machines, materials, and systems. We should fundamentally rethink how we educate engineers for this future.

Ed Crawley the Ford Professor of Engineering
Department of Aeronautics and Astronautics and
faculty co-director of the NEET initiative at MIT.

k



reach
for
the
future



Questions



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