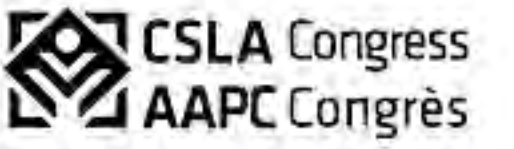


PRESENTATION BY
JUSTIN BENJAMIN TAYLOR



DEADSCAPES:

EVOLVING THE PARADIGMS OF LANDSCAPE ARCHITECTURE

MOVING FORWARD:

ADDRESSING SOCIETY'S CHALLENGES THROUGH NEW PARADIGMS IN LANDSCAPE ARCHITECTURE

THE NEW PARADIGM IS...

THE DE-LIMITATION OF THE LANDSCAPE ARCHITECT

▶ A PROBLEM OF IDENTITY

CSLA Congress
AAPC Congrès

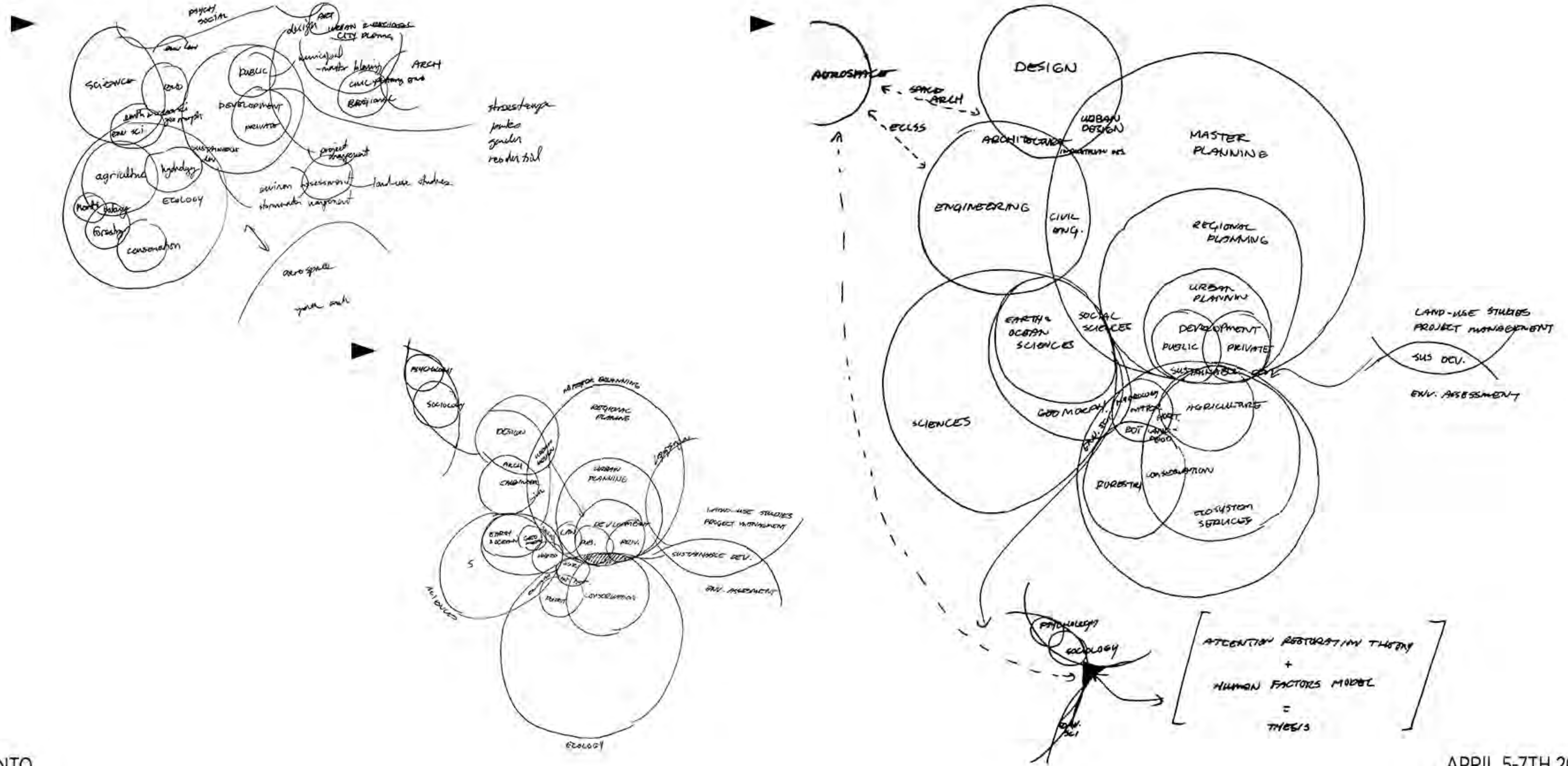


► AN ISSUE OF BRANDING

CAMPSITE DESIGN
CEMETERIES
CHILDREN/YOUTH PARKS
PLAYGROUND & SCHOOL DESIGN
CIVIL ENGINEERING
COLLEGE & UNIVERSITY CAMPUS DESIGN
COMMERCIAL/INDUSTRIAL SITE DESIGN
CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN
GREEN ROOF DESIGN
HIGHWAY/ROADSIDE DESIGN
HISTORIC RESEARCH & CONSERVATION
HI-TECH CAMPUS/CORPORATE DESIGN
HOTELS & RESORTS
INSTITUTIONAL DESIGN
LAND CONSERVATION & RECLAMATION
LAND USE PLANNING & PUBLIC CONSULTATION LANDSCAPE
ASSESSMENT/VISUAL RESOURCE MANAGEMENT
LANDSCAPE ILLUSTRATION
LEED® ACCREDITED PROFESSIONAL
MULTIPLE FAMILY RESIDENTIAL DEVELOPMENTS
NORTHERN LANDSCAPES
PARKS & GREENWAY DESIGN
PLACES OF WORSHIP
PUBLIC ART
RESIDENTIAL GARDEN DESIGN
SITE FURNISHINGS DESIGN
STORMWATER MANAGEMENT
SUSTAINABLE LANDSCAPES
THEME PARKS & FAIRGROUNDS
THERAPEUTIC LANDSCAPES
URBAN DESIGN
WATERFRONT DEVELOPMENT & RESTORATION
WETLAND REMEDIATION & STREAM CORRIDOR RESTORATION
WILDLIFE PRESERVES & ZOOS MASTER PLANNING



► DE-LIMITATION



DISCIPLINARY
KNOWLEDGE
V.
PRACTICAL
KNOWLEDGE

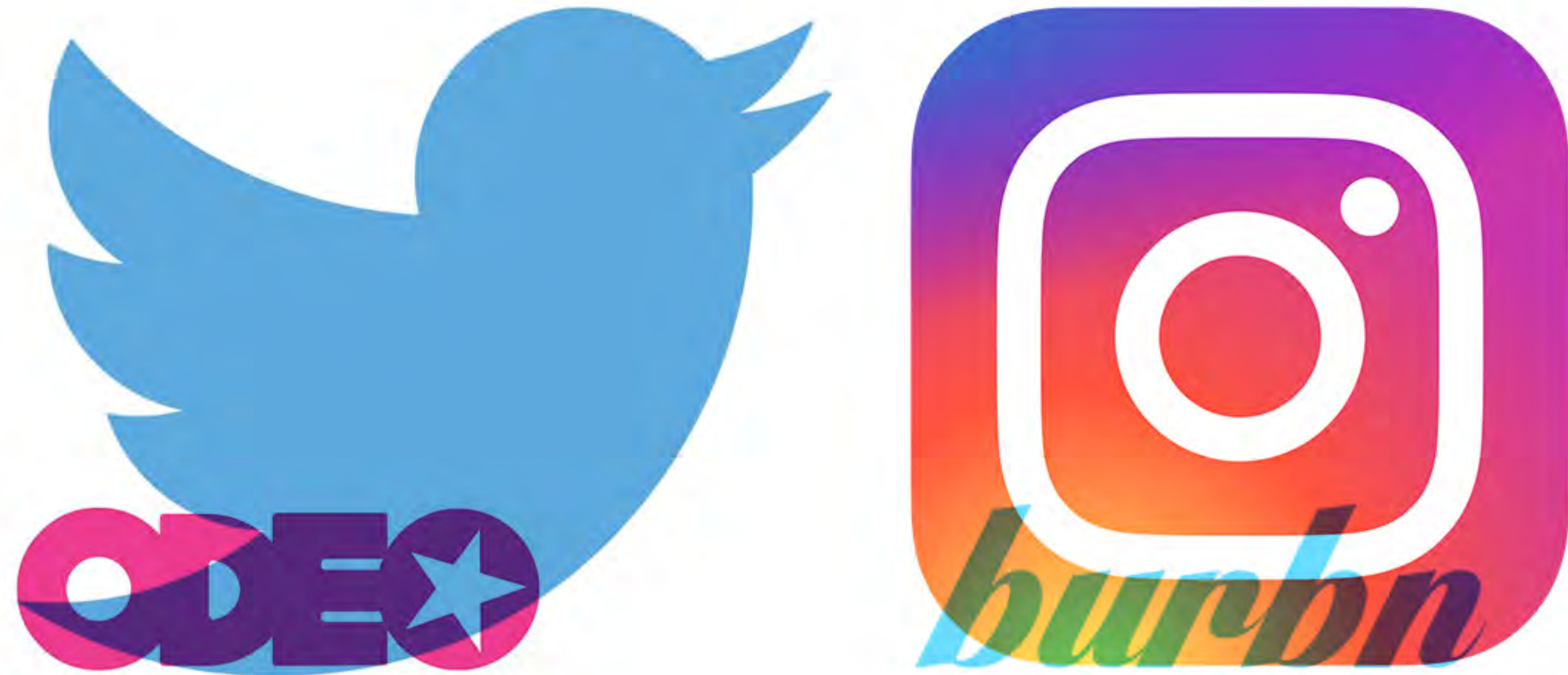
WHICH IS MORE IMPORTANT
IS NOT THE DISCUSSION...
JUST THE RECOGNITION THAT
IDEALLY THEY SHOULD WORK
IN TANDEM. AND MORE
IMPORTANTLY BE
RECOGNIZED AS TWO SIDES
OF THE SAME COIN RATHER
THAN COMPETING IDEALS.

PHOTOS: BORA JUNG & JUNGYANG KIM ©2013

TORONTO



► THE PIVOT ► *'NEW PARADIGM' DOESN'T HAVE TO MEAN 'RADICAL SHIFT'... MAYBE IT JUST MEANS "PIVOT"*



- “PIVOTING DOESN’T NECESSARILY MEAN DESPERATION. IT CAN BE A TOOL TO DISCOVER ADDITIONAL GROWTH. GROWTH YOU MIGHT OTHERWISE HAVE OVERLOOKED.

SOURCE:
INC.COM 10 AUG 2012

WHEN THE SKILLS ARE EXAMINED ON MERIT ALONE, WITH NO ADDITIONAL CONTEXT, THEY CAN BE RE-IMAGINED AND LEVERAGED TOWARDS A NEW POSITION THAT MAKES THEM MORE ACCESSIBLE TO THE CONSUMERS (READ PROBLEMS) THEY’D LIKE TO REACH.

► THE PIVOT

- WE AS LANDSCAPE ARCHITECTS ARE UNDER-SELLING OURSELVES, OUR SKILLS. UNDERVALUING OUR POTENTIAL THROUGH OUR OWN SELF-IDENTITY.

AN INTERNAL *RE-FOCUSING* IS REQUIRED.

AN EXTERNAL *RE-EDUCATION* IS REQUIRED.

A *RE-BRANDING* IS REQUIRED.

NOT TO ACTUALLY CHANGE OUR IMMEDIATE POSITION IN THE DAY-TO-DAY WORLD, BUT TO GIVE OURSELVES THE OPPORTUNITY TO BE CALLED ON IN THE FUTURE, BEYOND THE DAY-TO-DAY.

► DE-LIMITATION



**(1) THE PREMISE THAT EQUATES LANDSCAPE ARCHITECTURE
WITH “GREEN SPACE” OR “NATURE”**



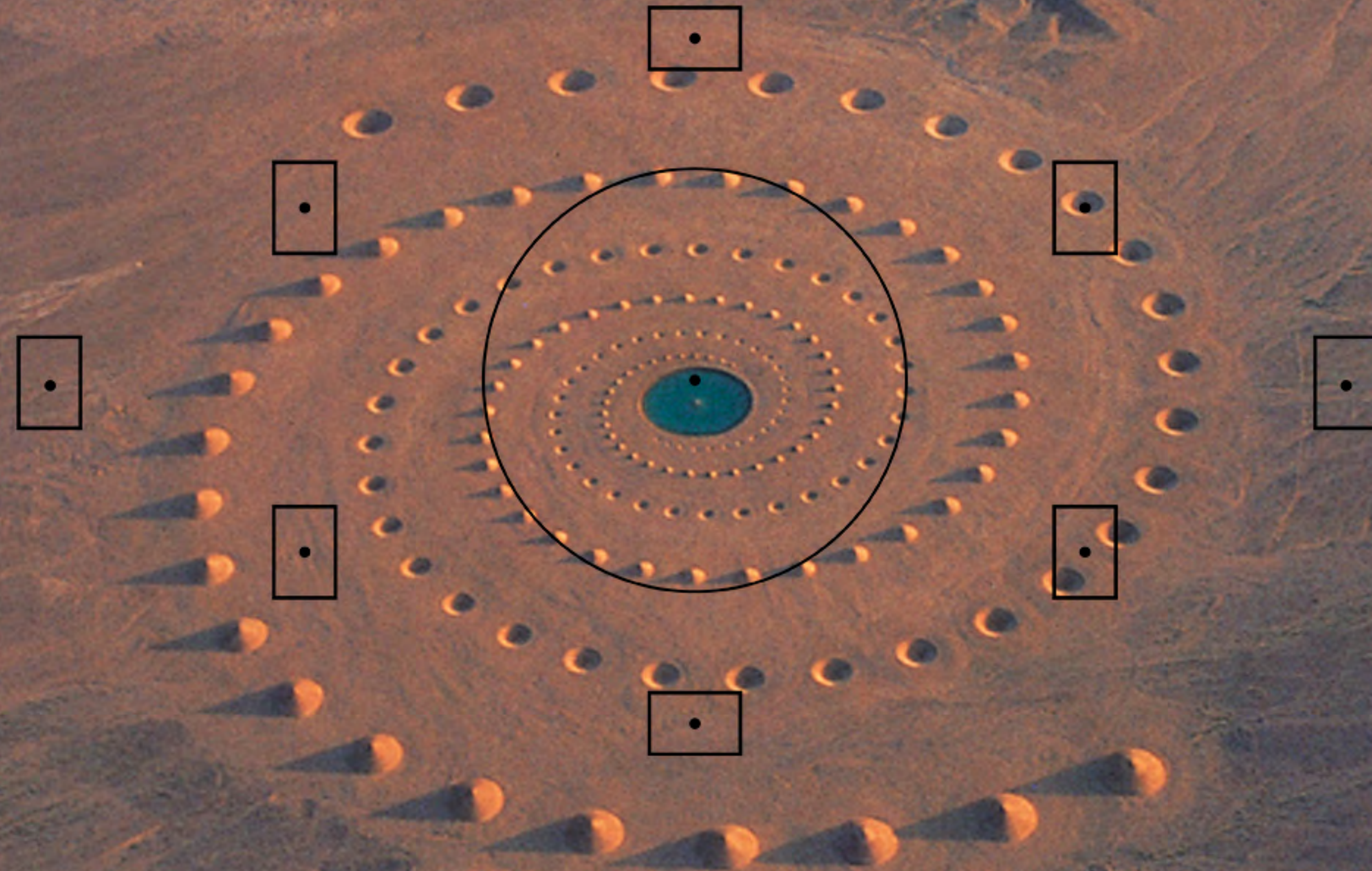
**(2) THE PREMISE THAT LANDSCAPE ARCHITECTURE IS
LIMITED TO THE OUTDOORS**



EXPANDING OUR ROLE HINGES ON REMOVING THESE TWO FALSE PREMISES

► NOT GREEN

► “DESERT BREATH” | D.A.ST. ARTEAMT © 1997



► NOT GREEN

► “LEVITATED MASS” | MICHAEL HEIZER © 2012



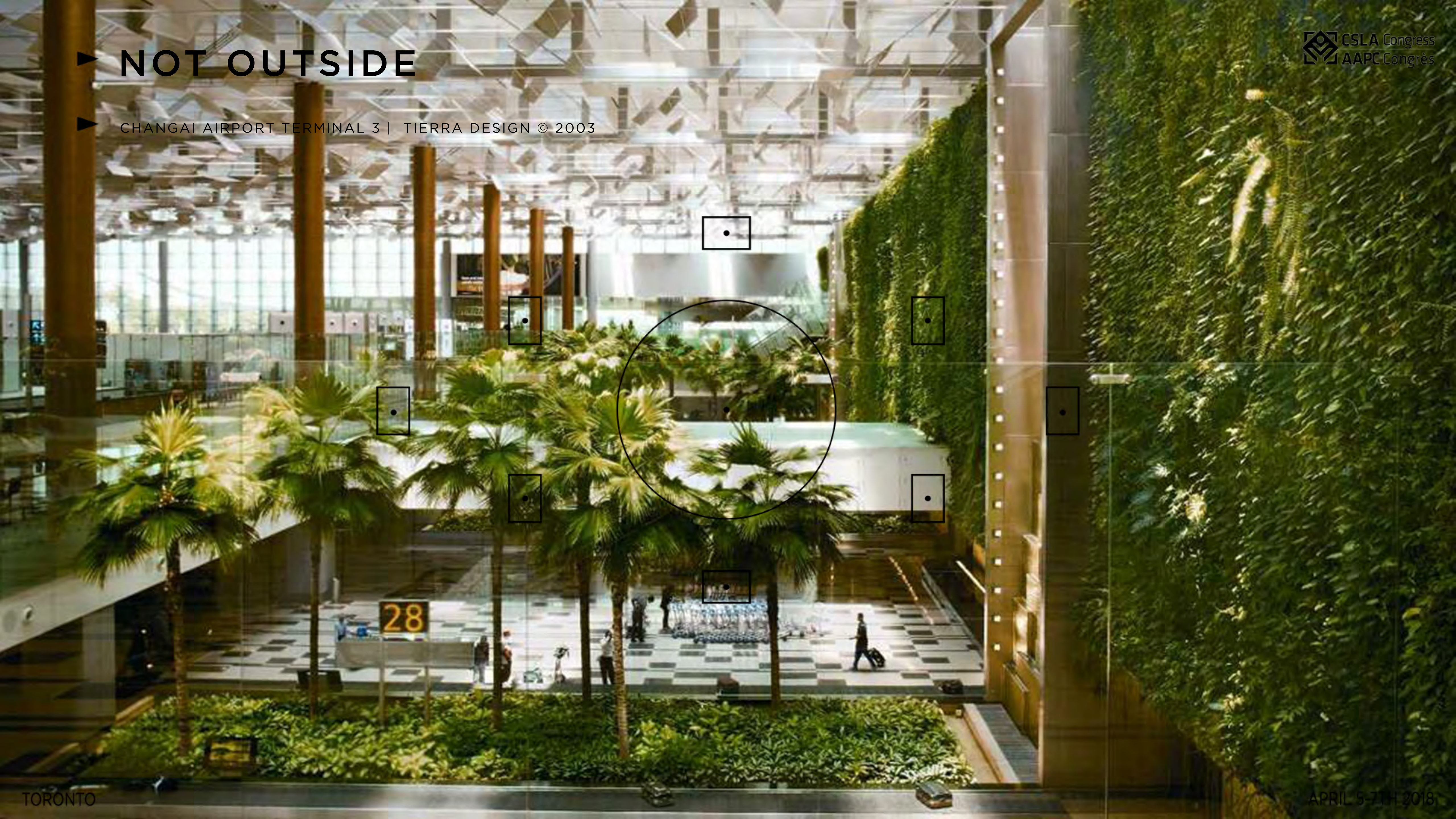
► NOT GREEN

► "CANYON SKYWALK" | MARK JOHNSON © 2003



▶ NOT OUTSIDE

▶ CHANGAI AIRPORT TERMINAL 3 | TIERRA DESIGN © 2003





NOT OUTSIDE

MARINA BAY "CLOUD FOREST" | GRANT ASSOCIATES © 202



► THE PITCH

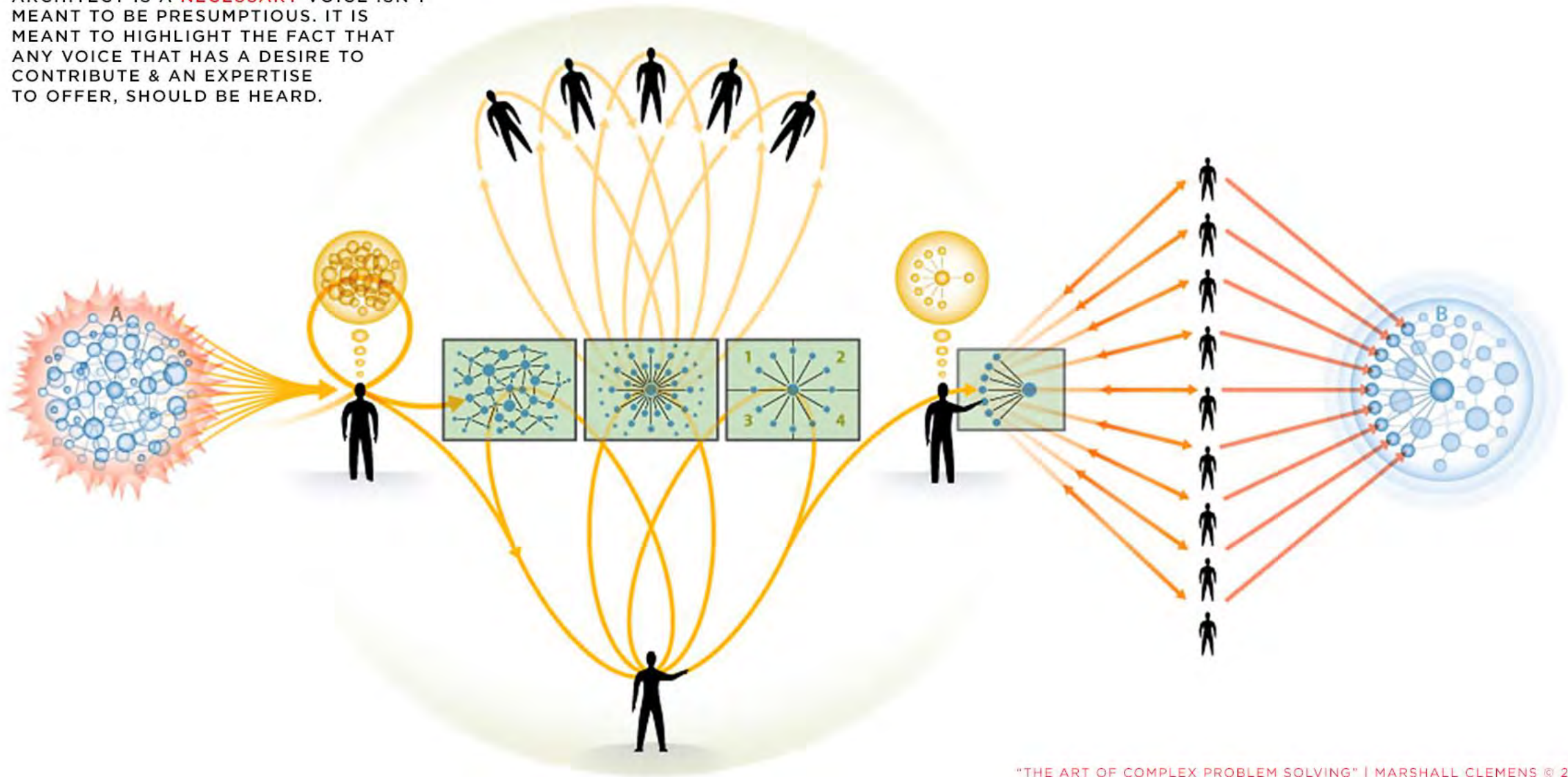


P2-022 JUSTIN BENJAMIN SEC 017 FUTURE TYPOLOGIES IN LANDSCAPE ARCHITECTURE KRIS FOX + CYNTHIA GIRLING	P2-000 JACQUELINE B. KILGUS SEC 117 NASA: "HUMANS ON MARS SURFACE IN LATE 2030S" <i>RICH ZUREK, CHIEF SCIENTIST, NASA MARS PROGRAM OFFICE</i> IS THIS RELEVANT TO OUR PROFESSION?	P2-008 THE LINDSEY CHOI SEC 117 "THE ARCHITECT EMPLOYS SCIENCE FICTION AS A STATEMENT OF AMBITION." <i>DOMINIK SIGG</i>
P2-001 WILL WE BE READY? SEC 117 OUR CURRENT BASE OF KNOWLEDGE ONLY ADDRESSES THE COMMON ENVIRONMENTS WE CURRENTLY INHABIT.	P2-001 WILL WE BE READY? SEC 117 WE ARE ILL-EQUIPPED TO SHARE KNOWLEDGE WITH OTHER DISCIPLINES IN AREAS WE SHOULD BE KNOWLEDGEABLE OF.	P2-001 PRECEDENTS + CRITIQUE SEC 017 DO YOU SEE THE WHATS MISSING? <i>PHD LANDSCAPE ARCHITECT, UNIVERSITY OF XYZ</i> +1
P2-001 WHAT WE NEED TO KNOW SEC 117 THIS PROJECT WILL: INTRODUCE THE LANDSCAPE ARCHITECT AS A NECESSARY ROLE IN THE CONTINUED CONVERSATION ON SPACE EXPLORATION.	P2-001 WHAT WE NEED TO KNOW SEC 117 IT WILL DO SO BY: BEGINNING TO EXPAND OUR KNOWLEDGE ON DESIGNING LANDSCAPES IN EXTREME, FOREIGN, AND CONFINED ENVIRONMENTS.	P2-001 WHERE? SEC 017 RIGHT NOW I'M LOOKING TO DESIGN A UTOPIA... UTOPIA = NO PLACE ...A TYPOLOGY THAT SPEAKS TO EVERYPLACE.

THE NECESSITY OF THE
LANDSCAPE ARCHITECT
AS A VOICE IN THE CONTINUED DIALOGUE ON SPACE EXPLORATION

► NECESSITY

- SUGGESTING THAT THE LANDSCAPE ARCHITECT IS A **NECESSARY** VOICE ISN'T MEANT TO BE PRESUMPTUOUS. IT IS MEANT TO HIGHLIGHT THE FACT THAT ANY VOICE THAT HAS A DESIRE TO CONTRIBUTE & AN EXPERTISE TO OFFER, SHOULD BE HEARD.



"THE ART OF COMPLEX PROBLEM SOLVING" | MARSHALL CLEMENS © 2005

JULY 10-14TH 2016

A COUNTER-MEASURE ADDRESSING HUMAN STRESSORS

THE PROBLEM +
H.F.M. VERSUS A.R.T. +
CENTRAL COMPONENTS OF A.R.T. +

A CLASSIFICATION ADDRESSING SITE SELECTION

ZOOMING INTO THE MARSCAPE +
NARROWING THE POOL OF LANDING SITES +
SITING CONSIDERATIONS +

A HOME ADDRESSING HABITABILITY

PHENOMENOLOGY & THE SPIRIT OF A PLACE +
LEVELS OF INTERACTION +
THE ULTRA GREEN HABITAT MODULE +

1

2

3

4

5

A NEW VOICE

A NEW COLLABORATIVE PARTNER

- + DIFFERENTIATING BETWEEN B.L.S.S. & LANDSCAPE
- + THE LANDSCAPE ARCHITECT'S SKILLSET
- + AREAS OF PRACTICE
- + AN INTRODUCTION TO DEADSCAPES

A GROWTH STRATEGY

ADDRESSING THE FUTURE

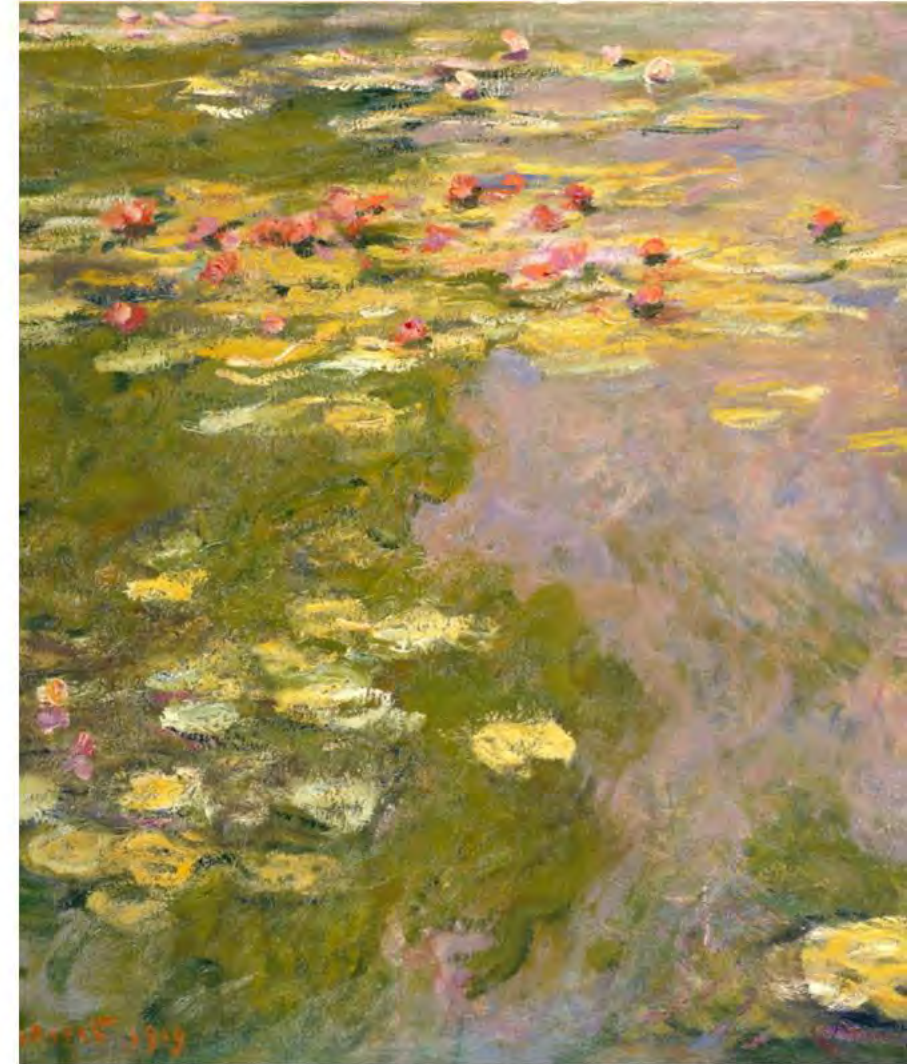
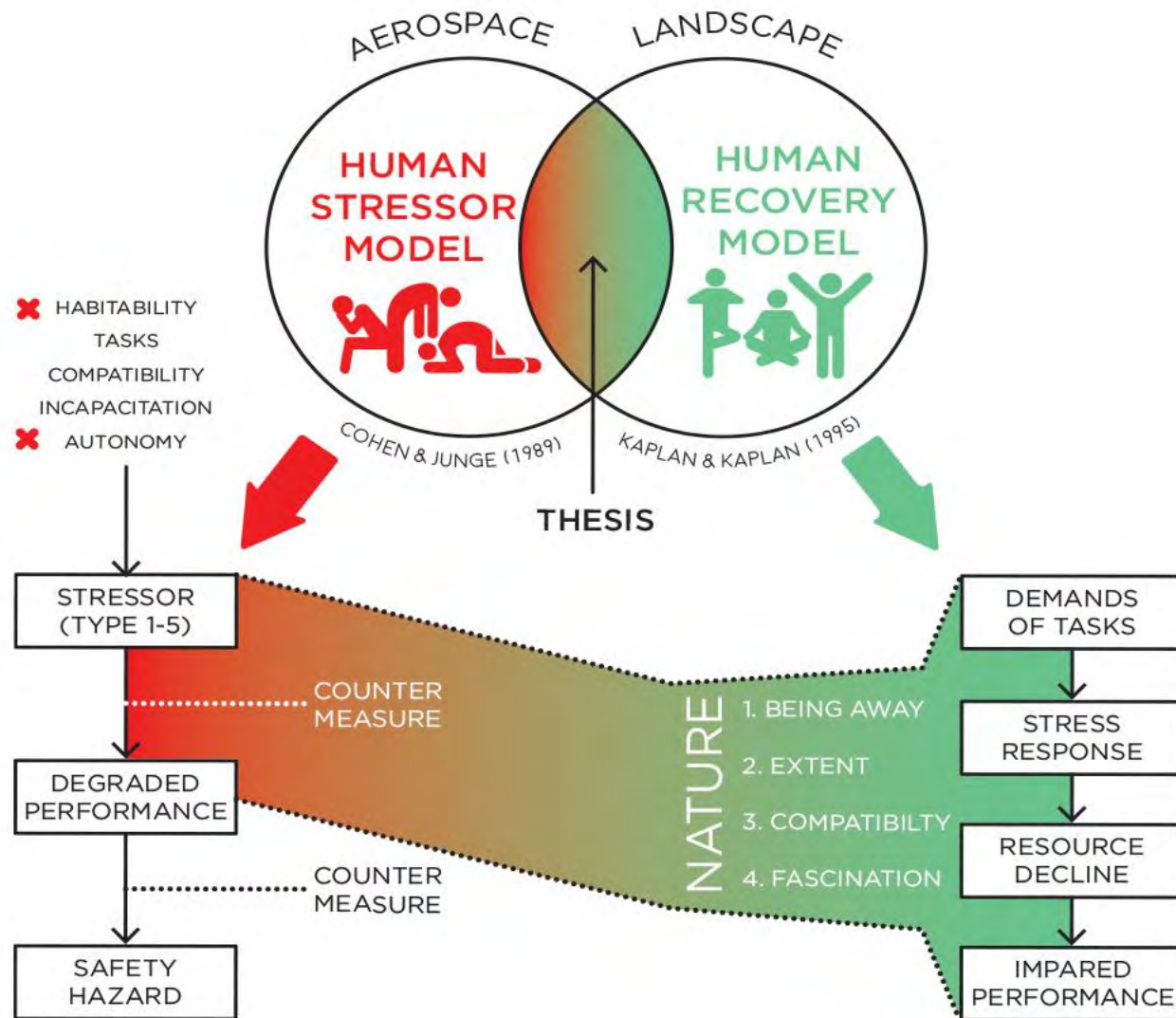
- + AN INTRODUCTION TO EKISTICS
- + MASTERPLANNING THE FUTURE
- + LANDSCAPE GESTURES

► THE PROBLEM

- (1) HUMANS ARE NOT MACHINES.
THEY GET TIRED.
- (2) WHEN THEY GET TIRED THEY
MAKE MISTAKES.
- (3) IN SPACE, THESE MISTAKE CAN
BUILD UP TO A CATASTROPHIC
FAILURE.
- (4) HUMANS FATIGUE BOTH
MENTALLY AND PHYSICALLY +
NEED REST TO RECHARGE.
- (5) THE CURRENT SOLUTION IS
SHORT-SIGHTED: "WE WILL JUST
PICK THE MOST ELITE PEOPLE
+ TRAIN THEM TO NEVER
MAKE MISTAKES"
- (6) THE ALTERNATIVE SOLUTION IS
TO PROVIDE A SIGNIFICANT +
PREDICTABLE
COUNTERMEASURE TO HUMAN
STRESSORS (I.E. ATTENTION
RESTORATION THEORY)

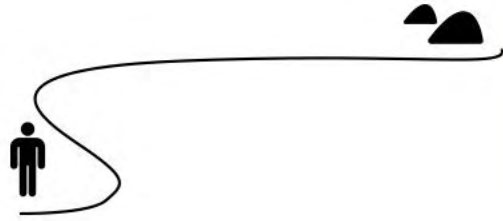


► A COUNTER-MEASURE



▶ DOES NOT HAVE TO BE FAR, BUT MUST BE SEPERATE

▶ GETTING AWAY FROM IT ALL

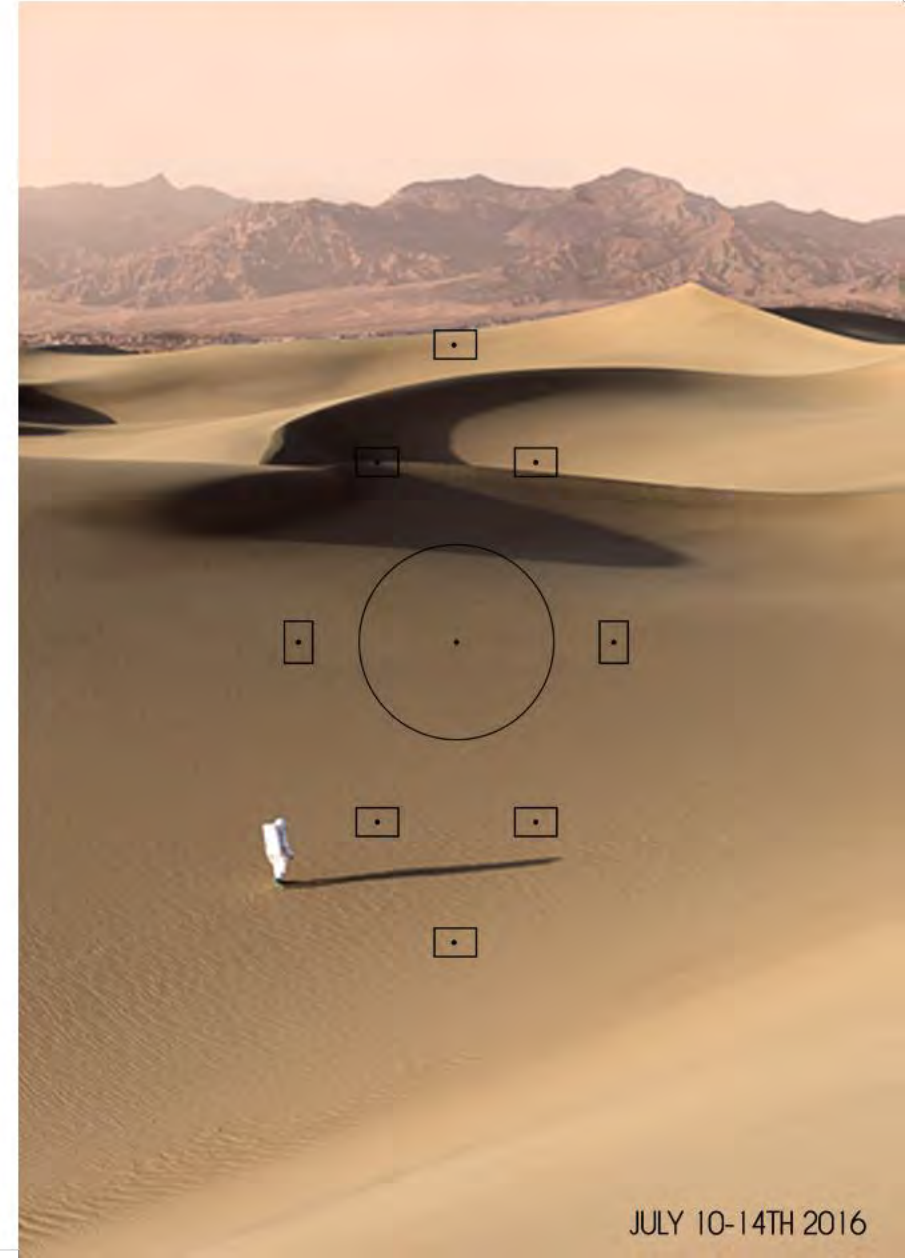


1 | 4 BEING-AWAY

"SOMETIMES EVEN WHEN YOU ARE VERY NEAR HOME IT CAN FEEL LIKE YOU ARE FAR AWAY FROM EVERYDAY THOUGHTS AND CONCERNS. HOW MUCH DOES THE SETTING HAVE TO DO WITH THAT FEELING OF BEING AWAY?"

HERZOG, MAGUIRE, AND NEBEL

▶ PHOTOS: "GREETINGS FROM MARS" | JULIEN MAUVE ©2015

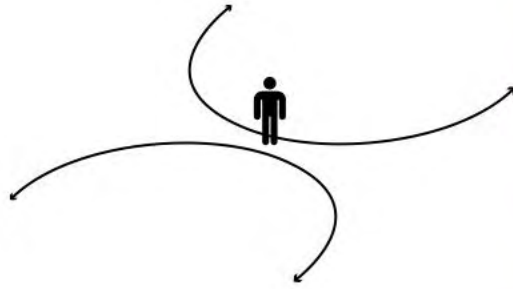




▶ SCOTT KELLY: TEXANS GAME DAY | NASA JOHNSON ©2015

► CONNECTED ELEMENTS FORMING A GREATER WHOLE

► LOST IN THOUGHT. HEAD-SPACE



2 | 4
EXTENT

"SOMETIMES EVEN A SMALL SETTING
CAN FEEL LIKE A WHOLE WORLD OF
ITS OWN. IT CAN SEEM LIKE THERE IS
ENOUGH ROOM TO GET COMPLETELY
INVOLVED IN THE SETTING AND NOT
EVEN THINK ABOUT ANYTHING ELSE.
HOW MUCH DOES THE SETTING SEEM
LIKE SUCH A 'WHOLE OTHER WORLD'?"

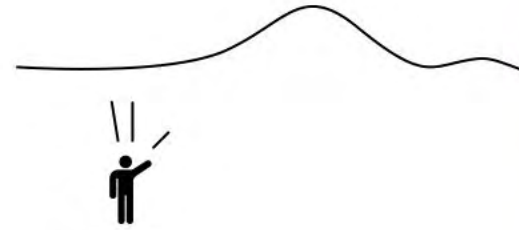
HERZOG, MAGUIRE, AND NEBEL

PHOTOS: "GREETINGS FROM MARS" | JULIEN MAUVE ©2015





► “FASCINATING” ELEMENTS DO NOT REQUIRE “DIRECTED ATTENTION”. IT IS A SPECTRUM.



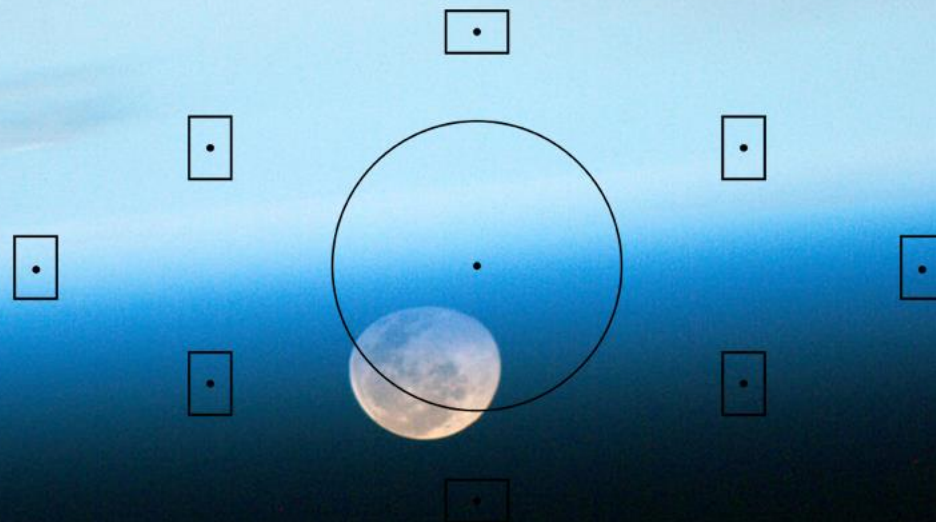
3 | 4 FASCINATION

“HOW MUCH DOES THE SETTING
DRAW YOUR ATTENTION WITHOUT
ANY EFFORT ON YOUR PART? HOW
MUCH DOES IT EASILY AND
EFFORTLESSLY ENGAGE YOUR
INTEREST?”

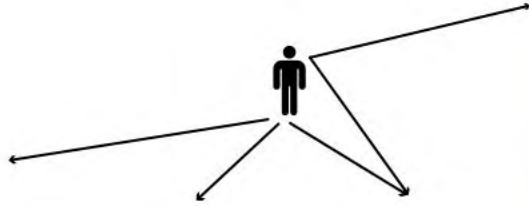
HERZOG, MAGUIRE, AND NEBEL

PHOTOS: “GREETINGS FROM MARS” | JULIEN MAUVE ©2015





► “DEGREE OF FIT” BETWEEN ONE’S PREDISPOSITIONS + ACTIONS REQUIRED OF THE ENVIRONMENT

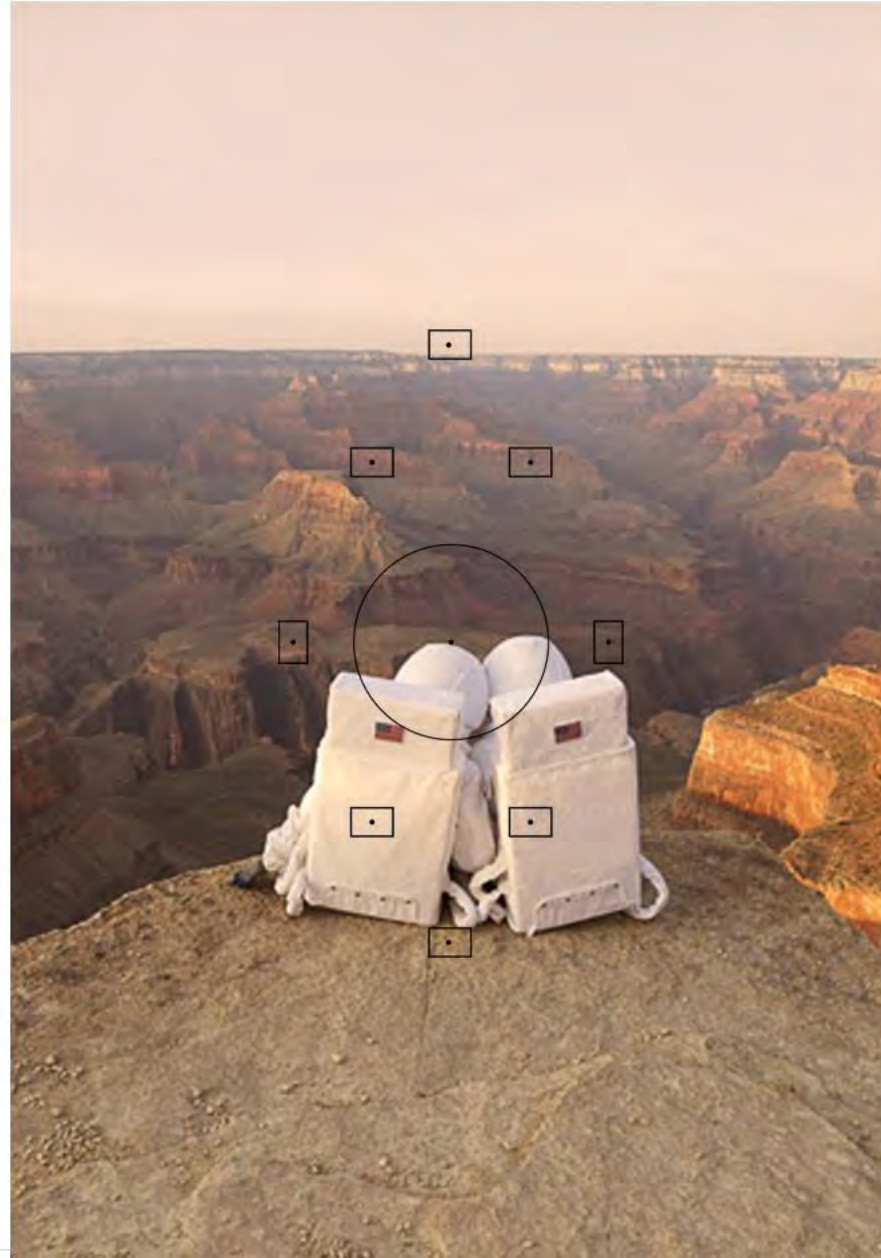


4 | 4 COMPATIBILITY

“SETTINGS CAN EITHER HELP YOU
FEEL COMFORTABLE AND AT EASE OR
THEY CAN MAKE IT HARD TO DO SO.
HOW MUCH DOES IT SEEM LIKE THE
SETTING WOULD MAKE IT EASY FOR
YOU TO FEEL COMFORTABLE AND AT
EASE?”

HERZOG, MAGUIRE, AND NEBEL

PHOTOS: “GREETINGS FROM MARS” | JULIEN MAUVE ©2015





▶ A NEW COLLABORATIVE PARTNER

- ▶ COMPLEX PROBLEMS ARE NOT SOLVED BY SINGLE MINDS IN SINGLE STROKES. RATHER, THE ROBUSTNESS OF A SYSTEM RELIES ON A COLLABORATIVE AND ITERATIVE PROCESS OF REFINEMENT.

WE ARE NOT HORTICULTURALISTS OR BIO-SYSTEMS ENGINEERS, BUT WE CAN BE JUST AS USEFUL AS ASSETS FOR STRATEGIC PLANNING, CREATIVE DESIGN, & VISUAL MODELLING.



▶ CAUGHT IN A BLISSFUL DICHOTOMY OF ART + SCIENCE



THE GENERALIST

▶ APPROACH PROBLEMS FROM A LARGER SCALE, BOTH LITERALLY AND FIGURATIVELY

▶ IDEALLY SUITED TO LEAD IN INTERDISCIPLINARY ENDEAVOURS

► A TOOLKIT OF THEORY AND DESIGN PRACTICE TO ADDRESS THE PROBLEM OF HABITABILITY



THE HUMANIST

► OFFERS AN ALTERNATIVE + CONSISTENT COUNTERMEASURE TO THE H.F.M. PROBLEM

► ADVOCATE FOR THE MENTAL-HEALTH AND WELL-BEING OF HUMANS

► UTILIZING 'ATTENTION RESTORATION THEORY' TO PROVIDE A THEORETICAL FRAMEWORK



THE THERAPIST +

► CAPITALIZING ON HISTORIAL PRECEDENTS OF 'LANDSCAPES OF HEALTH'

► ADDRESSES PROBLEMS THROUGH A HOLISTIC PRACTICE OF DESIGN

► GREEN



► RICE FIELDS, JAPAN

► GREEN

46th
INTERNATIONAL
CONFERENCE ON
ENVIRONMENTAL SYSTEMS
KES 2016



► "A PATH IN THE FOREST" | TETSUO KONDO ARCHITECTS ©2014

VIENNA

JULY 10-14TH 2016

► BLUE



► "JOURNEY BEHIND THE FALLS", NIAGARA FALLS, CANADA

► BLUE



► ATLANTIC OCEAN ROAD, NORWAY | CINEMATIC PHOTOGRAPHY © 2015

GREY

46th
INTERNATIONAL
CONGRESS OF
ENVIRONMENTAL SYSTEMS
ES 2016

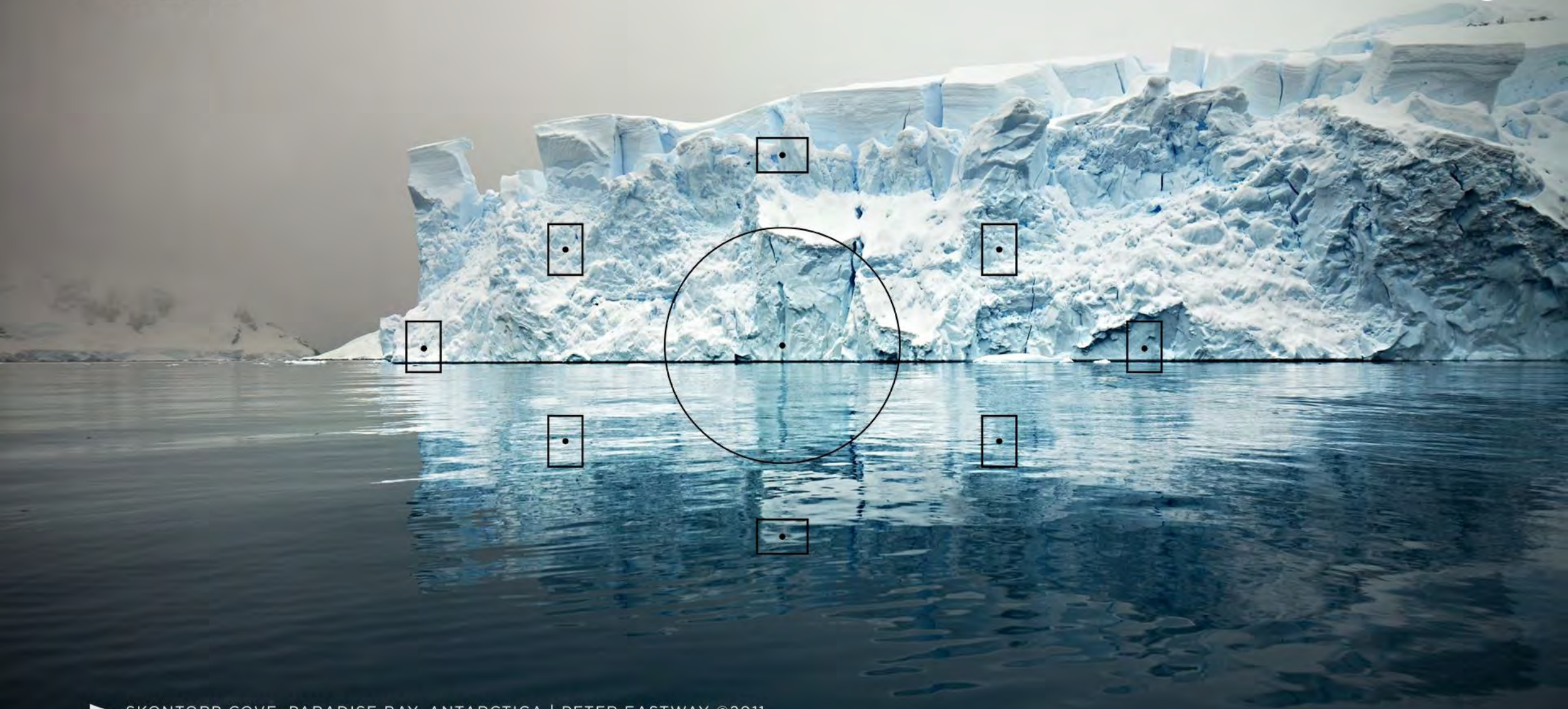


GAPSTOW BRIDGE, CENTRAL PARK, NEW YORK | PAINTING BY ROD CHASE



► "SUPERKILEN" | TOPOTEK 1 + BIG ARCHITECTS + SUPERFLEX © 2012

► DEAD



► SKONTORP COVE, PARADISE BAY, ANTARCTICA | PETER EASTWAY ©2011

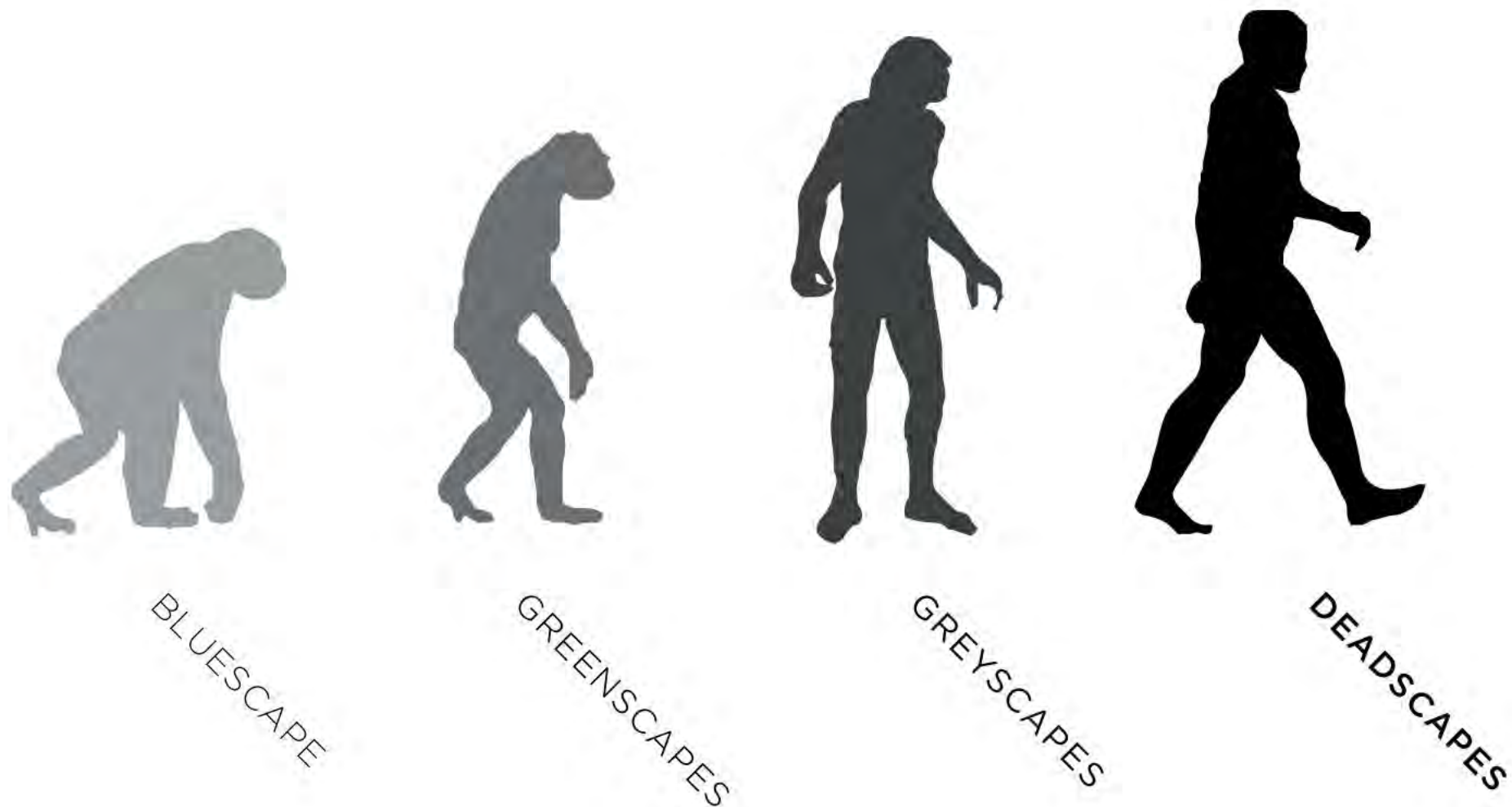
▶ DEAD

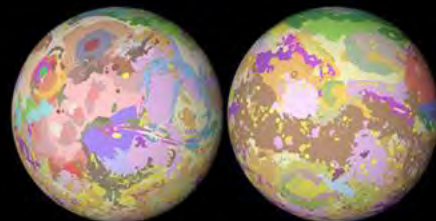
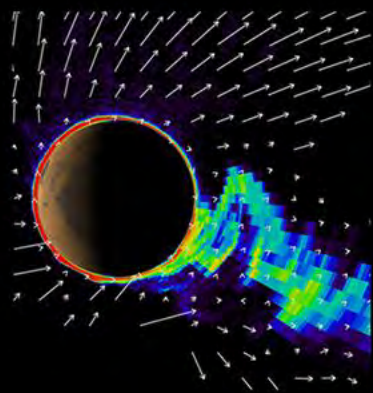
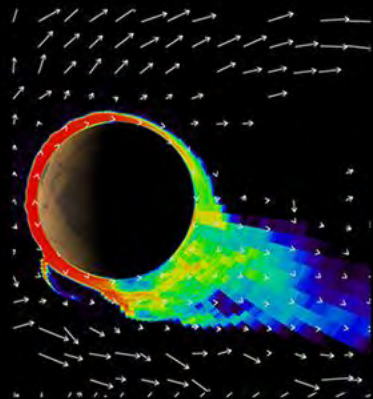


▶ UNFINISHED BASEMENT

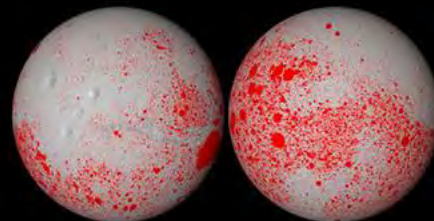
► DEADSCAPES

A NATURAL EVOLUTION OF LANDSCAPE TYPOLOGIES

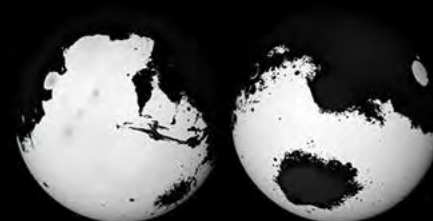




Geology
254 Classes | 2878 Distinct Units
Skinner et al.



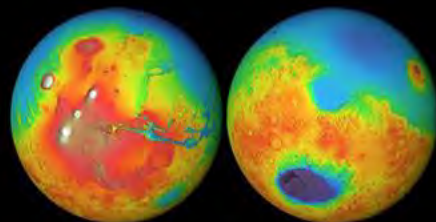
Craters
Total 384,343 | Std Dv. 6.9km to 12.3km dia.
Robbins et al.



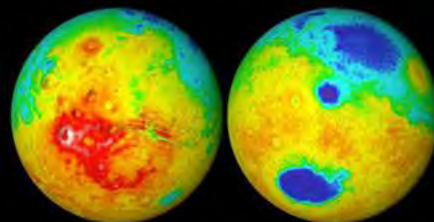
Sea Level
Equipotential Surface aka. "Zero Elevation"
MGS MOLA



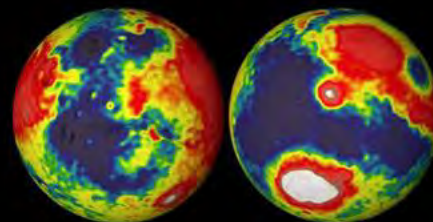
Digital Elevation Model
Contours at 1km
MGS MOLA



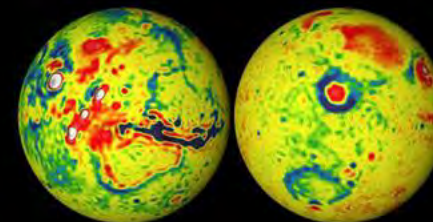
Topography
-8km to 14km
MGS MOLA



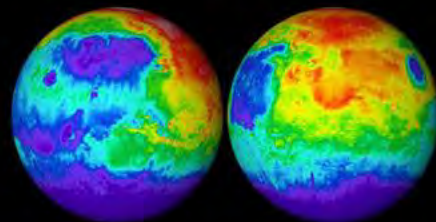
Crustal Thickness
0km to 100km
NASA JPL



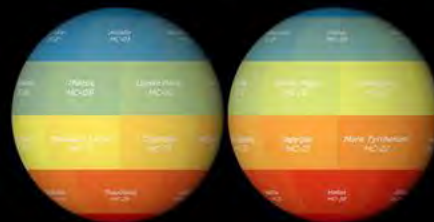
Bouguer Gravity
-600Mg to 900Mg
NASA JPL



Free-Air Gravity
-600Mg to 900Mg
NASA JPL



Temperature Night
Day -120°C to 27°C | Night -133°C to -65°C
JPL NASA



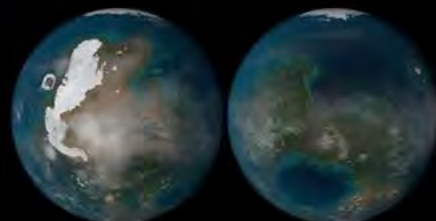
Quadrangles
Mars Charts 1 to 30
USGS ASC



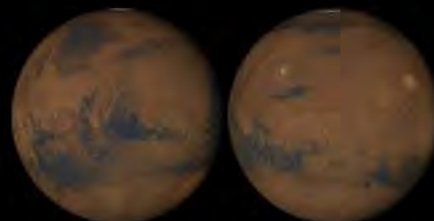
Nomenclature
1798 Named Sites
USGS ASC



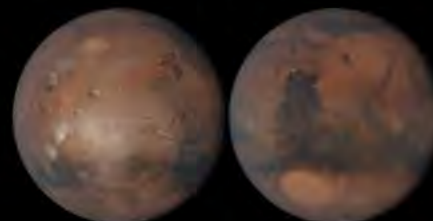
Landing Sites
Top 10 Candidates | My Selection
NASA JPL | Pansini et al.



Prehistoric Condition
Artist Rendering
@HualadOmegasSpiritus



Schiaparelli & Serbus Hemis
Colour Corrected
MGS MOLA

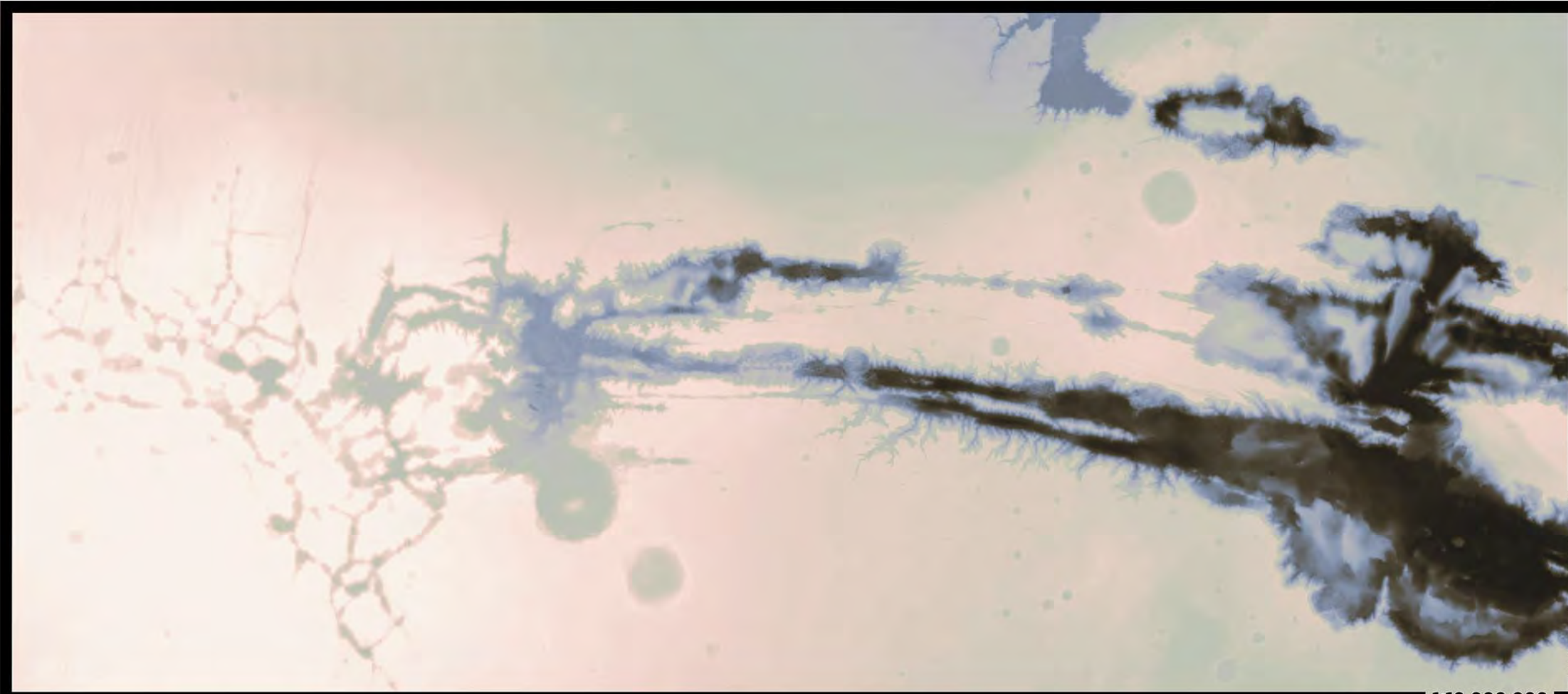


Valles Marineris & Syrtis Major Hemis
Clouds & Atmosphere c.1990
MGS MOLA



Marscape Night c.2130

► ZOOMING INTO THE MARSCAPE

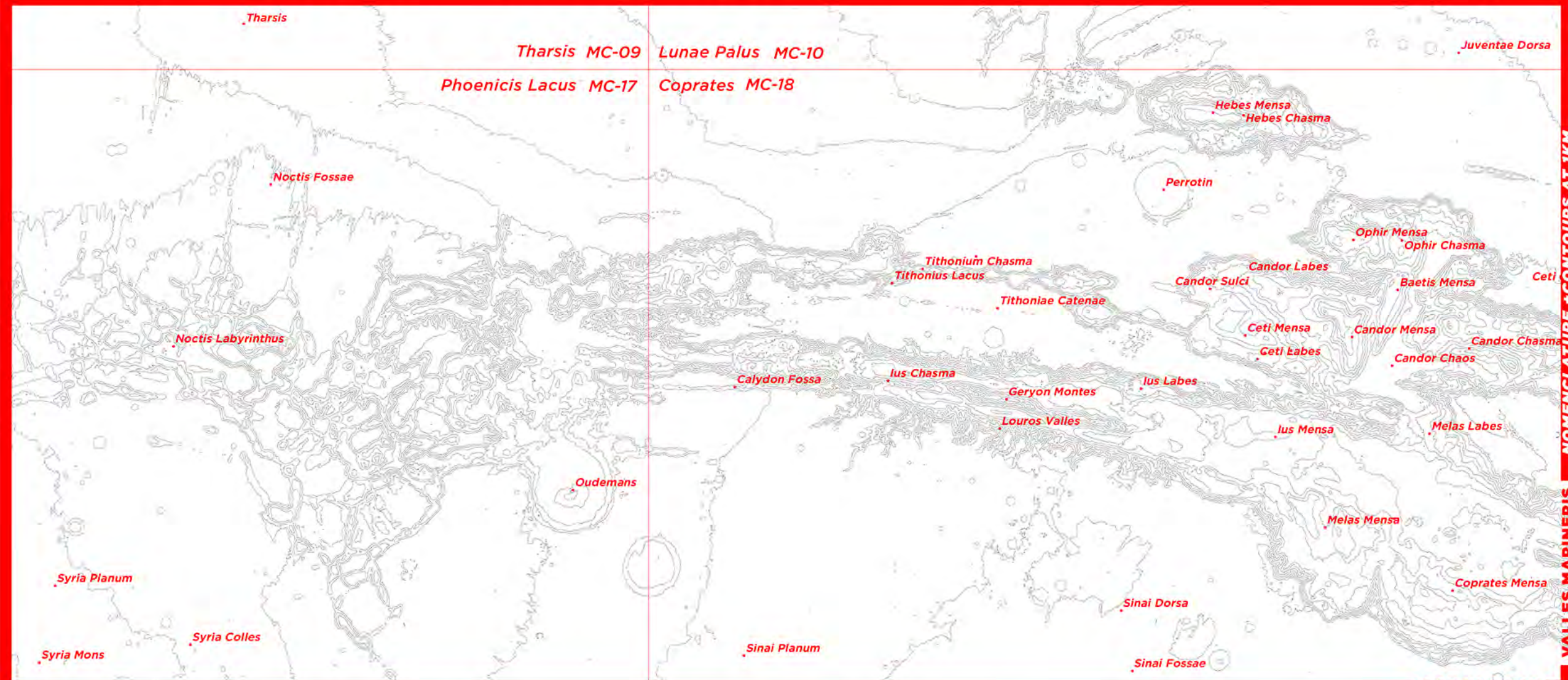


VALLES MARINERIS

1:10.000.000

► OFTEN A LANDSCAPE ARCHITECT MUST ADDRESS THE DESIGN FROM A REGIONAL SCALE, DOWN TO A MINOR PAVING DETAIL IN THE SAME PROJECT.

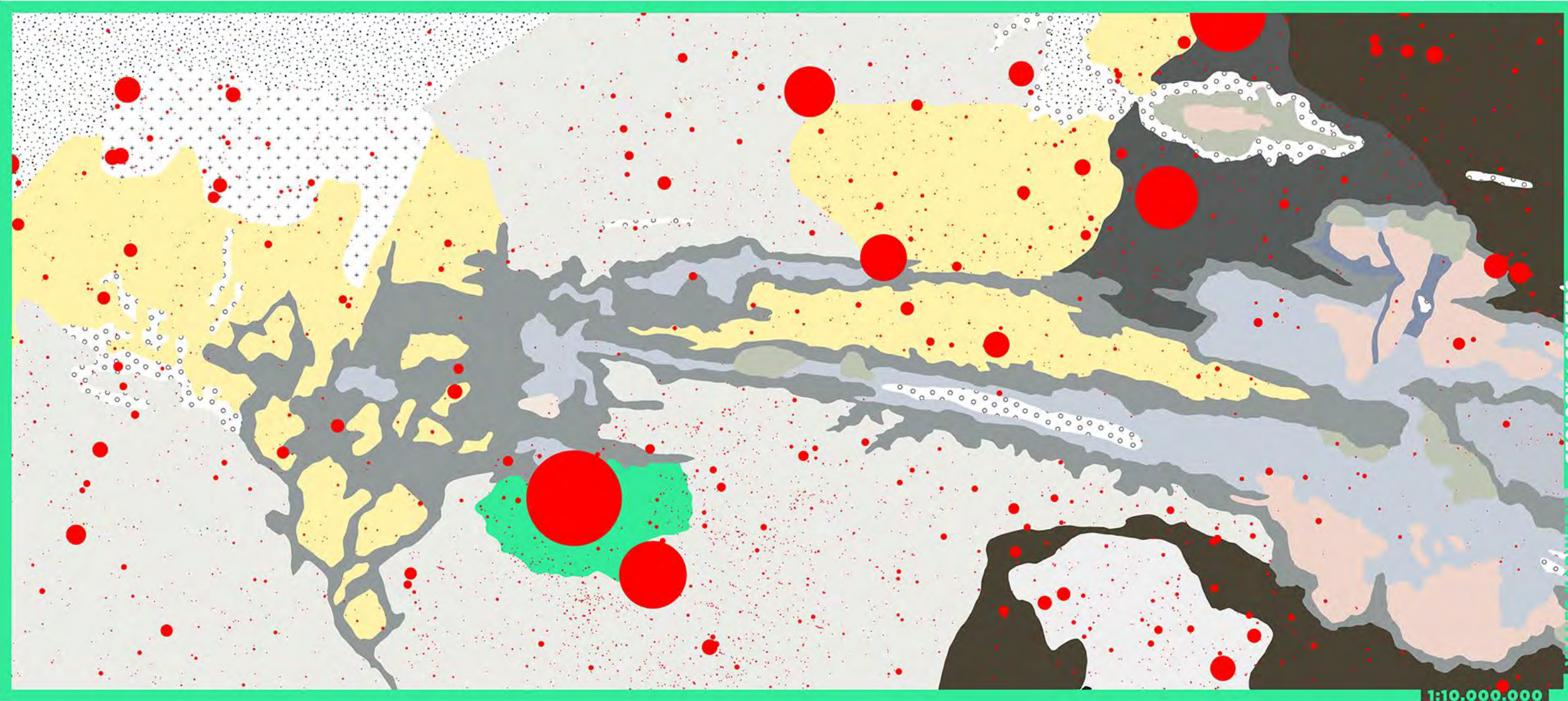
► ZOOMING INTO THE MARSCAPE



1:10.000.000

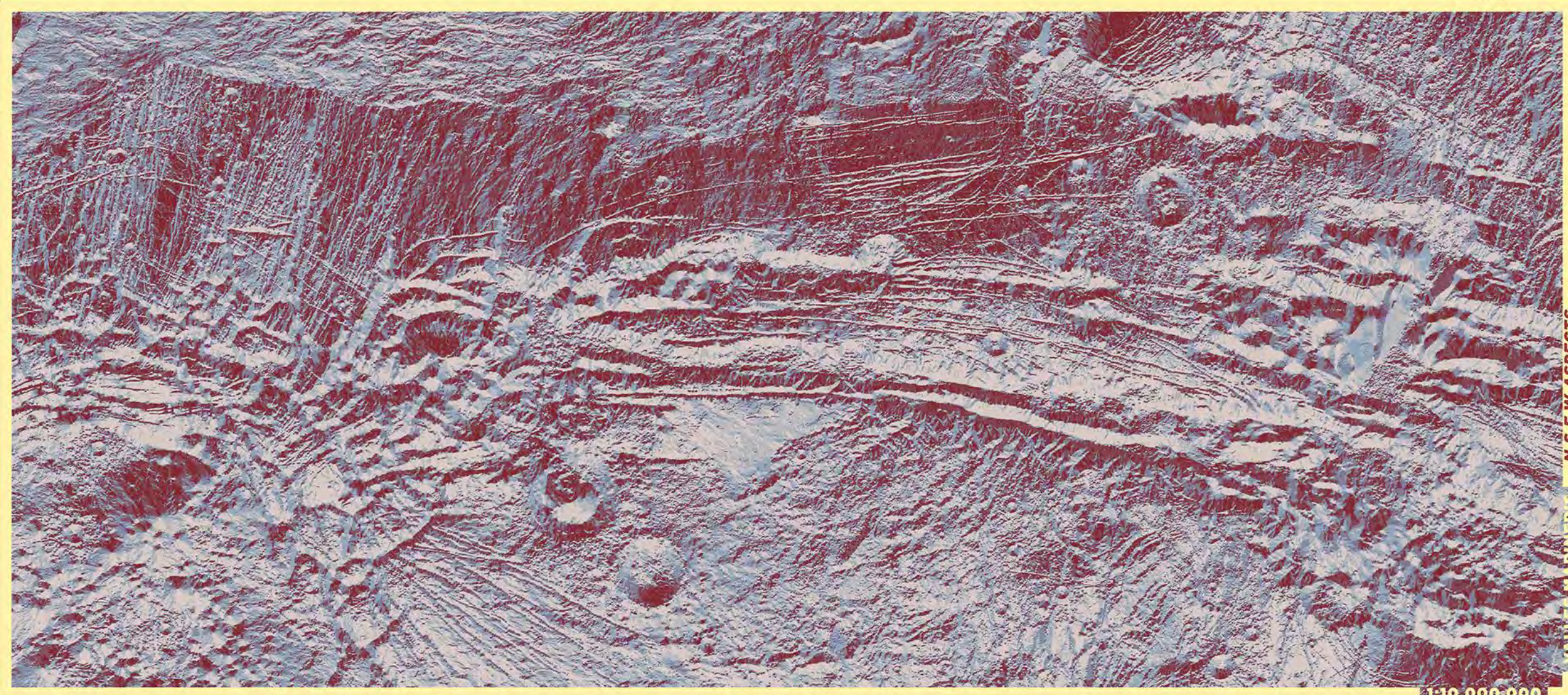
► OFTEN A LANDSCAPE ARCHITECT MUST ADDRESS THE DESIGN FROM A REGIONAL SCALE, DOWN TO A MINOR PAVING DETAIL IN THE SAME PROJECT.

► ZOOMING INTO THE MARSCAPE



► OFTEN A LANDSCAPE ARCHITECT MUST ADDRESS THE DESIGN FROM A REGIONAL SCALE, DOWN TO A MINOR PAVING DETAIL IN THE SAME PROJECT.

► ZOOMING INTO THE MARSCAPE

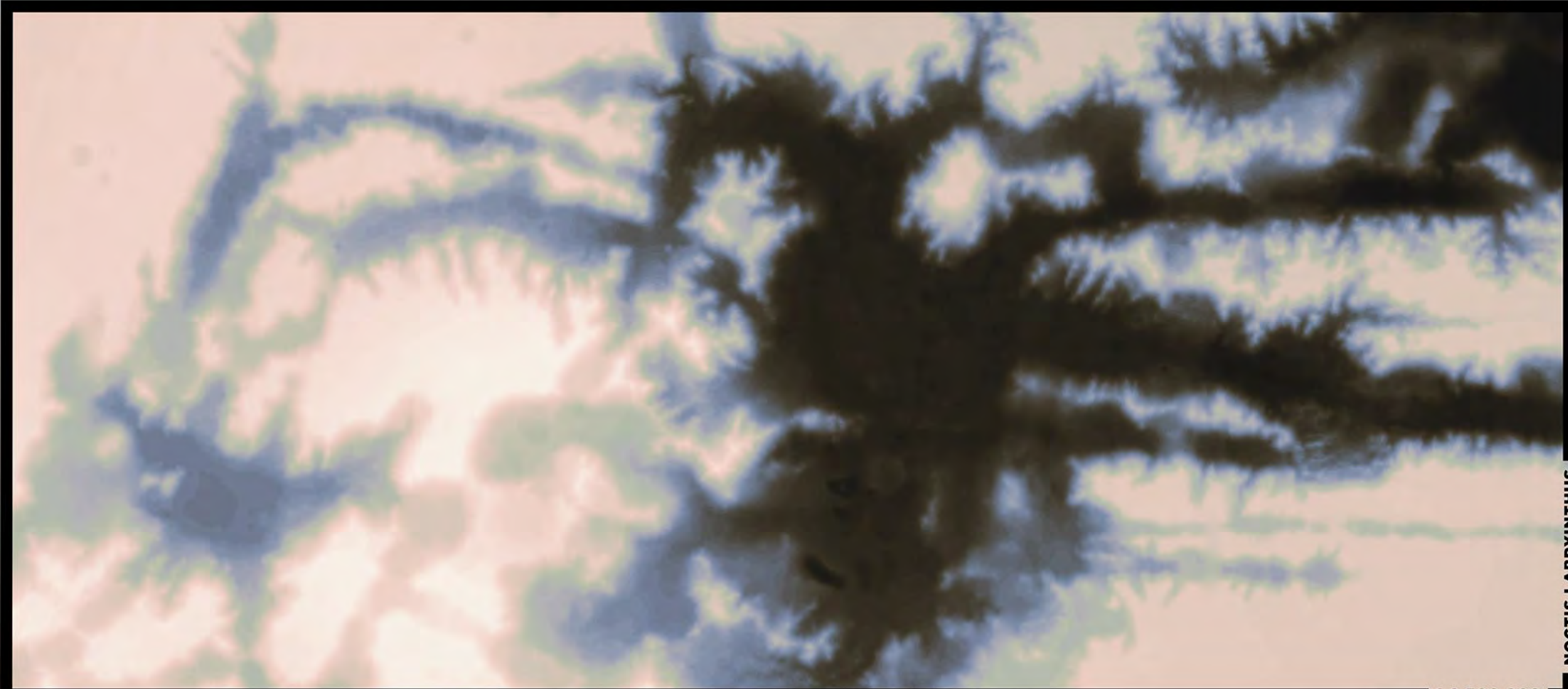


N.S.E.W ASPECTS
VALLES MARINERS

1:10.000.000

► OFTEN A LANDSCAPE ARCHITECT MUST ADDRESS THE DESIGN FROM A REGIONAL SCALE, DOWN TO A MINOR PAVING DETAIL IN THE SAME PROJECT.

► ZOOMING INTO THE MARSCAPE

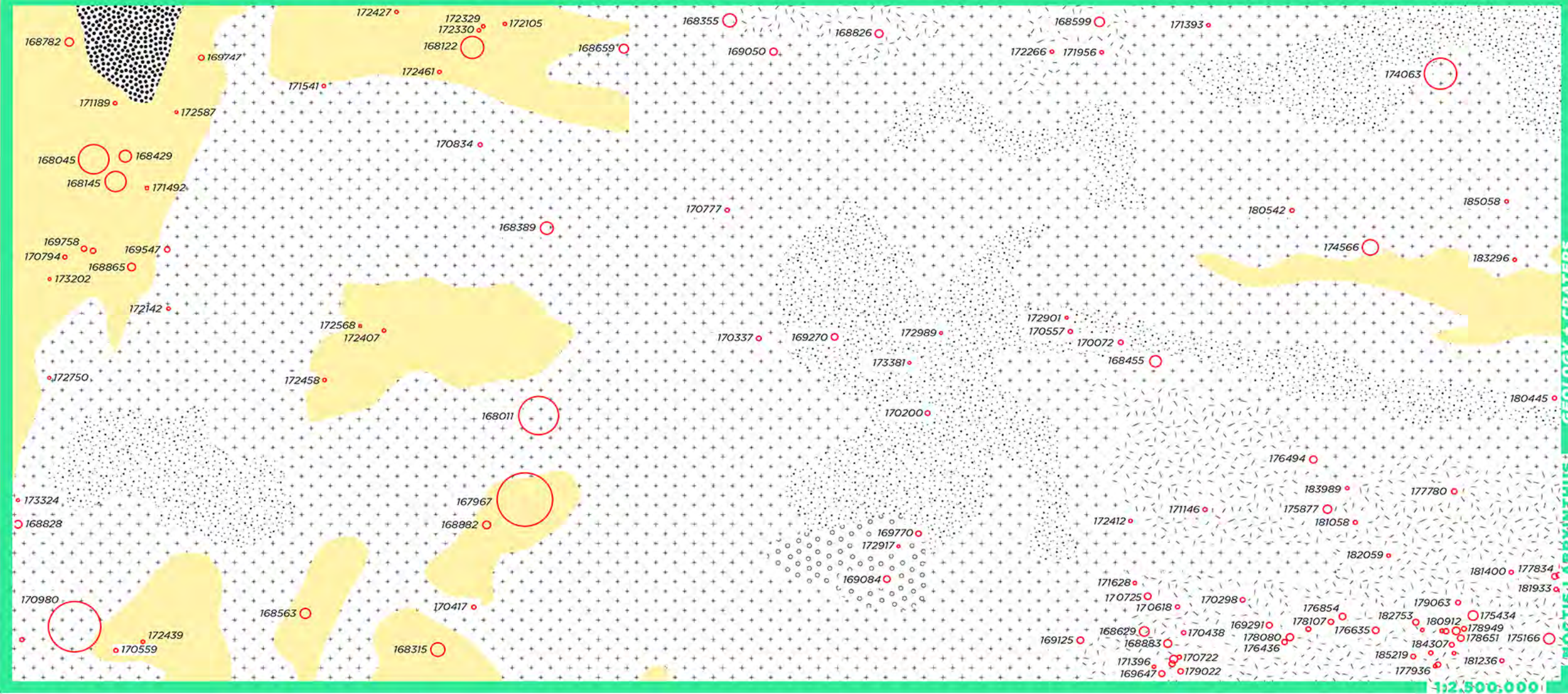


1:2.500.000

NOCTIS LABRYINTHUS

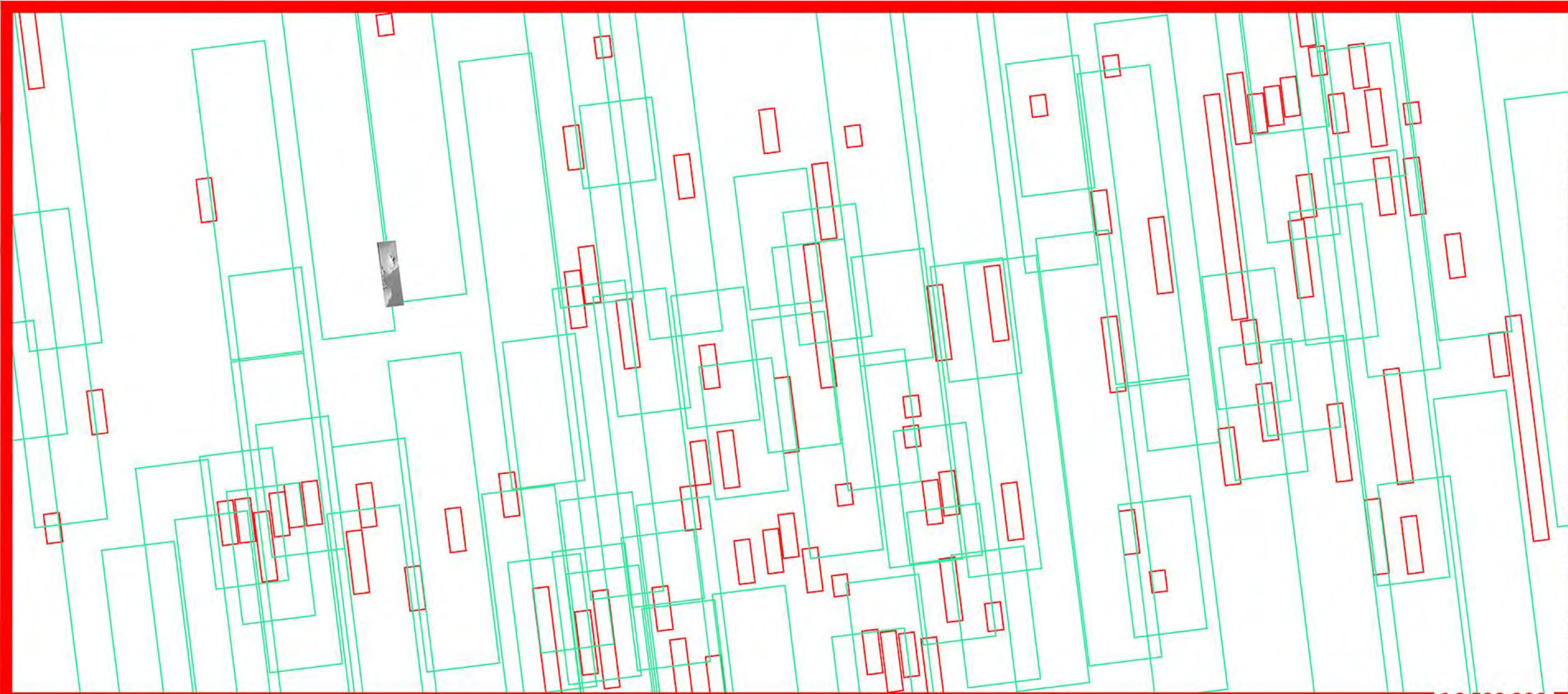
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► ZOOMING INTO THE MARSCAPE



► OFTEN A LANDSCAPE ARCHITECT MUST ADDRESS THE DESIGN FROM A REGIONAL SCALE, DOWN TO A MINOR PAVING DETAIL IN THE SAME PROJECT.

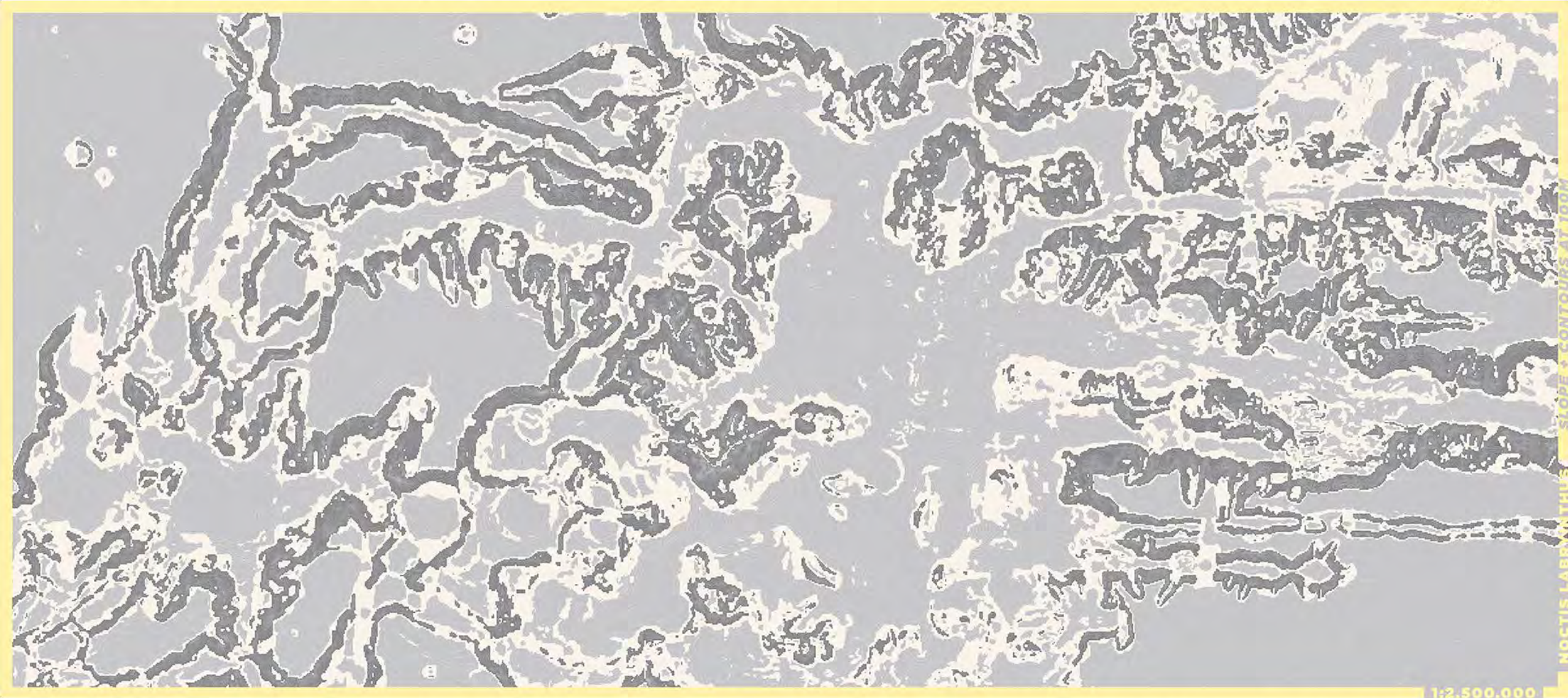
► ZOOMING INTO THE MARSCAPE



1:2.500.000

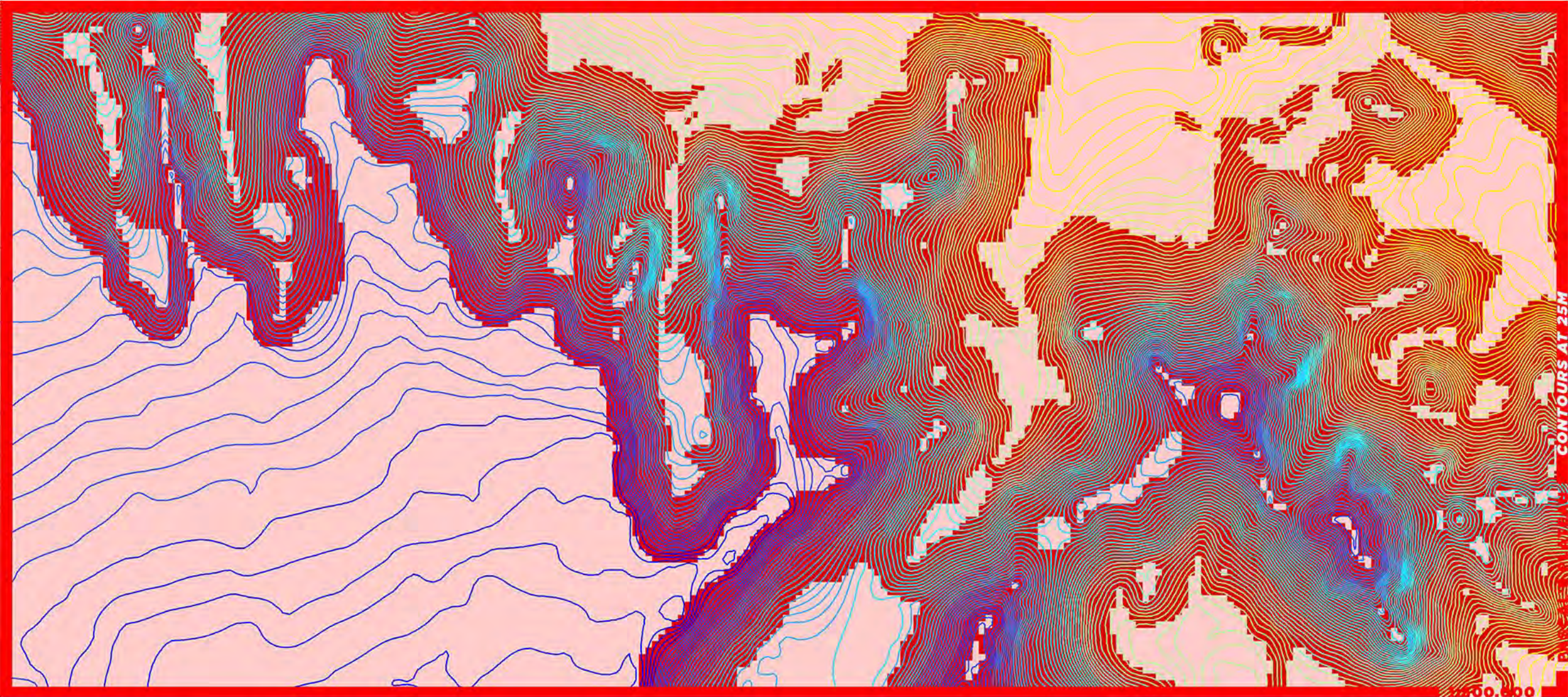
► OFTEN A LANDSCAPE ARCHITECT MUST ADDRESS THE DESIGN FROM A REGIONAL SCALE, DOWN TO A MINOR PAVING DETAIL IN THE SAME PROJECT.

► ZOOMING INTO THE MARSCAPE



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► THE ABILITY TO THINK BOTH BIG & SMALL-PICTURE AT THE SAME TIME IS A USEFUL ASSET WHEN TACKLING COMPLEX PROBLEMS

► ZOOMING INTO THE MARSCAPE

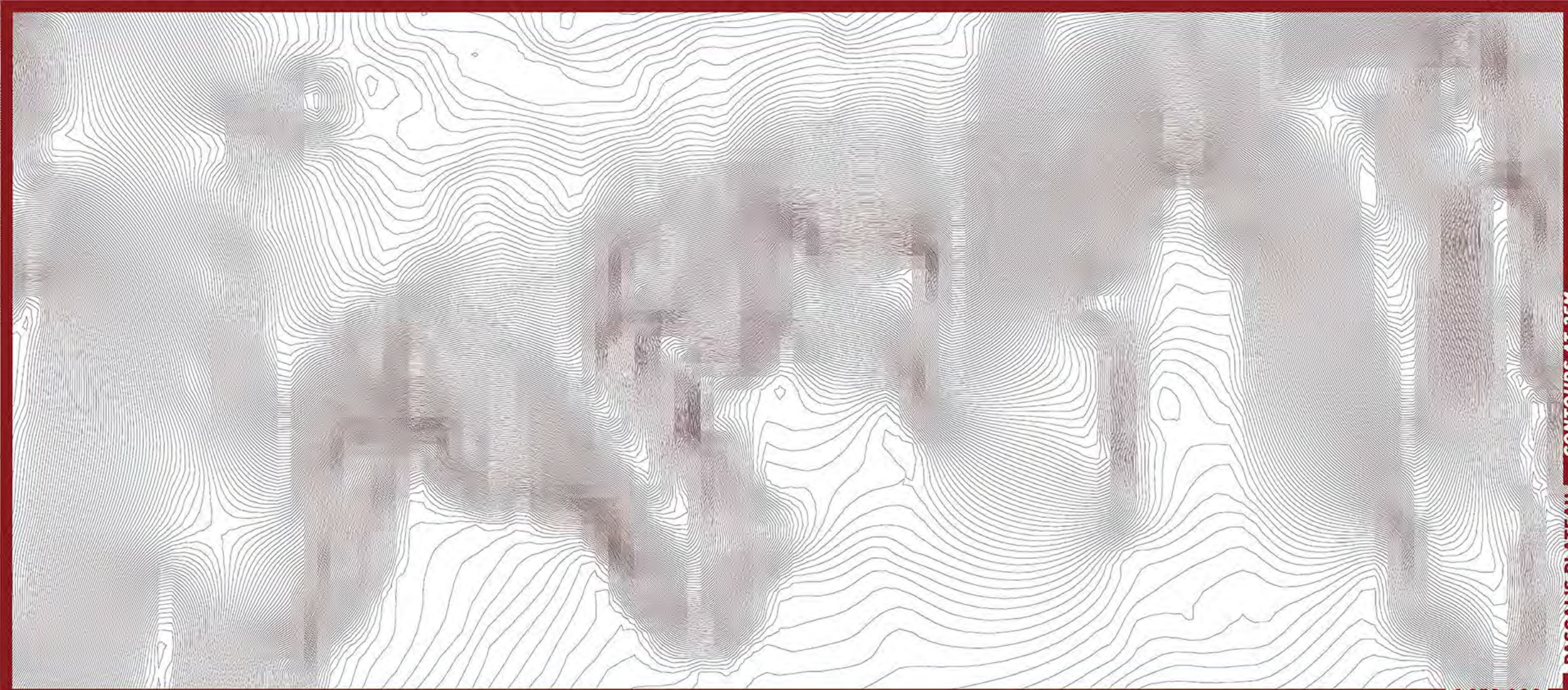


PASCAL'S PLATEAU

1:250.000

► THE ABILITY TO THINK BOTH BIG & SMALL-PICTURE AT THE SAME TIME IS A USEFUL ASSET WHEN TACKLING COMPLEX PROBLEMS

► ZOOMING INTO THE MARSCAPE



1:250,000

PASCAL'S PLATEAU
CONTOURS AT 25M

► THE ABILITY TO THINK BOTH BIG & SMALL-PICTURE AT THE SAME TIME IS A USEFUL ASSET WHEN TACKLING COMPLEX PROBLEMS

► ZOOMING INTO THE MARSCAPE



1:2.500

► THE ABILITY TO THINK BOTH BIG & SMALL-PICTURE AT THE SAME TIME IS A USEFUL ASSET WHEN TACKLING COMPLEX PROBLEMS

► ABBREVIATING SITE CONDITIONS



► APPLYING A.R.T. TO THE TYPOLOGY OF (1) MOUNTAINS, (2) VALLEYS, (3) CRATERS, (4) PLAINS



► NARROWING THE LANDING SITES



► WE HAVE TO LAND SOMEWHERE FIRST. IF WE'VE APPLIED ENGINEERING & SCIENTIFIC FACTORS, WHAT ABOUT HUMAN FACTORS?

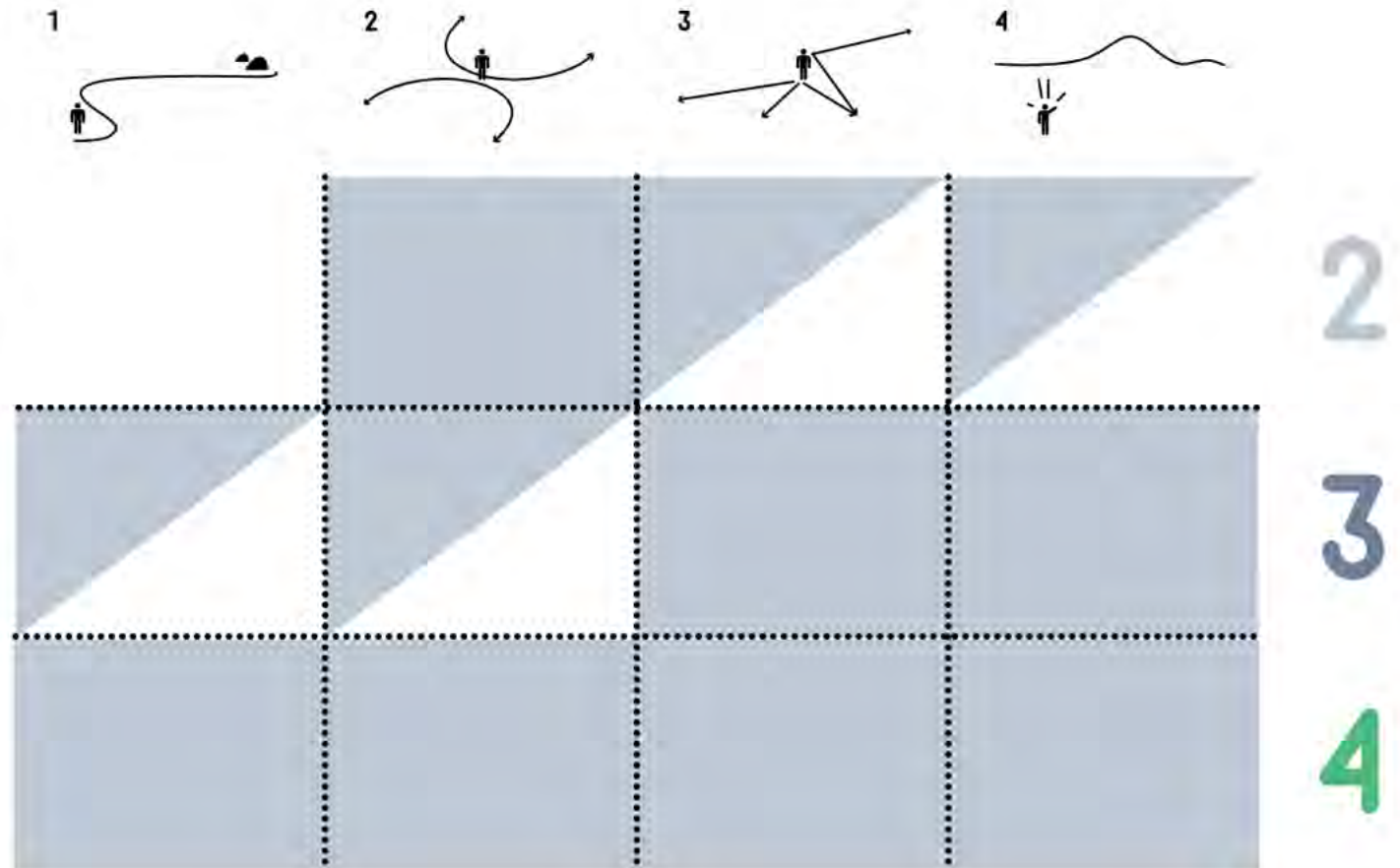
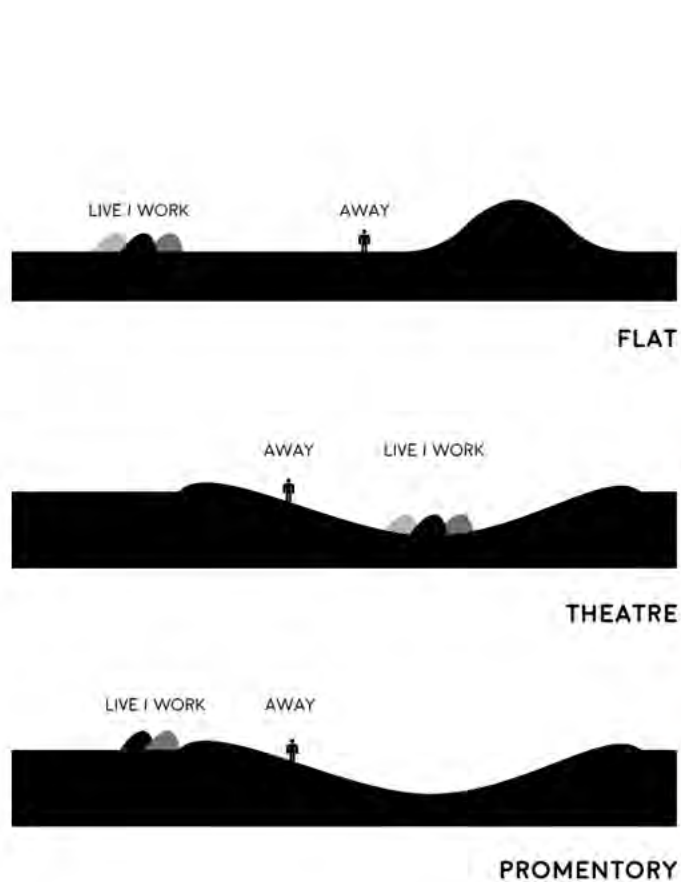
► NARROWING THE LANDING SITES

rankings	Site	Landing Site Scientific Selection Criteria											
		CHARACTERIZABLE GEOLOGIC SETTING & HISTORY		ANCIENT HABITABLE ENVIRONMENT		HIGH BIOSIGNATURE PRESERVATION POTENTIAL		ASTROBIOLOGICAL QUALITY OF RETURNED SAMPLES		PETROLOGICAL QUALITY OF RETURNED SAMPLES		AVERAGE	
		mode	average	mode	average	mode	average	mode	average	mode	average	mode	average
1	Jezero	5	4.9	5	4.7	5	4.4	5	4.4	5	4.3	5	4.5
2	Columbia Hills	5	4.7	5	4.3	5	4.3	3	3.8	5	4.1	4.6	4.2
3	NE Syrtis	5	4.7	5	3.8	3	3.3	5	3.8	5	4.8	4.6	4.1
4	Eberswalde	5	5.0	5	4.5	5	4.3	3	3.4	3	3.0	4.2	4.0
5	SW Melas	5	4.5	5	4.1	5	3.9	3	3.6	3	3.1	4.2	3.9
6	Nili Fossae Trough (N)	5	4.4	3	3.4	3	3.2	3	3.4	5	4.7	3.8	3.8
7	Nili Fossae Carbonate	5	4.2	3	3.4	3	3.2	3	3.2	5	4.3	3.8	3.7
8	Mawrth	5	4.3	3	3.7	3	2.9	3	3.4	5	3.9	3.8	3.6
9	Holden Crater	5	4.4	3	3.4	3	3.2	3	3.2	3	3.4	3.4	3.5
10	McLaughlin	3	3.6	3	3.9	3	3.0	3	3.5	3	3.5	3	3.5
11	Hypanis	3	3.8	3	3.6	3	3.1	3	3.0	3	2.8	3	3.2
12	Nili Fossae Trough (S)	3	3.8	3	2.9	3	2.6	3	2.9	3	3.9	3	3.2
13	Ladon Valles	3	3.8	3	3.3	3	3.1	3	2.7	3	2.7	3	3.1
14	E. Margaritifer	3	3.7	3	3.1	3	3.5	3	2.7	3	2.7	3	3.1
15	Coprates Chasma	5	4.1	3	2.7	3	2.3	3	2.5	3	3.7	3.4	3.1
16	Oyama Crater	3	3.3	3	3.2	3	2.8	3	2.7	3	3.1	3	3.0
17	Eridania	3	3.2	3	2.8	3	2.5	3	2.3	3	2.4	3	2.6
18	Nili Patera	5	4.6	3	2.4	3	2.5	1	1.4	3	2.2	3	2.6
19	Oxia Planum	3	3.0	3	2.4	1	2.1	1	2.1	3	2.7	2.2	2.5
20	Sabrina/Magong Crater	3	3.1	3	3.0	3	2.2	1	1.8	1	2.0	2.2	2.4
21	Hadriacus Palus	3	3.2	3	2.5	1	1.5	1	1.6	3	2.8	2.2	2.3

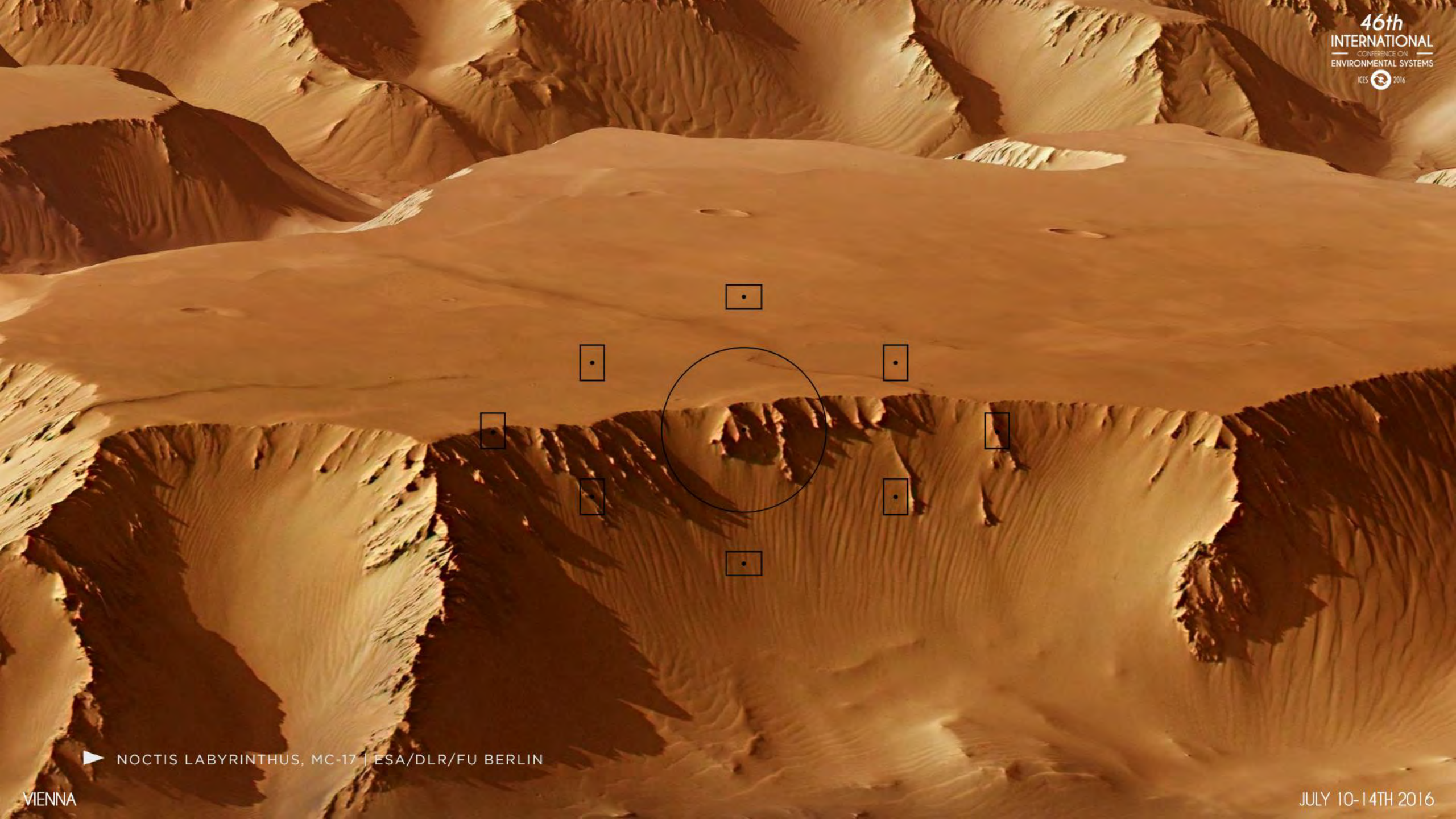


► WE HAVE TO LAND SOMEWHERE FIRST. IF WE'VE APPLIED ENGINEERING & SCIENTIFIC FACTORS, WHAT ABOUT HUMAN FACTORS?

► A HUMAN-CENTRED CLASS OF FACTORS



► IF WE CROSS THE TRADITIONAL THEORIES OF SPATIAL-PREFERENCE WITH THE A.R.T. MODEL, WE GET A NEW HUMAN-CENTRED CLASSIFICATION



▶ NOCTIS LABYRINTHUS, MC-17 | ESA/DLR/FU BERLIN

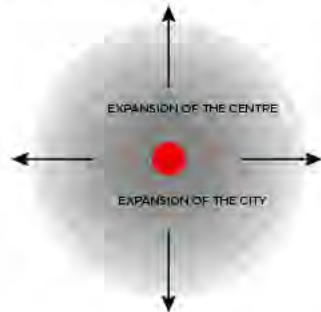
► EKISTICS

THE STUDY OF SETTLEMENTS

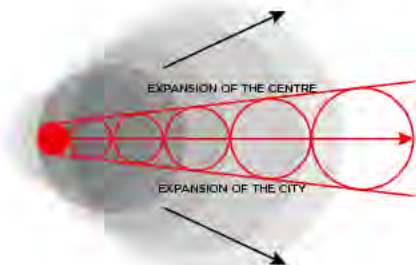
THE STATIC CITIES OF THE PAST



THE EXPANSION OF A DYNAMIC CITY



THE IDEAL EXPANSION OF A DYNAMIC CITY



THE BASIC CELL OF HUMAN SETTLEMENTS

COMMUNITY CLASS 6
SMALL METROPOLIS | 500,000



COMMUNITY CLASS 5
POLIS | 75,000



COMMUNITY CLASS 4
SMALL POLIS | 10,000



COMMUNITY CLASS 3
NEIGHBOURHOOD | 1,500



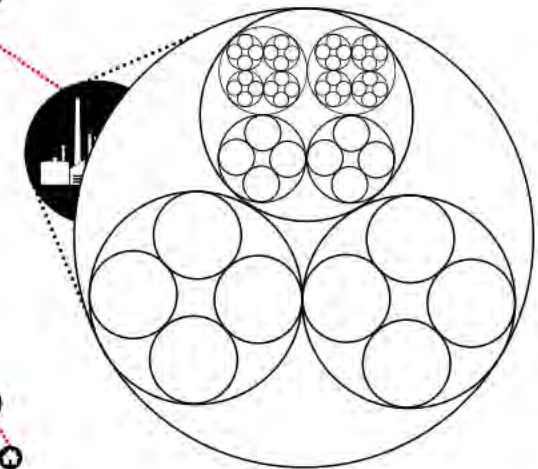
COMMUNITY CLASS 2
SMALL NEIGHBOURHOOD | 250



COMMUNITY CLASS 1
HOUSE GROUP | 40
HOUSE | 5
ROOM | 2
ANTHROPOS | 1



HEIRARCHICAL STRUCTURE



► EKISTICS' IS THE SCIENTIFIC STUDY OF HUMAN SETTLEMENTS.
DIAGRAMS BY C. A. DOXIADIS © 1968

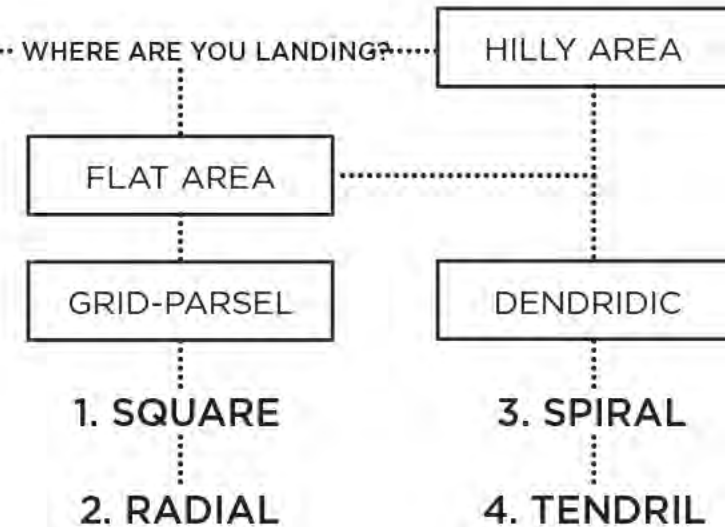
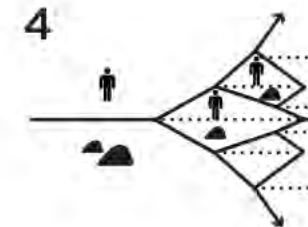
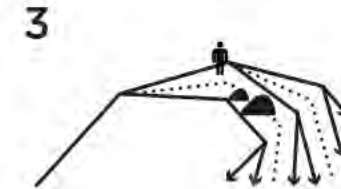
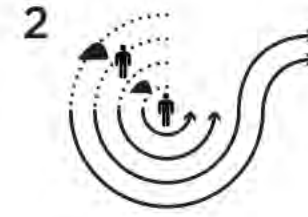
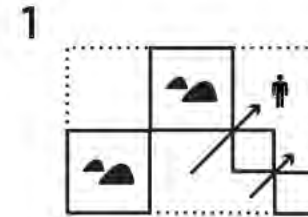
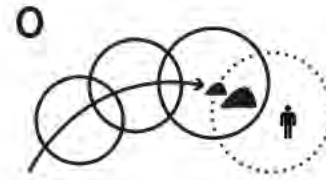
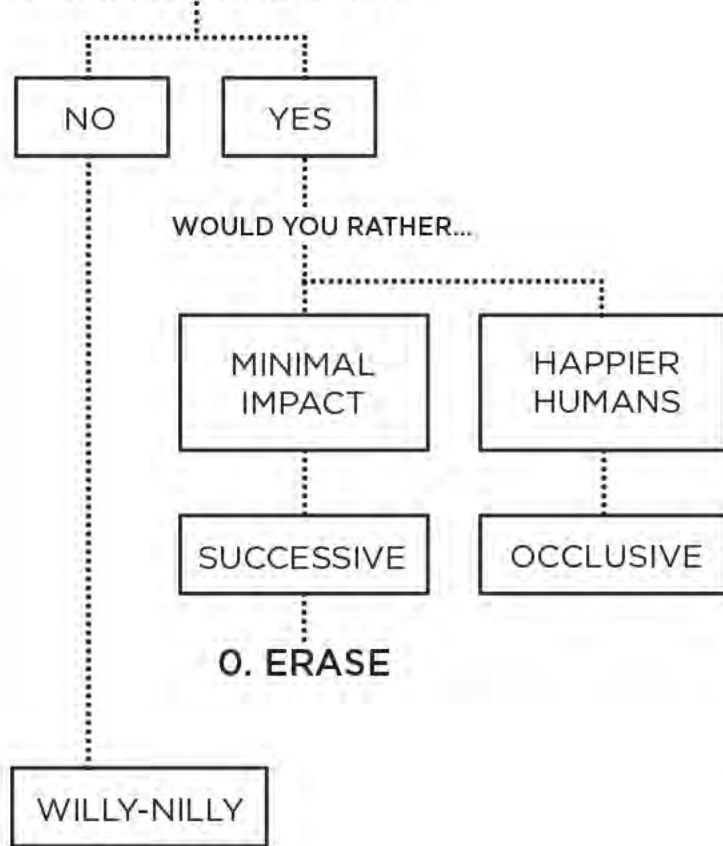


▶ CENTRAL PARK, MANHATTAN

► EKISTICS

RATIONALIZING THE MARSCAPE

DO YOU WANT TO BE SMART?



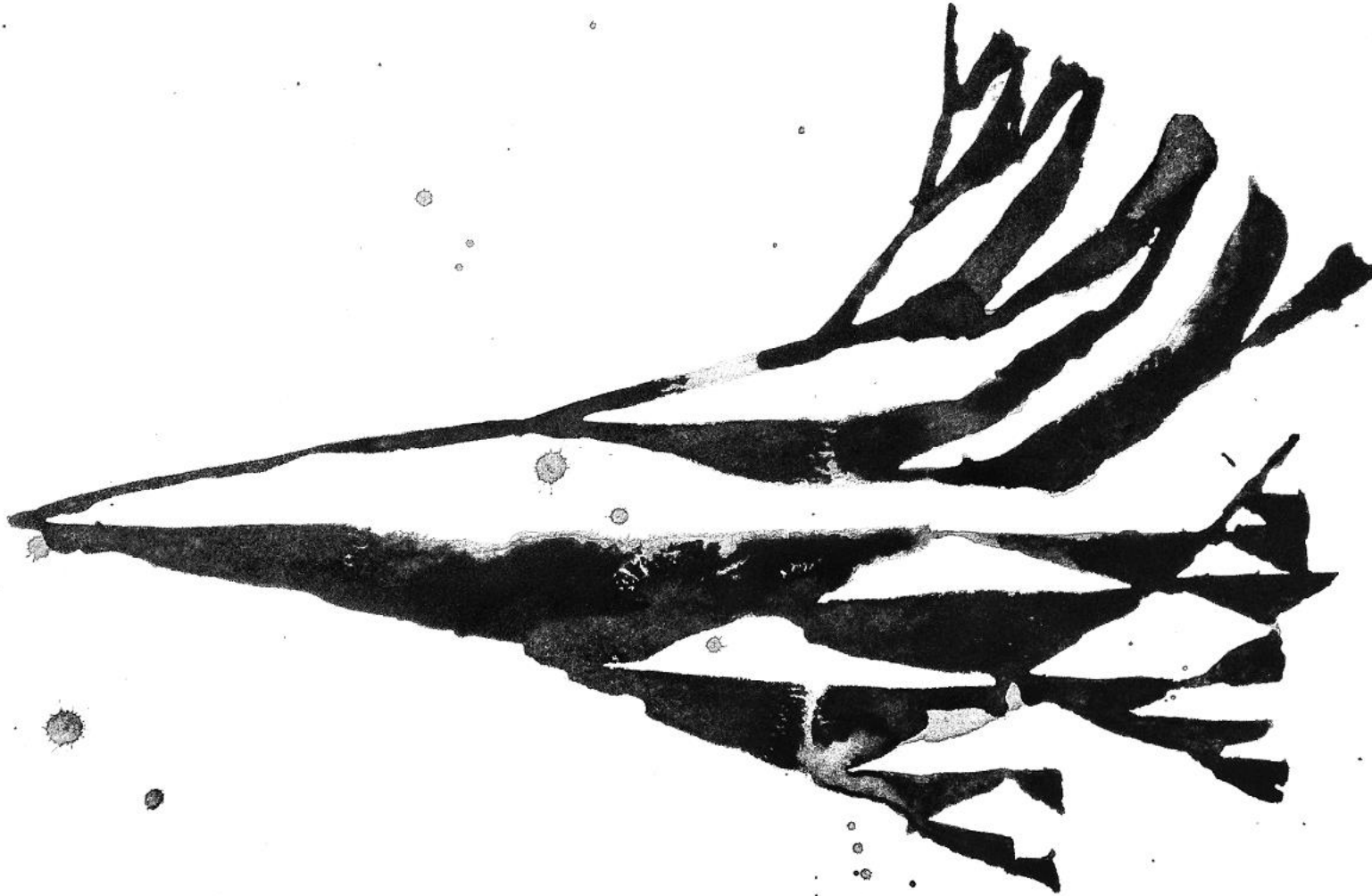
ALL SETTLEMENTS SHARE ELEMENTS OF THE SAME MORPHOLOGY, BUT THE PROPOSED GROWTH STRATEGY INTRODUCES A NEW METHOD THAT TAKES INTO ACCOUNT THE IDEALS OF DOXIADIS' "EKISTICS: THE "DENDRITIC-SPLIT" FORM

► A NEW GROWTH STRATEGY THE "DENDRITIC-SPLIT"



► DRY RIVER BED, MEXICO | ADRIANA FRANO/NAT GEO

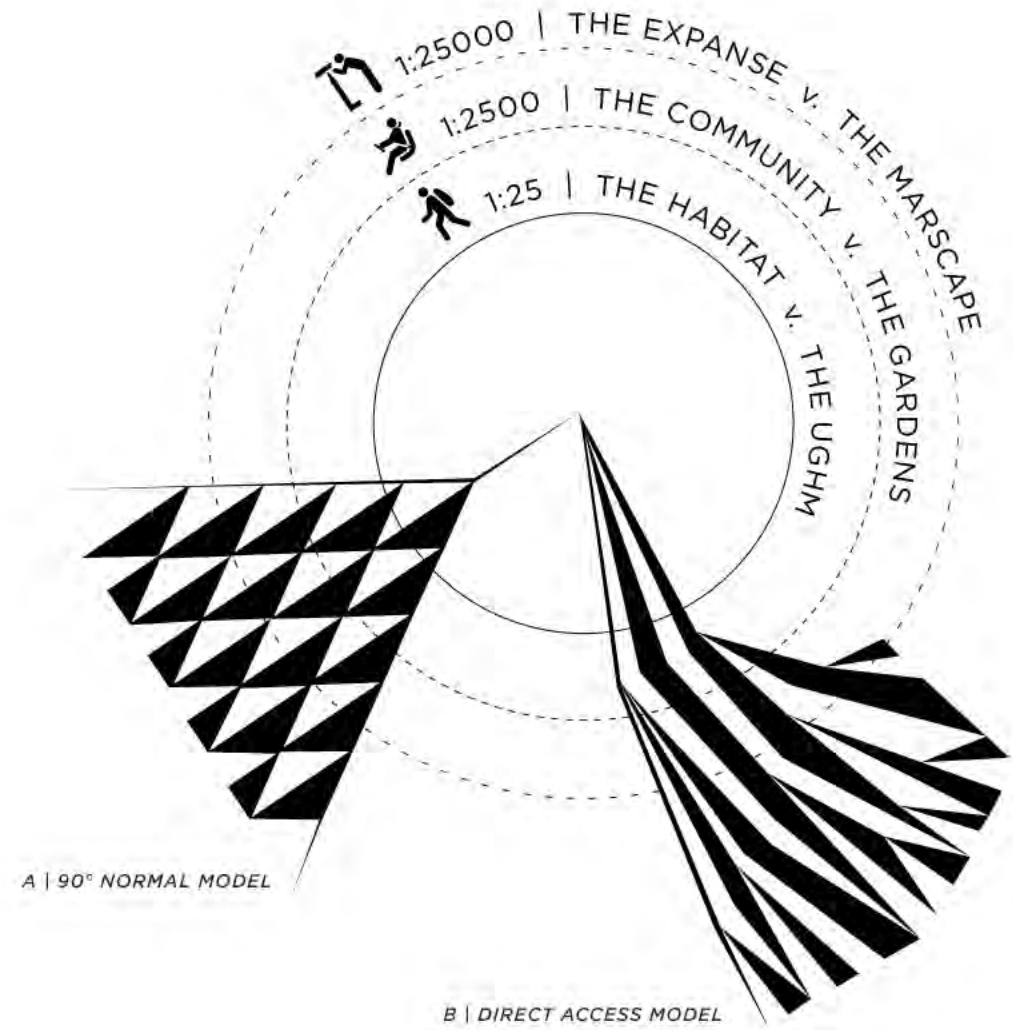
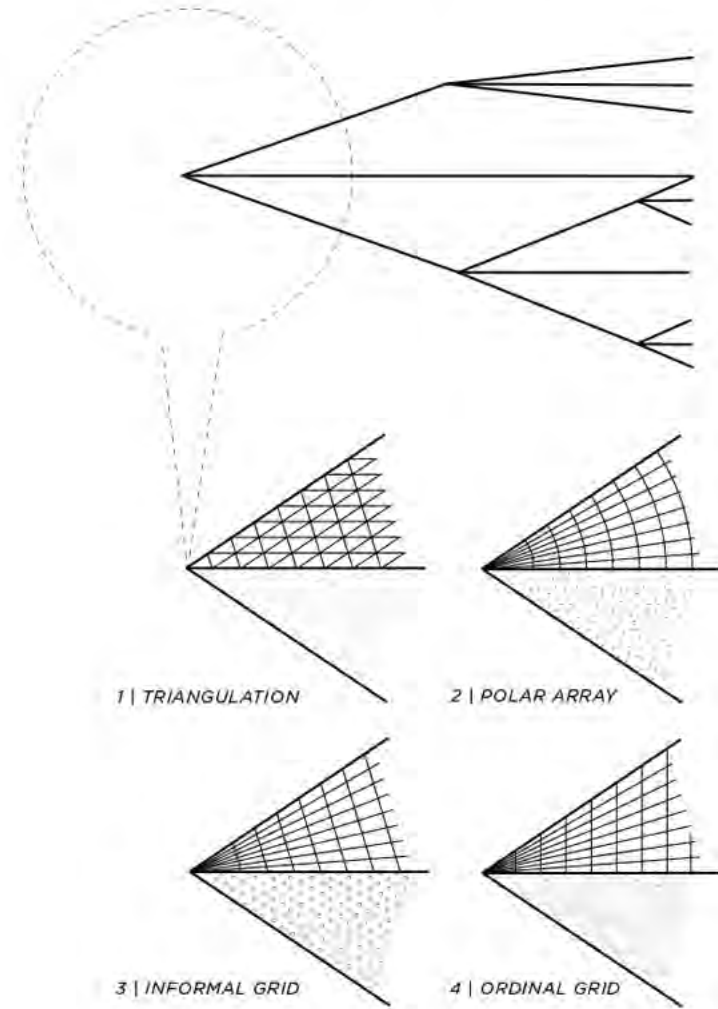
► A NEW GROWTH STRATEGY THE "DENDRITIC-SPLIT"



▼ THIS STRATEGY COMES DIRECTLY FROM THE CORE CONCEPTS OF A.R.T., AND WOULD NOT HAVE ARISEN ANY OTHER WAY

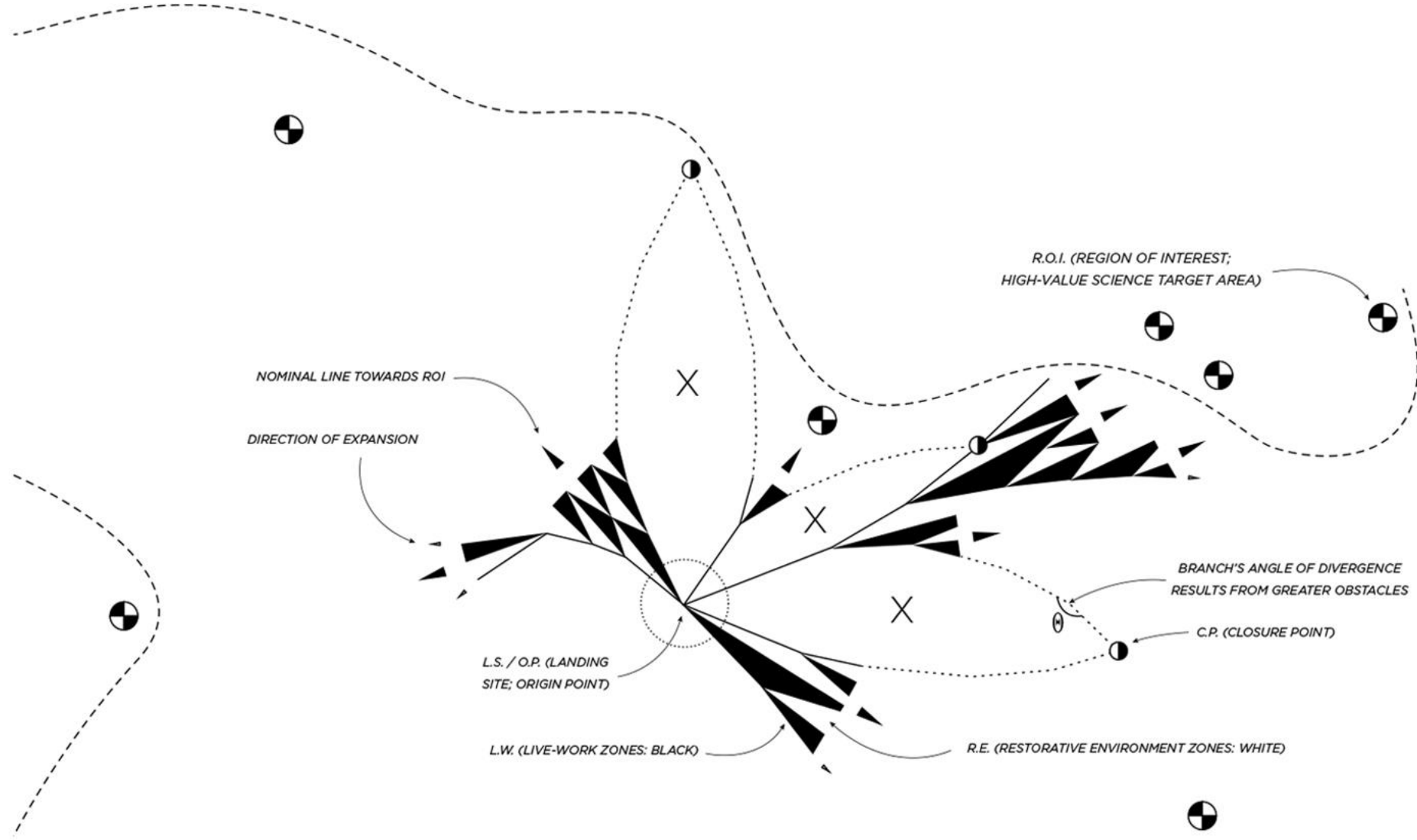
► DENDRITIC LAYOUT + INTERACTIONS

► THE "TRIANGULATION" PATTERN IS BOTH THE MOST EFFICIENT, AND MOST WELL-SUITED ORIENTATION PATTERN BASED ON PRINCIPLES OF A.R.T.



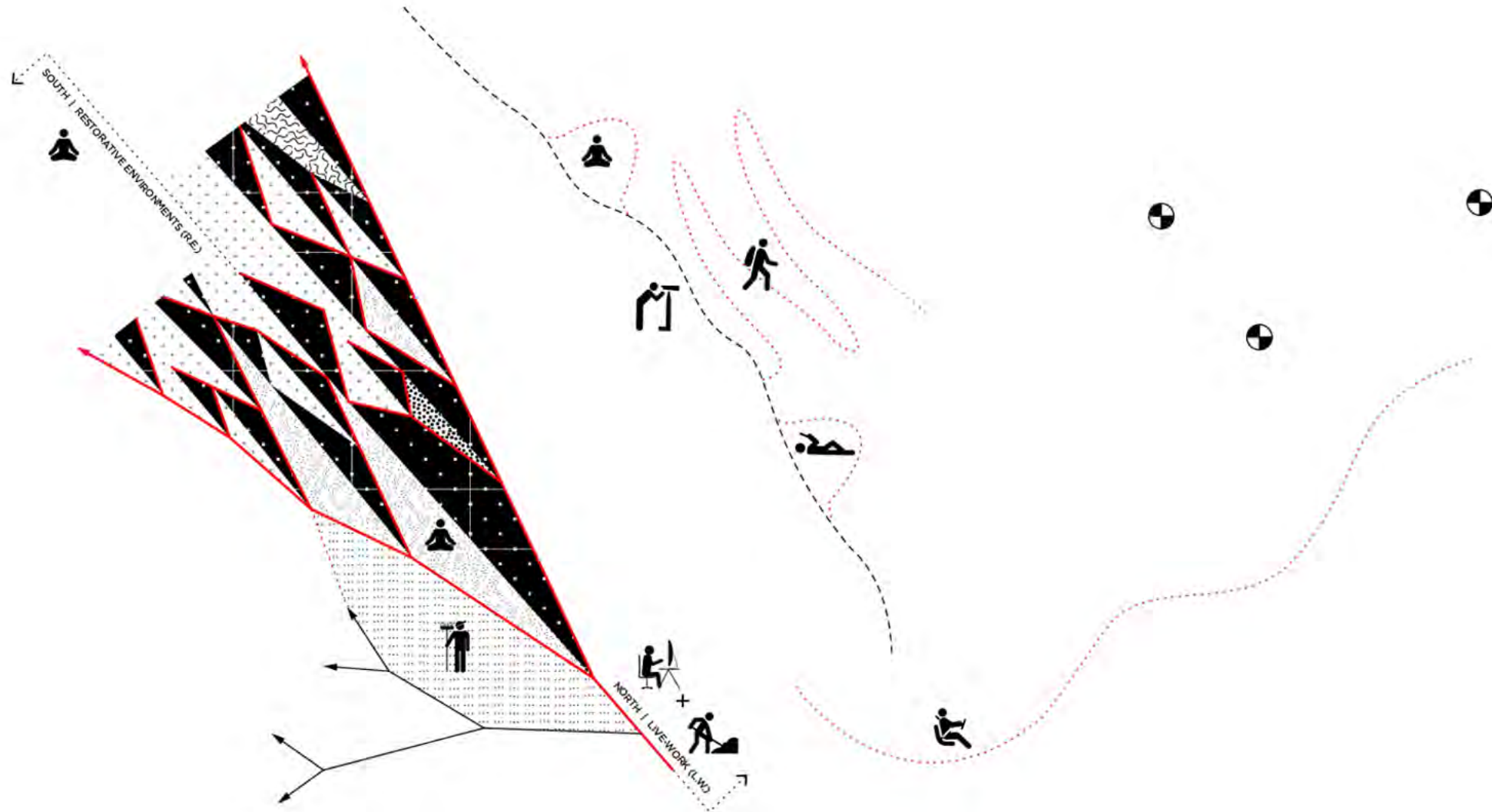
► THE INTERACTIONS OF THE HUMANS WITH AN EXPANSIVE DEADSCAPE IS CATEGORIZED BY SCALE: (1) WALKING, (2) DRIVING, (3) VIEWING.

► DENDRITIC APPLICATION TO PHYSICAL SPACE



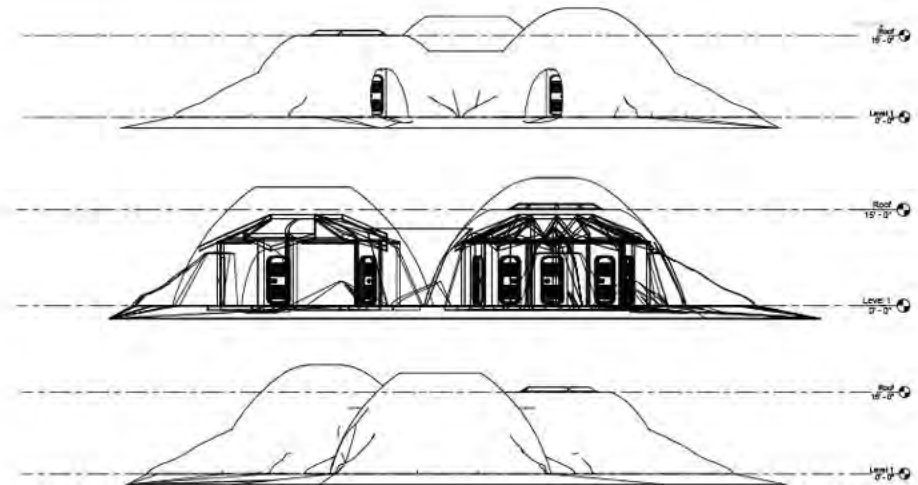
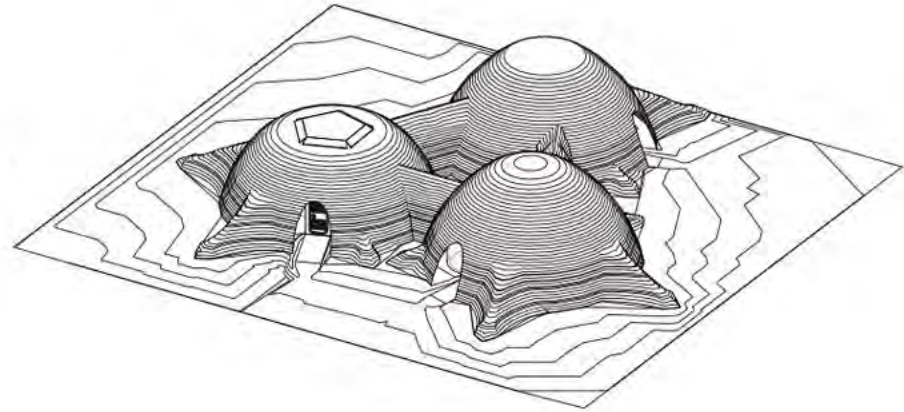
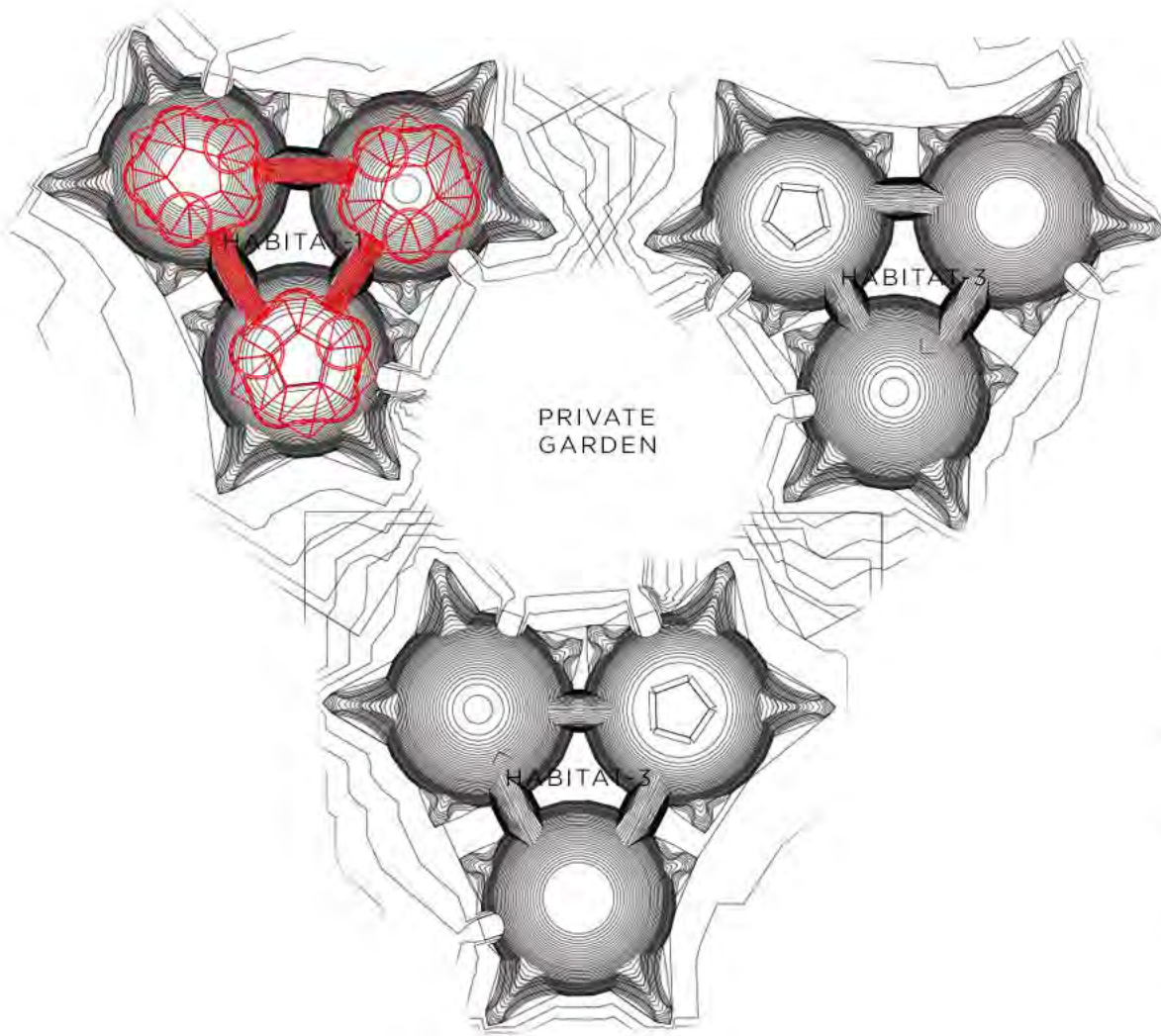
▼
DIRECT APPLICATION TO THE "EVOLVABLE MARS CAMPAIGN" (E.M.C.) +
ANY OTHER NEW HUMAN SETTLEMENT IN A DEADSCAPE

► DENDRITIC A COHERENT COMMUNITY



▼
THE IDEA IS THAT WITH ANY BRANCH EMINATING FROM A LANDING SITE TOWARDS A REGION OF INTEREST, SHOULD TAKE THE MOST DIRECT ROUTE. WHENEVER THERE IS A DIVERGENCE FROM THE NOMINAL LINE, THIS CREATES A "SPLIT" WHICH SEPARATES THE AREA INTO (1) LIVE-WORK + (2) DESIGNATED RESTORATIVE ENVIRONMENTS

► DENDRITIC THE HABITAT GROUP



THREE DIFFERENT KINDS OF SEMI-AUTONOMOUS ROBOTS ARE PARACHUTED ONTO THE SURFACE OF MARS TO CREATE A 93 SQ.M HABITAT CONSTRUCTED FROM IN-SITU REGOLITH (I.E. THE LOOSE SOIL AND ROCKS FOUND ON THE SURFACE OF MARS) AS A PROTECTIVE SHIELD AROUND THE INFLATABLE HABITATS

FOSTER+PARTNERS © 2015

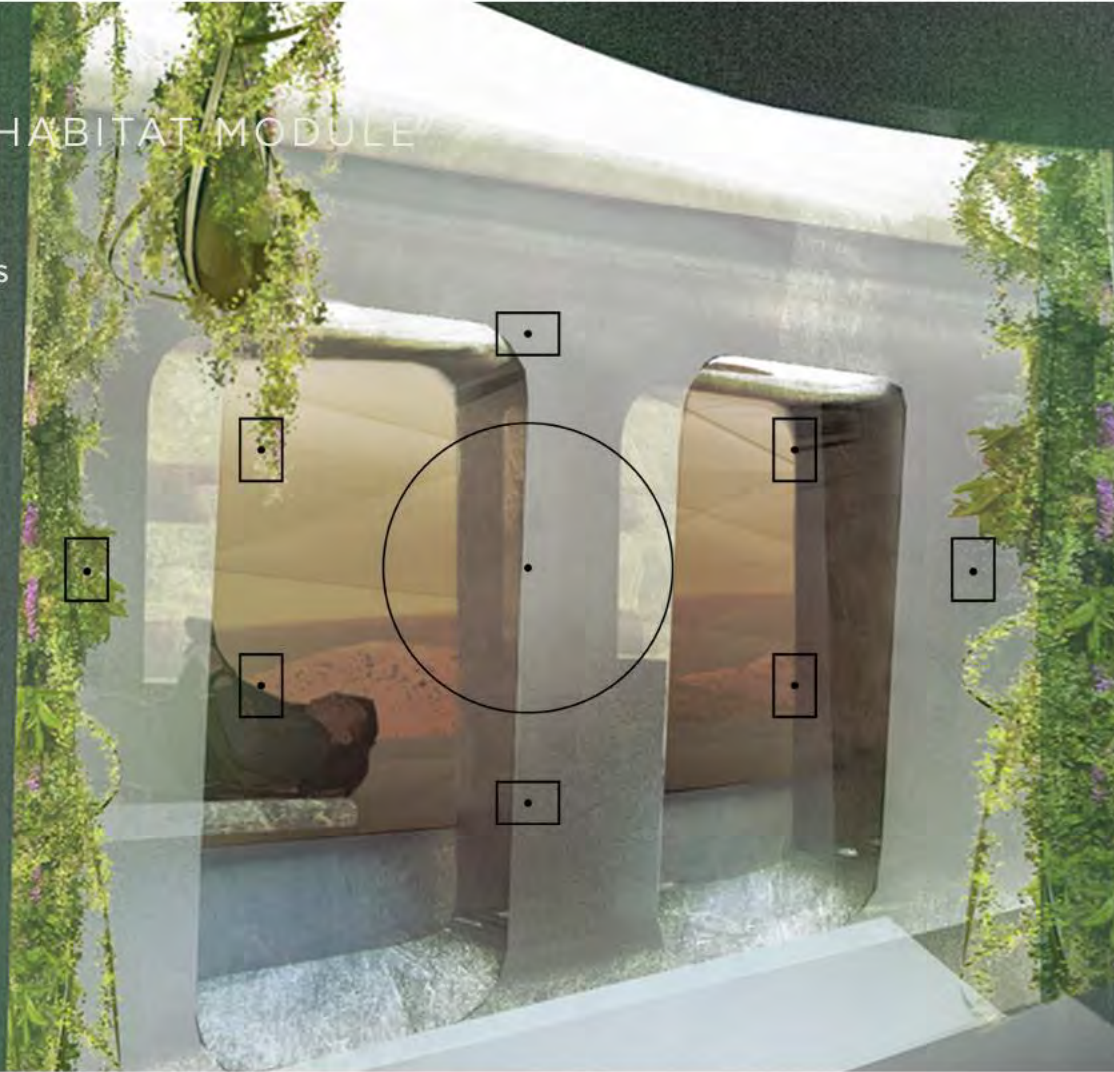
► (1) ARRANGEMENT, (2) IMPERFECTIONS, (3) TEXTURE + RESPONSIVE MATERIALS, (4) MOVEMENT

TAKE-AWAYS

FOR THE ULTRA-GREEN HABITAT MODULE

DIFFERENTIATING BETWEEN
ARTIFICIAL, VIRTUAL, AND REAL PLANTS

100 PARTICIPANTS
50 VISUAL EXHIBITS
44% CORRECT ANSWERS



► PHOTO: "MARS ICE HOUSE", WINNER OF NASA HABITAT COMPETITION | CLOUD AO + SEARCH © 2015

▶ A HOME: GESTURES

▶ INTRODUCING THE MUNDANE SIGNS OF PERMANENCE



46th
INTERNATIONAL
CONFERENCE
ON ENVIRONMENTAL SYSTEMS
ICES

▶ A HOME: GESTURES

▶ INTRODUCING THE PICTURESQUE SIGNS OF PERMANENCE

▶ A HOME: GESTURES

▶ INTRODUCING THE SUBLIME SIGNS OF PERMANENCE



► PHENOMENOLOGY



► "WANDERERS: BLUE SUNSET" | ERIK WERNQUIST © 2014

► PHENOMENOLOGY



► "WANDERERS: IAPETUS RIDGE, SATURN" | ERIK WERNQUIST © 2014

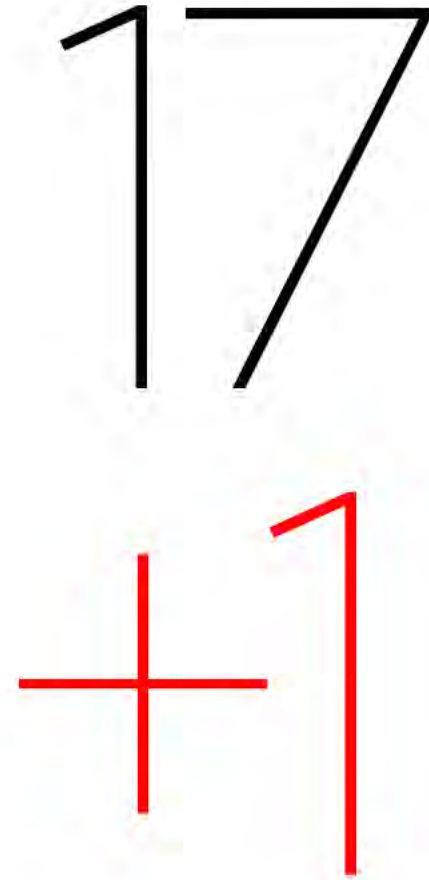
► NEXT STEPS

MARS ICE HOUSE RESEARCH TEAM

PLANETARY GEOPHYSICS, MIT AERONAUTICS AND ASTRONAUTICS
 PHD GEOLOGY AND PLANETARY SCIENTIST, PLANETARY SCIENCES INSTITUTE
 PHD ASSOCIATE PROFESSOR, ICS AT UNIVERSITY OF HAWAII
 PHD RESEARCH ASSOCIATE, MECHANICAL ENGINEERING AT LAVAL UNIVERSITY
 PHD APPLIED MATHEMATICS, CALIFORNIA INSTITUTE OF TECHNOLOGY
 PHD PROFESSOR OF PRACTICE OF AEROSPACE ENGINEERING, MIT A+A
 PHD GEOPHYSICS, AUSTRIAN ACADEMY OF SCIENCES, SPACE RESEARCH INSTITUTE
 PHD PROFESSOR OF NUCLEAR ENGINEERING, UNIVERSITY OF TENNESSEE
 CONSTRUCTION ROBOTICS CO-FOUNDER, ASMBLD CONSTRUCTION ROBOTICS
 ELECTRICAL ENGINEER, ASMBLD CONSTRUCTION ROBOTICS
 ORBITAL MECHANICS/AEROSPACE ENGINEERING, UNIVERSITY OF MADRID
 ROBOTICIST AND AEROSPACE ENGINEER, AVIATOR
 PHYSICS AND SPACE SCIENCES, UNIVERSITY OF GRAZ
 ASSOCIATE PROFESSOR, SCHOOL OF ARCHITECTURE AT MCGILL UNIVERSITY
 DISTINGUISHED ANALYST, A.N.S.E.R.
 CONSULTING ENGINEERS, L.E.R.A
 ENGINEER AND SOFTWARE ARCHITECT

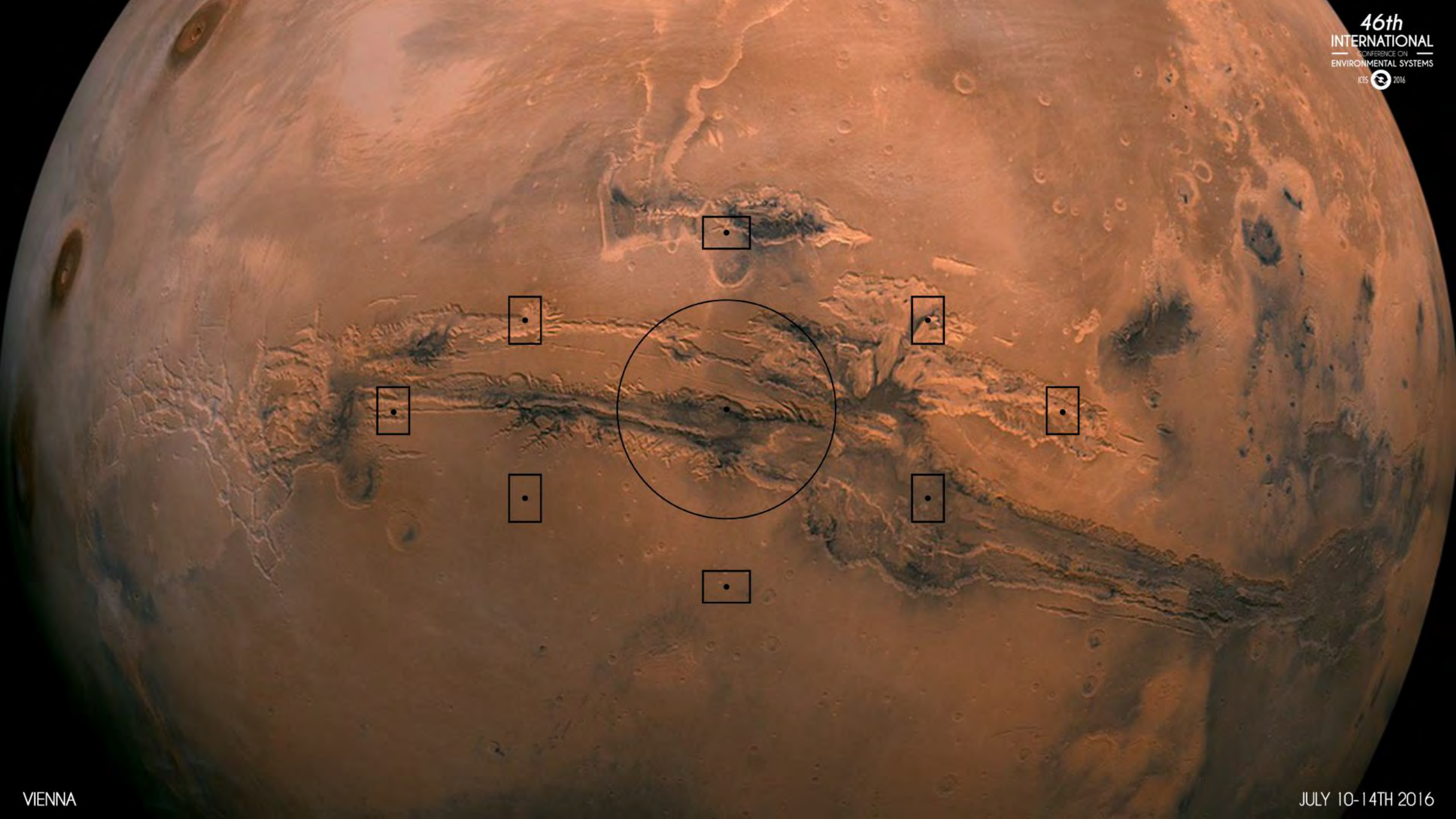
DO YOU SEE WHAT IS MISSING?

PHD LANDSCAPE ARCHITECTURE, UNIVERSITY OF XYZ



► INTERDISCIPLINARY ENGAGEMENT IS KEY TO GROWTH + OUR ROLE IS NECESSARY TO THE FUTURE SUCCESS OF THE E.M.C.

THANKS TO
KRIS FOX + CYNTHIA GIRLING
MARC M COHEN



THE NEW PARADIGM IS...

THE DE-LIMITATION OF THE LANDSCAPE ARCHITECT

THANKS TO
CSLA/OALA PLANNING COMMITTEE



PRESENTATION BY
JUSTIN BENJAMIN TAYLOR

CSLA Congress
AAPC Congrès

DEADSCAPES:

EVOLVING THE PARADIGM OF LANDSCAPE ARCHITECTURE

TORONTO

APRIL 5-7TH 2018

► QUESTIONS TO EXPLORE INCLUDE:

- THE EXPANDING ROLE OF THE LANDSCAPE ARCHITECT IN A QUICKLY URBANIZING WORLD
- ESTABLISHING NEW PARADIGMS OF COLLABORATION AS A MODEL FOR GOOD SOLUTIONS, INCLUDING WORKING IN INTERDISCIPLINARY TEAMS
- THE INCREASING ROLE OF THE CITY REGION, INCLUDING ITS PLACE AND ECOLOGIES IN OUR LANDSCAPE
- THE USE OF NEW TECHNOLOGY AND INNOVATION IN CONTEMPORARY LANDSCAPE ARCHITECTURE
- THE NEED AND DESIRE FOR INCREASINGLY RESILIENT AND AESTHETIC URBAN DESIGN TO RESPOND TO OUR CHANGING CLIMATE