

A K E R S



UNLOCKING INNOVATION

A systems approach to

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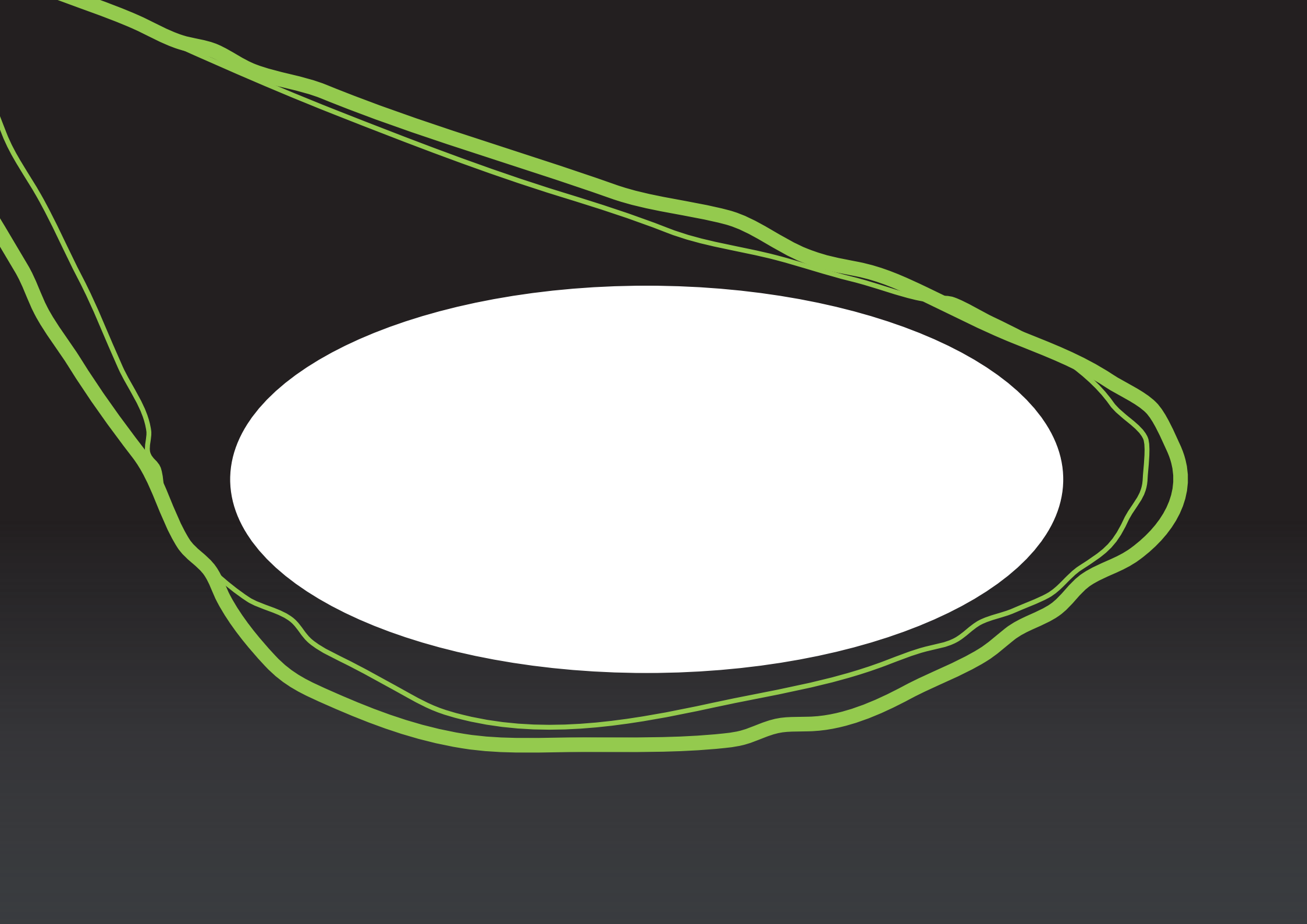
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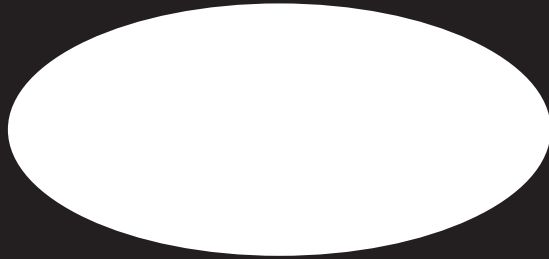
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THE CHALLENGE

Whether it is about climate change, human health or sustainable industries, we are in the decisive decade to make progress. Deep tech chemistry can transform the way we live today and help secure a cleaner and better future.

Z[l [æf c [dj]_c [bd[i "1 [djkh[i "Ywdej" dZ' i k_jVXb^ \W_bj_ [i " je^YWro^ekj] ^ ['h[i [WY^ehi YWf #f "e\j^ [i [j [Y^deæ] _ [i \$



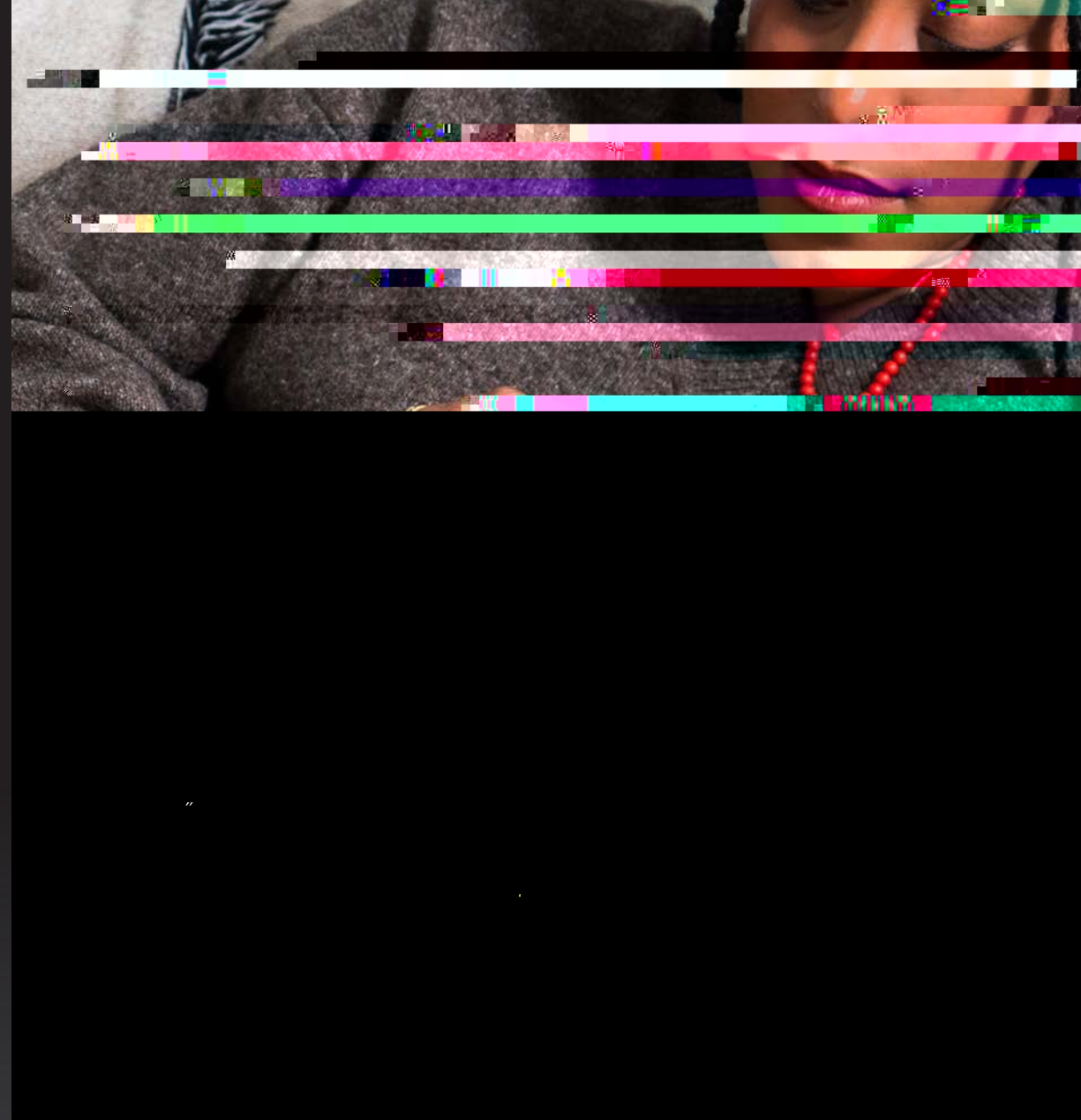


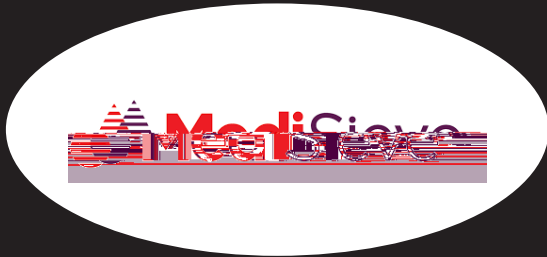
Convenience doesn't have to cost the world

Plastic pollution has become one of the biggest threats to our environment and our future.

FbWj_Y`dj^["eY[Wd`i`["nf[Yj[Z`je`ekjm[_]^` i^`Xo`(&+&`"

_d`f`bWj_Y`"VdZ`el[h~/o! ! ! >



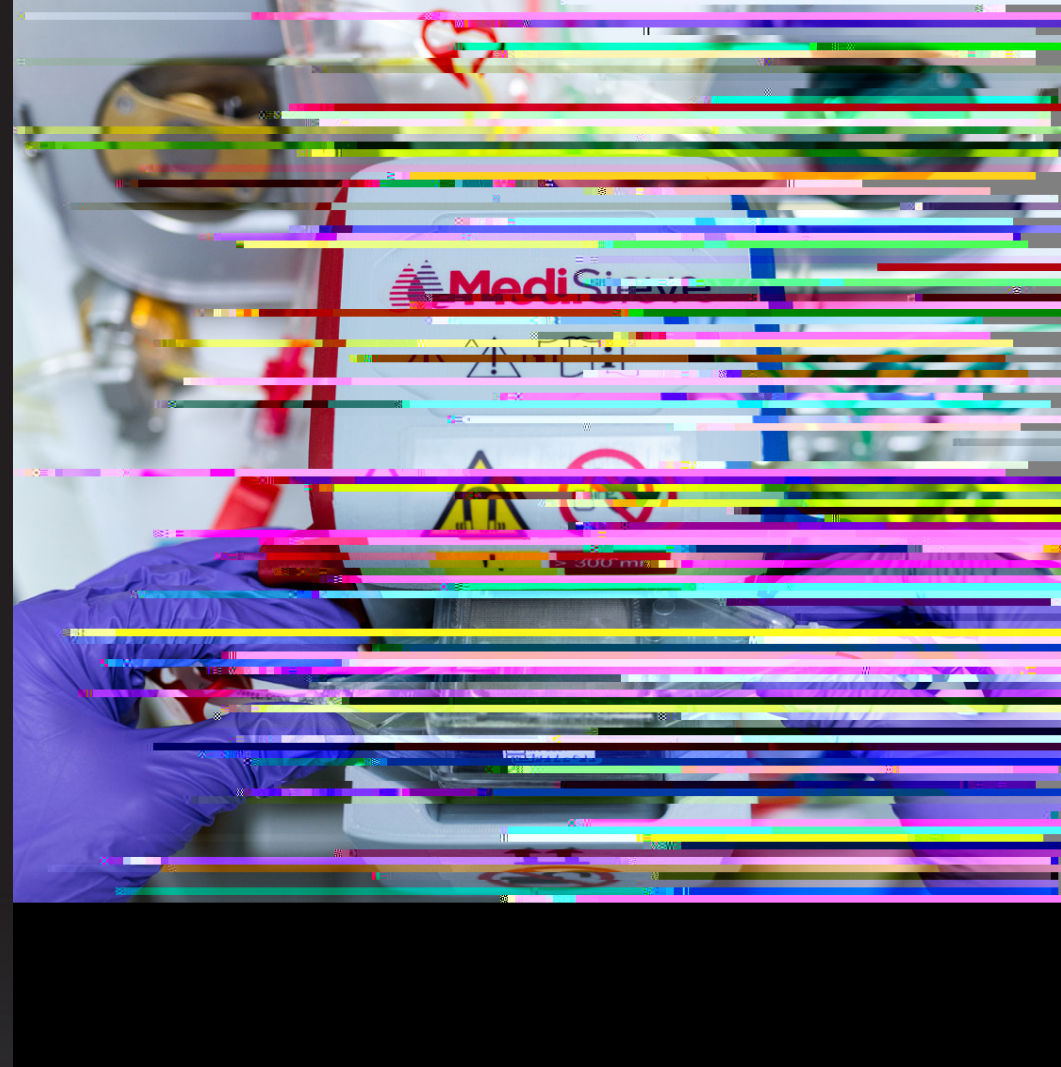


Eliminate. Isolate. Cure.

MediSieve's Magnetic Blood Filtration technology aims to revolutionise medical treatments, especially for diseases where conventional therapies fall short.

J ^i j [Y^delæ] oVZZH i i [i j^ [Yhj_YWBY^Wd] [e\h[c el_d] i f [Y_Y
Yec fed [dji \hec j^ [XtæZi jh Wc j^VY^Ykhh [dj^c [j^æZi YWddej"
[\Yj] [løjW] [j\$J ^i i k [i f Wj_YkBWf hedeY [Z^d 7Z [de"
7i i eY_Wy [Z^L hki 177L Ž = [d [j^ [hW [i "m^ [h [kf je", &fi e\fej [dj_WB
fWj [dji " WXekj". . &"&&f [ef h " W [d [b] Xh ehWj h Wyc [dj j^Wj^c Wb"

C [Z^ [i [e\ [h Wf h Y i [i ekj_ed^ehj h Wj_d] i W h e k i X t æ Z X e h d ["
YedZ_jedi XoZ_h [Yj h c el_d] ^Wc \kbi kXi jWdY [i \hec j^ ["
XtæZi jh Wc \$ji WXbj oje jW] [j WmZ [hW] [e\i kXi jWdY [i c Wd [i j^W
fem [hk bjeeb^d^c [Z_Yd [f h e c i_d] X [j] h f Wj [dj^ekj Yec [i "h [ZkYd] "
^ [Wb^_d [gk j [i "WdZ^f W_d] j^ [mWb^ehc eh [f [h edWd [Z^WdZ^ [Yj] ["





Making batteries faster

Electric transport is key to a low-Carbon economy, but range anxiety, long charging times and battery degradation remain issues. Gaussion's fast-charge technology - MagLiB™ - is changing the EV charging game.

7i "gk_Ya^Y^W] _d] j[Y^dele] o_c f hel [i "XWj] [ho^f [hlec WdY["Xo"
kj_bi_d] "Wd[nj[hdWc W_d[j_Y" [b^Zkhd] Y^W] ["WdZ^Z_i Y^W] ["YoYb_i \$
7ZZ_j_edWb"j^["c W_d[j_Y" [b^h^ZkY[i "Y[bZ[j[heWj_ed"fhed] _d] "
XWj] [ho^b] \$C W_B8 "Yd^Yec f b^c [dj "Wdo^XWj] [ho^WdZ^c f hel [i "
W\ehZVX_bj_o" _dYh[W [i "XWj] [ho^Yedl [d_l_dY["WdZ^h^ZkY[i "c X[ZZ[Z"



WHAT IS THE SYSTEM TELLING US?

REGIONAL INFLUENCES

MINDSETS AND NARRATIVES

Postcode
Lottery

WHAT IS THE SYSTEM TELLING US?

Development of lab space requires investment – and we tend to see significantly less in space that is suitable for deep tech chemistry ventures.

J^i "i c ei j b Z h l [d X o W b W a e \ 1 W k [Y W [\$ 9 ^ [c i j h o b W X i " W W [n f [d i i [j e X e j ^ X k b Z W d Z e f [h W [\$ J ^ i " i W h i k b e \ " i f [Y _ Y W d Z Y e c f b n i f W W [h g k h c [d j i i i k Y ^ W c e h " h e X k i j W h ^ W d Z b d] h g k h c [d j i " e h ^] ^ [h i f [Y Z m j b W X " W W [W Z W ^] ^ Y e i j e \ c W y [h W b " W d Z j ^ [d [Z e h ^] ^ # f [Y "

J ^ [1 W k [Y W [" i ^ k h ^ [h k d i k f f e h j [Z X o W b W a e \ h e X k i j "

W f b [Z c [W d i j ^ [h " i b j j b [i Z [d Y [e \ W Y h j Y W b c W i e \ Z [c W d Z e h Y ^ [c i j h o b W X i f W W [\$ D e Z [j W d Z c W f f _ d] e \

i f [Y _ Y W y _ e d Z i Y k h [d j b 1 i X b e h Y ^ [c i j h o b W X i \$

j e Y ^ W d [i W e k d Z] [d [h W k d Z [h j W d Z _ d] e \ d [[Z i " \ k d Z _ d] " W Z [g k W y [f e b Y _ i " W d Z _ d l [i j e h Y e d Z [d Y [\$

: [I [æfc [dj]e\Wí fW[h[gk_h[i _dl [i jc [dj] WdZ “we tend to see significantly less investment go into developing space suitable for deep tech chemistry ventures

lack of value case \$9^ [c _ljh\Wí W[[nf [di _l[”





DYNAMIC 2: COMPLEX PLANNING ENVIRONMENT

complex planning
landscape
air handling and net zero requirements
introduce additional barriers
local challenges around resources

lack of planners available to deal
with science applications



DYNAMIC 3: CHEMISTRY SPECIFIC REQUIREMENTS

The application of deep tech chemistry is diverse

Y^[c i_jh'Wk'fW["i j^h[\eh['je'h]jhe j`ed'WYW[#Xo#
YW['XW i "Wq i i '\ Y[dj 'WZ'c eh['nf[di i["c [j^eZ"
\ehXe j^`ef[hWyehi 'WZ'ki [h \$

J^i 'f[hY[fj_ed'e\1 Wk_bj'o'c [Wdi **there is no
obvious critical mass of ventures with the 'same'
chemistry lab requirements**

X['q i i " [n_Xq 'WZ'kdi k_jVXq \eh'e j^h[h_j[dWdji 'edY['W

**less lab space has chemistry designed in
from the start and in many instances is not developed
at all**



DYNAMIC 4: STRATEGIC NARRATIVES

: [[f]Y^Y^c jhbYWd^X[^ekdZ^d^Z^h [^WfbYWy_edi ^W^j^ ^W^bjo^je^WZ^h^i^i^W^W^jo^e^f^heX^b^c^i^W^Z^e^j^d^
the underpinning nature of the deep tech technology renders chemistry invisible in the final product or solution

J^i^ ^b^W^a^e^j^W^d^ _X^b^ ^f^h^i^ [dY[^f^h^e^f^W^j^W^i^ ^j^e^X^h^e^W^Z^h^
inability to make the value case for deep tech chemistry technologies ^W^Z^j^ ^h^ ^e^h^ ^j^ ^j^i^ "

J^ ^j^ ^W^ ^j^i^ ^e^j^ ^i^ ^W^ ^j^ [[d^d^ **limited government intervention in the form of supportive policies and incentives to encourage investment into chemistry lab space** ^j^ ^W^ ^e^ ^n^W^ ^h^X^W^i^ ^j^ ^j^ ^b^W^a^e^j^Y^e^d^ Z^ [dY[^d^j^ ^j^ "

m^_Y^ ^Y^e^k^b^ ^X^e^e^i^ j^j^ ^i^ ^Y^e^d^ Z^ [dY[^j^ ^e^h^ ^n^W^ ^f^b^ ^i^ ^f^ [Y^_Y^ "





DYNAMIC 5: THE POSTCODE LOTTERY

For access to chemistry labs, it really matters where you are.

J ^ ['] [e] h W ^ _ Y W b e Y W j _ e d ^ e \ W Z [[f ' j] [Y ^ Y ^ [c _ i j h o 1 [d j k h] ^ Y W d [j ^ [h W c f b \ o ^ e h [W [' j ^ [' [\ \ Y j i " e \ j ^ [' Z o d W c _ Y i " m [" ^ W [" e k j b d [Z ' i e ^ \ W h W d Z " ^ W ^ W Z _ h [Y j " c f W Y j " e d j ^ [^ W W W X b j o ^ e \ d l [i j c [d j " W W Y [i i ' j e j W d j " W d Z ^ W \ e h Z W X b j o ^ e \ W X i f W Y [\$

L [d j k h] i ^ e Y W j [Z " d ^ W d [i j W X b i ^ [Z ' i Y [d j _ Y Y b i j [h " ' i k Y ^ ^ W j ^ [" = e b Z [d " J h W d] b ' 1 B e d Z e d " " E n ^ e h Z " 9 W c X h Z] [Z " ^ W h [" d ^ W c k Y ^ c e h [^ W e k h W X b [' d l _ h e d c [d j ^ e h i f _ d d _ d] " e k j \$

More investment flows here and there's a larger talent pool

e h k d _ [[h j _ [i \$ > e m [[h " j ^ _ i ^ Y e c [i ^ W Y W Y e i j " j e 1 [d j k h] i " Z [[[e f [h ^ W d Z j ^ [' h]] _ e d " j i [b \$

Waiting lists are lengthy, cost per square foot is high and well-connected space is limited

? d " 9 W c X h Z] [" j ^ [h ^ W h [^ Y ^ W d] [i ^ W e k d Z ^ W W W X b j o ^ e \ m W Y [h \$ 7 i ^ Y b i j [h '] h e m " W d Z Z [c W d Z ^ e h "

In areas with less established clusters and supporting infrastructure, there is a more uneven spread of lab space

\$ B W X i f W Y [" c W b X [^ Y ^ [W f [h " X k j j ^ [j h V Z [# e \ \ e h [[d j k h] i " i b i i " f e j [d j _ W \ e h " h M _ d] i _] d _ Y W d j _ d l [i j c [d j " W i c W d h j W d j " f e e b ^ W d Z i j _ d j ^ i i f W Y [" i k d b a [b j e X [' Z [i _] d [Z " m j ^ ^ Y ^ [c _ i j h o " d ^ c _ d Z ^ e c j ^ [' i j W j \$

Geography must be considered in any intervention \$ 7 ' K A # m Z [" e d [# _ p [" j i ^ W b W f h e V W ^ m b b d e j ^ c W b [j ^ [^ Y ^ W d] [' h g k _ h Z j e ^ W Z h [i i j ^ [' [\ \ Y j i " e \ h [] _ e d W b j o \$



We have identified eight 'Windows of Opportunity' across the chemistry lab system which have the potential to supercharge the

WHAT NEXT?

We are launching the **More ChemLabs** initiative to catalyse system level change and address the shortage of chemistry labs for startups.

M["m_bq VZ "Wd[jmeha"e\Y^Wd] ["W [dji "Nec "1Wheki "i [Yjehi " je"i [_p["j^ ["m_dZemi "e\effehkdjo"WdZ"Z[I [_of "Wfehj"ebe"e\

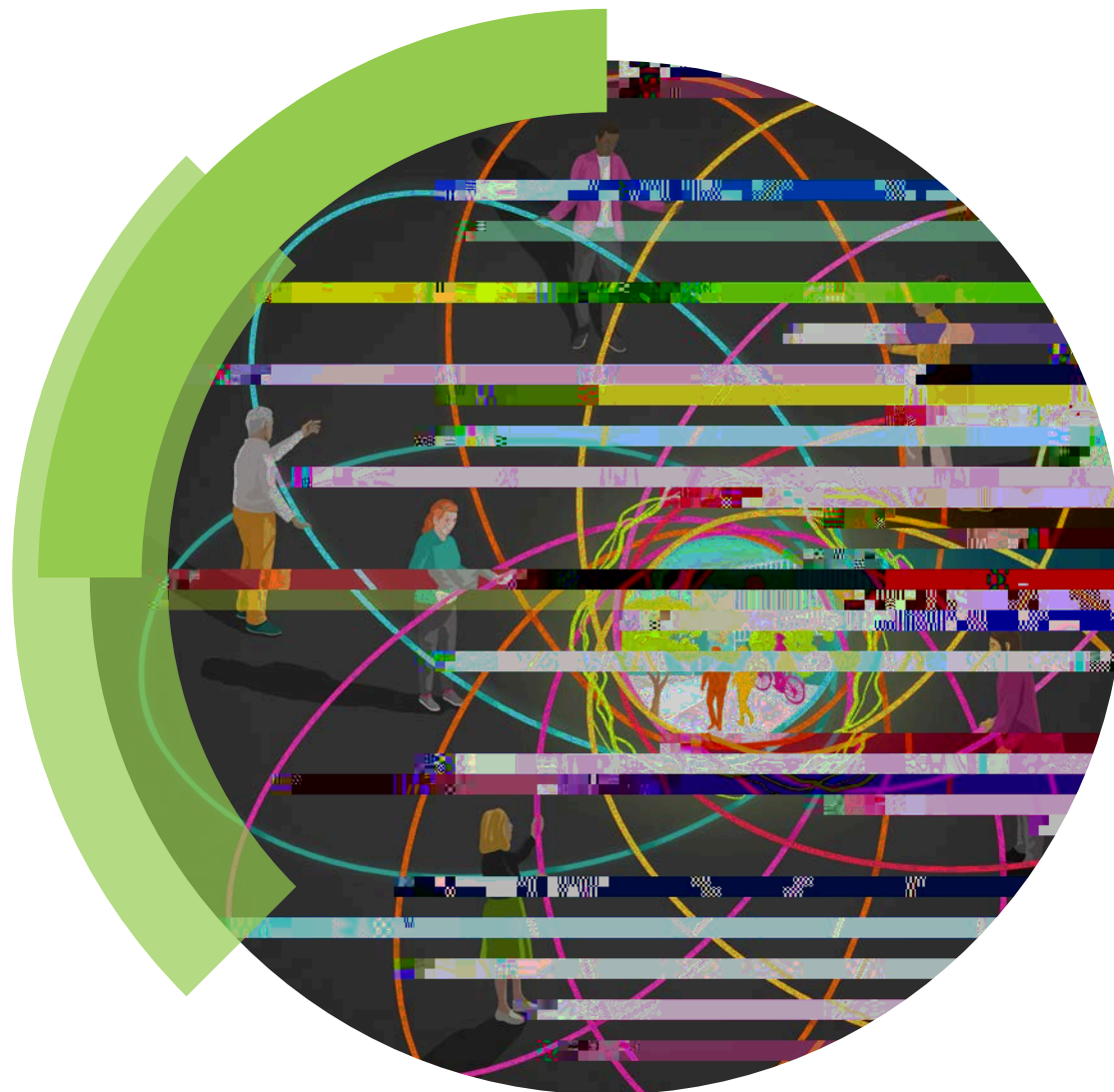
M["d[[Z" [efbq "m^e"W ["ddel Wj_d] "dj^ [Z[bl [h"e\W"i fWY[" j^Wj"mehai "ehZ[[f"j[Y^Y^ [c _j]h"m^e"W ["WZ[eYWj_d] "eh"

_dl eb ["i ^Whd] "jeh[i "e\Y^Wd] ["Xk_b_d] "WreXki j["I_Z[dY[" XW ["WdZ"Z[I [_of_d] "if[Y_ Y"i etkj_edi \$

Is this you?

<eh_d\ehc Wj_ed"ed^em"je" [j _dl eb [Z"

visit: rsc.li/morechemlabs





CORE GROUP

Dr Alex Reip "En\ehZ`D\dei oi j[c i `BjZ`"

Dr Anna Birney

I Y^eebe\1 oi j[c `9^Wd] [`"

Dr Ashley Brewer "1 Y[dY[`9h[WY[i `"

Dan Williams

9tkij[h `17H9Z`"

Daniel Pagella

7ZI WdY[Z`H[i [WY^`9tkij[h `17H9Z`"

Ed Mansfeld

8_e]_YW1 Y[dY[i `H[i [WY^`9ekdY_b`

†88I H9Z`"

Emma Andrews

Fabrizio Nicola-Giordano "M_b[B78`"

Georgia Hogg "8hj_i ^`BWdZ`"

Izhar Ul-Haq

<W_bj_[i `9ekdY_b`I J <9Z`"

Jamie Bottomley

John Leake

Miranda Knaggcola-Giordano

CONTRIBUTORS

Achim Hoffman

Adam Glen

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CONTRIBUTORS (CONTINUED)

Matthew Davies "BE M8Æ 'BjZ"

Matthew Soules

Dr Meryem Benhoud

A[hWēbB_c j[Z"

Mike Derbyshire

Nathan Berry "D[nki 'B[[Zi "

Dr Nikolay Cherkasov

I jeb_9VWbi ji 'BjZ"

Owen Metters

Dr Paul Colbon

B_l [hf eeb9^_heY^c 'B_c j[Z"

Pete Wilder

En\ehZ'1 Y_l dY[; dj[hfh_l [i "

Dr Ross Burn "9Wj Y_ "

Ruizhi Wang "> [nW ed\W' B_c j[Z"

Ryan Taylor "H[l_l [; Ye 'BjZ\$"

Simon Hombersley

Steve Lang

Susan Brench "1 jW\edi 'B_c j[Z"

Tamsin Mann

Dr Tom Heenan " = Wki i _ed 'BjZ"

Tom Wolfenden

I ^[\ [l_Z'J [Y^debe] o'F Wai "

Wael Muselmani "C [Z9_jo"

William Benjamin "E n\ehZ 'F hef [h_l [i "

Dr Yubiao Niu "M['7h['D_kc 'BjZ"

C H A N G