

THE AI REVILO IN BANKING

Manuel Abat Jose Luis Juanas Rainer Glaser Mustafa Domanic 6Ub_g`\Uj Y`VYYb`hfm]b['Zcf`mYUfg'hc`]a d`Ya Ybh'Ufn] VJU``]bhY``][YbW'f5±'dfc[fUa g'hc`]a dfcj Y`h\Y]f`W]YbhYI dYf]YbW'g`UbX`ZYbX`c `]bWfYUg]b['Wta dYh]h]cb'Zfca 'bYk 'YbhfUbhg' ci hg]XY`h\Y`hfUX]h]cbU`` bUbVJU`gYfj]W'g`]bXi ghfm'A cg4 b VJ h

: cf'gca Y'VUb_g'h\ Uh'\ Uj Y'Ya VfUWYX'5=žh\ Y'fYgi `hg`\ Uj Y'VYYb`]a dfYgg]j Y'"Ci f'fYW'bh'k cf_` k]h\ 'U``YUX]b['VUb_'gYfj Yg'Ug'U'hYgh]a cbmcZh\ Y' bUbV]U`]a dUWhh\ Uh'5=\Wb XY`]j Yf"'5g' Ub YI Ua d`Yžh\ Y']bhfcXi \Wjcb'cZ'5=]b'gY`YWh]cb'cZ`YUXg'Zcf'a Uf_Yh]b['Wua dU][bg\\Ug'\UX' fYa Uf_UV'Y'fYgi `hg.'%i 'cZ'gU'Yg']b'h\ Y'VUb_'hcXUmZcf'dYfgcbU``cUbg'UbX'Ui hc``cUbg'UfY' `]b_YX'hc'5=\Wa dU][bg''=b'mYh'Ubch\ Yf'YI Ua d`Yž`Yj YfU[]b['UXj Ub\WXX'XUhU'UbU'mh]\Wg'hc'

Exhibit 1: Pillars of the AI transformation



Deploy AI everywhere



Work like a tech company



Transform the tech behind the AI data brain



Build an AI factory that can deploy AI at scale

Deploy A I everywhere: < ck "XcYg"U"VUb_"Ybj]gU[Y'5="Uhk cf_"]b]hg'cf[Ub]nUh]cbžZfca "Zfcbh' c W"hc "VUW_3CbW"h\Y"VUb_"\Ug'h\]gj]g]cb]b d `UWZh\Y'bYI hghYd]ghc WfYUhY U"WYUf d `Ub ci h']b]b['\ck '5=k]``VY'XYd `cmYX'h\fci [\ci h'h\Y'cf[Ub]nUh]cbž]bWi X]b['h]a Y`]bYg"H\Ym g\ci `X'ghUfhk]h\ 'Udd`]WUh]cbg'h\Uhk]``VY'UV'Y'hc XY`]j Yf'j U'i Y'ei]W_`nžUg'h\]g'k]``k]b cj Yf'h\Ygi ddcfhcZh\Y'hYUa 'UbX'h\i g'\UghYb h\Y'UXcdh]cb'cZ'5=]b'ch\Yf UfYUg"

Work like a tech company: HfUX]h]cbU`VUb_g [fYUhYghWta dYh]h]cb bc `cb[YfWta Yg'Zfca ch\YfVUb_gzVi hfUh\Yf'Zfca 'hYW\bc c[mWta dUb]Yg"H\YfYZcfYz]hg'h]a Y 'rc ghUfhh\]b_]b['Ug' h\YmXc"K\Uh[]j Yg bhYW\Wta dUb]Yg'Ub YX[Y3K\UhXfUk gWtbgi a Yfg'rc h\Ya 3C ZhYbz]h]g' h\Y'U[]Yk cf_]b['a Yh\cXg'h\YmYa d`cnzk\]W\ a U_Y'h\Ya 'VYhhYf'rc 'gYfj Y'UbX'Ubgk Yf'h\Y]f' bYYXg" =b cfXYf'rc Wta dYhYzVUb_g'bYYX'rc a]a]Wh\]g'U[]']hm'i =ha UmfYei]fY'U'W\Ub[Y']b \ck 'h\YmcdYfUhYzVi h'h\YfYgi 'hg'k]``VY gY`Z\Yj]XYbh"

Transform the technology behind the data brain: 5h]hgj YfmWtfYž5=]g'UVci hXUhU"5' gi WWggZ `5=hfUbgZcfa Uh]cb'bYWgg]hUhYg'\Uj]b['\][\ei U']hm fUk 'a UhYf]U' 'Uj U]`UV'Y' Uhh\Yf][\hh]a Y"H\]gž]b'hi fbža YUbg'U'VUb_a i gh\Uj Y'h\Yf][\hXUhU]bZfUghfi Whi fY]b' d`UW'"=ha UmVY'bYWggUfmhc a cj Y'hc'h\Y'Wci X'hc YbUV'Y'fYU'!h]a Y'5=Udd`]WUh]cbg/]hk]``` U'a cgh'WfhU]b`mYbhU]`YghUV`]g\]b['h\Y'bYWggUfmXUhU'[cj YfbUbW*žghYk UfXg\]džUbX'XUhU! ei U`]hmZfUa Yk cf_q"

=b 'Ubm'jbXi ghfmi bXYf[c]b['a U'cf'W.Ub[Y'UhdUW'žd'UmYfg'UfY'gYUfW.]b['Zcf'U'g]'j Yf'Vi ``Yh' h\ UhWb'\Y'd h\ Ya 'bchcb`mfYa U]b 'U\YUX'cZ'h\ UhW.Ub[Y'Vi hYa Yf[Y'Ug'k]bbYfg"'H\]g']g' dUfhjW' 'Uf'mhfi Y'Zcf'h\ Y'VUb_]b['gYWfcfžk \YfY'h\Y'X][]hU'fYj c'i h]cb '\ Ug'hfUbgZcfa YX'h\Y' `UbXgWUdY'UWfcgg'X][]hU'ža cV]'YžUbX'XUhU''K \YfY']bW a VYbhd`UmYfg'cbW' Wti `X Wti bhcb 'YghUV']g\YX'Y[UWhUbX'U'[YbYfUh]cbg!XYYd'hfUW_fYWtfX'hc _YYd'W ghca Yfg'Wta]b['VUW_ž'X][]hU'bYk Wta Yfg'UfY'bck '[U]b]b['a Uf_Yhg\UfY'h\ Ub_g'hc'h\Y]f'UV]']hmhc'Ubgk Yf'Yj c'j]b['W ghca Yf'XYa UbXg"FY[i 'Ug'W

]ab X'hY g'a ha

7\Ub[Y]g'bYjYf'YUgm'7\Ub[]b['U'a]bXgYh]g'YjYb'a cfY'X] W\'hz`Ug']hYbhJ]`g'bchcb`mh\Y']a dcg]h]cb'cZbYk 'dfcW'Xi fYg'UbX'dfcW'ggYgžVi h'U'gc'fYg\Ud]b[']bhYfbU`'Wta dUbm'W\'hi fYz'UbX'YbWti fU[]b['Ya d`cm'Yg'hc'j]Yk'h\Y]f'fc`Yg']b'U'X] YfYbh

 $H\ UhigU]X\ddot{z}5=g\ ci\ X'bch'VY'j\]Yk\ YX'Ug'Ub']gc\ UhYX'Y'Ya\ Ybh'h\ Uh\Wb'gc\ j\ Y'U'gdYV\ WWi\ g]bYgg'dcV'Ya\ cf'cdh]a\]nY'U'gdYV\ Wa\ Yhf]WfUh\ Yfz]hg'dck\ Yf']g'Yl\ dcbYbh]U'`mYb\ Ub\WX'k\ Yb''$

Exhibit 7: Overview of 3-6-9 agile delivery approach followed by an AI-f rst trailblazer

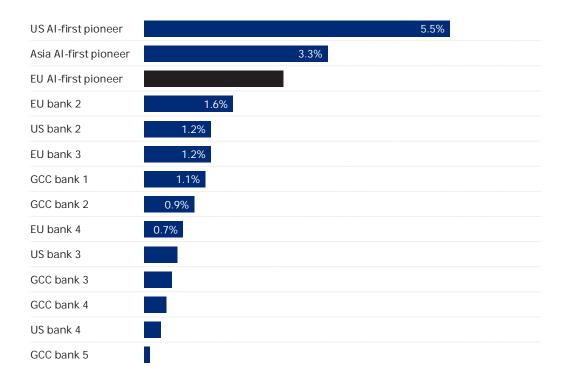
3	Days to mobilize multidisciplinary team	A i `h]X]gV]d`]bUfmhYUa gžVf]b[]b['hc[Yh\Yf'Ya dck YfYX' fYdfYgYbhUh]j Yg'cZU``fY`Yj Ubhi b]hg'Y"["ž5=ZUVVfcfnžf]g_ž retail, marketing,"""
6	Weeks to develop prototype	Hc:XY`]jYf:U'dfcXiVMi]b'U[]'Y'gdf]bhgzk]h\'Ub'AJD']b'cb`mg]lkYY_g'''''
9	Months to industrialize solution	5bX'ZcW'g]b['cb'a]gg]cbg'h\UhWb'gh]\W_'Uh'h\Y'VUb_'' 'cb`mghUfh'U'i gY' WugY']Z]hWb'VY']bXi ghf]U']nYX#Ya VYXXYX']b'cdYfUh]cbg']b'b]bY'a cbh\g' or less

Hc XYd`cmUbX Ya VYX 5='UWfcgg'U`VUb_'Uhih\Y`gWU`Y`cZh\Y`hfU]`V`UnYfgž'Ub cf[Ub]nUh]cb bYYXg' ghfcb['hYW\bc`c[mUbX`U`XUhU`ghU_'h\ UhiYbUV`Yg`5='Udd`]WWh]cbg''`<ck Yj Yfžih\]g`XcYg`bchi a YUb`U``hYW\bc`c[mUbX`XUhU`Y`Ya Ybhg'a i gh'VY`]b`d`UWY`VYZcfY`]h\Wb`Ya VUf_cb`h\Y`5=' hfUbgZcfa Uh]cb`ci fbYnf'Hc`h\Y`WbhfUfnžci f`Yl dYf]YbW'`\Ug`g\ck b`h\ Uhih\Y`dfc`YVMjg`]_Y`m hc`VY`a cfY`gi WWggZi ``]Zh\Y`VUb_` fgh\WbWbhfUhYg'cb``Ui bW\]b['i gY`VWgYg'h\ UhiXYa cbghfUhY` h\Y`VYbY hg`hc`VY`[U]bYX`h\fci [\ 'hfUbgZcfa Uh]cbž'Ug'h\]g'k]``Ybgi fY`gi ddcfhZfca 'h\Y` VfcUXYf cf[Ub]nUh]cb"

 $\label{thmg} $$C$ if $'UbU'mg]g'g\ck\ g'h\ Uh'hfU]'V'UnYfg'\Uj\ Y']$ a d'Ya\ YbhYX'XUhU'hfUbgZcfa\ Uh]cb'dfcfgfbfga \qquad W \\ Y\ '' A' C' B'UbU'mg]g'g\ck\ g'h\ Uh'hfU]'V'UnYfg'\Uj\ Y']$ a d'Ya\ YbhYX'XUhU'hfUbgZcfa\ Uh]cb'dfcfgfbfga \\ W \\ Y\ '' A' C' B'UbU'mg]g'g\ck\ g'h\ Uh'hfU]'V'UnYfg'\Uj\ Y']$ a d'Ya\ YbhYX'XUhU'hfUbgZcfa\ Uh]cb'dfcfgfbfga \\ W \\ Y\ '' A' C' B'UbU'mg'g'\ck\ g'h\ Uh'hfUbgZcfa\ Uh'hch'fU]'V'UnYfg'\C' UnYfg'\C' UnYfg'$

 $\label{thm:czvi} HfU]`V`UnYfg'i bXYfghUbX'h\Y']a dcfhUbW'cZVi]`X]b[`UXj UbW'X`XUhU UbU`mh]V\g WUdUV]`]h]Yg' \quad `UbX`WcbgYei Ybh`mUfY`dfYdUfYX`hc']bj Yghg][b] \quad WUbh`m]b`WfYUh]b[`U` k cf_ZcfW'k]h\ \wcffYgdcbX]b[g_]``g'' \quad \qq \quad \quad$

Exhibit 8: Comparative analysis of data and analytics team across top US, EU, GCC and selected AI-f rst pioneers — headcount based on LinkedIn information



 $\label{thm:conditional} $$H\Y'UV]^]hmhc\Waa\dYhY'k\]h\gi\W(\cf[Ub]nUh]cbg`fYei\]fYg`U`XY`]VYfUhY`ZcW\g`cb`UWW`YfUh]b[`h\Y`XYj\Y`cda\YbhcZ5=hYUa\g'': cf`Yl\Ua\d`YžcbY`hfU]`V`UnYf`VUgYX`]b`9i\fcdY`UV&i\]fYX`U` $$gdYV]U']nYX`V][`XUhU`ghUfhi\d'hc`fUd]X`mgWU'Y`i\d'WUdUV]`]h]Yg"`H\]g`UV&i\]g]h]cb`k\Ug'h\Y`ghUfhcZ\k\\Uh'hcXUm]g`U`&$$Ž`a\Ya\VYf!ghfcb[`5=i\b]h'h\Uh']bWl\XYg`a\UbmD\8g"$

6YncbX:5=lgdYVNJU]nYX:UbX:VfcUXYf:XUHJ:VWdUV]]h]YgžVUb_g'bYYX:hc:ZcVVg'cbidg_]``]b[:UbX:Vf]b[]b[:h\Y:k]XYf'cf[:Ub]nUh]cb'U'cb[:h\Y:5='cifbYn''CbY'HfU];V'UnYf'\Ug'HfU]bYX'\ibXfYXg'cZfYgcifWfg'UWfcgg'Vig]bYgg'UfYUgž]bWiX]b[:h\Y:VUb_g"YUXYfg\]dž]b'h\Y:ZibXUaYbhU'g'cZ'XUHJ:UbU'mh]Wg"'HfU]bYX:Yad`cmYYg'UWh'Ug'5='UaVUggUXcfg']b'h\Y]f'fYgdYWh]jY'Vig]bYgg'ib]hgžgwkih]b[:dchYbh]U'5=igY'WugYg'UbX:hfUbg'Uh]b[:Vig]bYgg'bYYXg']bhc:XUHJ:Udd`]Wuh]cbg"

 $\label{thm:linear_continuity} $$H\YfY'UfY'a\ UbmUfhf]Vi\ hYg'h\Uh'Uj\ Y\Wcbhf]Vi\ hYX'hc'h\Y``cb[Yj]hmcZh\Y`WffYbh'VUb_]b['a cXY'žk]h\]bQ$

9b Wti fU[]b[`ntxcbW'UWf]cb']g'hU_YbtyfYgi `hg'UfY'ZU]f`mfUd]XtyUg'\Ug'\YYb'XYa cbghfUhYX'Vm cbY'cZci f'W]Ybhgtk \Yb'dUfhbYf]b['k]h\'i g'hc'Vi]'X'Ub'5='WbhYf'cZYI W'``YbW'UbX'hfUbgZcfa 'h\Y'VUb_ftgYY'9I\]V]h-t''5g'dUfhcZci f'Wt'`UvcfUh]cbtk Y'UfY'k cf_]b['k]h\'ci f'W]Ybhhc'
XYj Y`cd'UbX'XYd`cm5=i gY'WgYgtk cf_]b['hc'[YbYfUhY']a dUWfik\]'Y'Vi]'X]b['_YmVWdUV]']h]Yg'
'Ub'UddfcUW\'h\Uh\Ug'\Y'dYX'i g'gYW'fY'gi ddcfh'UWfcgg'Vi g]bYgg'i b]hg'UbXt]b'gc'Xc]b[tz'
ZUW]hUhYX'Vi mt]b'Zfca 'h\Y'VfcUXYf cf[Ub]nUh]cb"

H\Y'h]a Y'hc'UWh]g'bck "5g'a i W\'Ug'hfUX]h]cbU``VUb_g'UfY'i bXYf'dfYggi fYžh\YfY'UfY'U'gc' gYj YfU``ZUWhcfg']b'h\Y]f'ZUj cfžgi W\'Ug'U'fY`UI YX'fY[i `UhcfmYbj]fcba Ybh'UbX]bWfYUg]b[']bhYfYghfUhYg''K]h\'5=Ug'U'Wta dY``]b['hcc``hc'ghcd'h\Y'`cgg'cZZ fh\Yf'a Uf_Yhg\UfYž5= fgh']bW a VYbhg'Wb``cc_Zcfk UfX'hc'fYa U]b]b['fY`Yj Ubh']b'U'k cf`X'cZWtbghUbhW\Ub[Y''

Exhibit 9: The journ7 Tm [] 6 (6) 7 (0 9 977953) n6R

