



**ModulTrade**  
The Freedom To Trade

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## Introduction

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HUKYsZbUbVtsgscbysg]b]WAbhSY Vb]cb "s sH Y` 7 5 D7 C` bghli hY` ci fbU` cZ ZbUbWU`  
fUbgZfa U]cb`**

5sk \c`YsbYk sUddfcUW`z]bZcfa YXsVnsV`cW`WU]bs`c[ ]W`Vti `XsVf]b[ sh Ysj YfnsfUbgZcfa Uh]cbsUb`  
YghUV`]g\YXsnYhfYghf]W`Xs/i g]bYggsgs]W]b[ sci hZcf"D`UW]b[ sh YsbX!hc!YbXsfUXYSZ]bUbW`sd`fcW`gg`  
cbsUbsYk sd`UhZcfa sk ci `Xs\ Uj YsUj YfnsWUfscV`YVW] Y.shcscZYfsl`syI dcfHYfgsUbXsja dcfHYfgsZUgh`  
UbXsYUgnslWUWggshcSYX]hsggi UbW`dUbXsUj ]gcfnsgYfj ]Wg`sh ]gs]gsUfUX]W`s/i hscVHU]bUV`Ysg\ ]Zi`sb`  
cdYbZsUi hca UHYXZsUbXshfUbgdUfYbshfUXYSZ]bUbW`sd`UhZcfa Zk \ ]W`sfYd`UW`gsW`a VYfgca Yshf gh`  
a YW`Ub]ga g`k ]h` Ui hca Uh]W`W`YW`g`UbX`Uggi fUbW`gz]g`bck`U`hYW`b]W`d`cgg]V`]h`

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H`Yscddcfh b]h]YgscfsA GA 9gs]bsh Ys`cVU`sa Uf\_Yhd`UW`dUbXs`Ui YsWU]bgdUfYs/bcfa ci g`.sh`  
YI dcgYgsh Ya shcsUf[ YsW`ghca Yf#Vi mYfsVUgYsUgsk Y`dUgscddcfh b]h]YgshcsYUfbZcfa sUf[ YsZ]fa g`  
UbX`Zcfa `Yb[ U[ ]b[ `UbX`gi fj ]j ]b[ `]b`i d`UbX`Vta ]b[ `gYVtcfgcZ`h`Y`[ `cVU`a Uf\_Yhd`UW`

H`YsXYj Y`cda YbhscZsY!Vta a YfW`sd`ca ]gYgshcsYI dUbXsYI dcfhscddcfh b]h]YgscfsGA 9gsUbXs` ]j Y`  
h`Ya sUs` `cVU`sd`fYgYbW`sh`Ush` UgscbW`sfYgYfj YXsZcfsUf[ Ysa i `h]bUh]cbU`sz]fa g` d`s [K C F @ 8 4 F 5 8 9`  
F 9 D C F H z & \\$ %`](#) %sGY` ]b[ sh fci [ \s ] [ ]h`s`W`UbbY`gsW`b`sd`fcXi W]j ]hms` U]bgsh`Ush`YsA W` ]bgYns` `cVU`  
bghli hY`f&\$%` E`UgYgha UHYX`UhVYrk`YYb`\*`UbX`%` dYf`W`bh`

A cXi `H`UXYsk ]`sU]a shcsY`dsA GA 9gsdfcgdYf]bsh Ys`cVU`sa Uf\_Yhd`UW`s/mZUW] ]hUh]b[ sj W`  
fUXY UgX`YgW]VYX`]b`h` ]g`K` \ ]hY`DudYf`

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5bch`YfsWU`hngshZcfsh ]gs\_]bXscZk]gfi dh]cb]sgsh`YsGYVtbXs995sDUna`YbhGYfj ]W`gs ]fYW]j YsDG8&`%  
k`YfYVns` : ]bhYVns` dcfj ]XYfgs`k ]`s VYVta`Ys`5W`ti bhs` bZcfa Uh]cbs`GYfj ]W`s Dfcj ]XYfgs`f5`GDg`  
h`Ya gY`j Ygs`k \ ]W`s`a U\_Ygs` ]hsYUg]YfZsZUghYfs`UbXs`Yggs`Vt`ghns`hcs`UbX`Ys`W`ghca Yf]f]s`dUna`Ybh`  
fUbgUW]cbg`UbX`UW`ti bhfy`UHYX`XUHU`

DG8&sk ]`sU`ck`sh`YsA`H`dsfA`cXi`H`UXYsD`UhZcfa`tschcs]bhYfUW`sk ]h`sW`ghca`YfgsUW`ti`bhg`  
k ]h` ]bsgYV`fYsd`fcW`ggYgsk ]h`ci`hsVub\_]b[ s]bhYfa`YX]Uf]Ygsh`i`gs]bW`YUg]b[ s/ZZ]W`bW`ns`UbX`  
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<sup>ES</sup> [Y`UÜSÖ`WÜÖÖ`ÜÖÜU`ÜVÉÖFI`-Ä`Äç^|ä`\\*`Ö`äæä`\\*`Ä`ä`Ä`ÜT`Ö`Ä`](#)

<sup>FF</sup> [V!æ`ÜÜÖGÜä`ä`\[ \]`ÄÖÖSÖÖÜÖÉÖFI`](#)

## Problem

A GA 9gsZUWsa UbnsVUff]YfgsUbXsWdUW]msVtbgfU]bhgsXi YshcsH Y]fsfYUhj Y'nsa U'ng]nY"s `cVU`msh  
]gsYghja UHYXsh UhdJddfcI ja UHY`ns) \*i scZA GA 9sfUXYsZ]bUbWsd fdcgUgsUfYsfY'VWYXZa dUfYXsc`  
cb`m+ `Zcf'a i `h]bUh]cbU`VtfdcfUh]cbg`%&

A cXi `HFUXYsUXxfYggYgsh YsbYYXgscZA GA 9gsVns`ja ]bUh]b[ sh Ysa U]bsVUff]YfgsZcfS/bhfn]bhc`  
[ `cVU`hfUXY.  
@UW`cZhf i gh'  
<][\ YbhfmiVtghg'  
7ca d`YI ]hmcZhfUXY!fY`UHYX`cdYfUh]cbg'

## Vi`•c

@UW`scZshfi ghsfYa U]bgsUsg][ b]Z]WbhsdfcV`Ya szcfsA GA 9gsUbXsdfYj YbhgshYa szfca sVY]b[ sUW]j Y`  
d`UnYfgs]bsH Ys[ `cVU`shfUXYsbYHk cf\_`sH YsYVtbcA ]W]sa YUb]b[ scZsh]gshfi ghs]ggi YsVti `XsVY`  
gi a a Uf]nYX`]b`hY Zc`ck ]b[ `ei Ygh]cb.

K ]`h`Y`6i nYf`dUm i dcb`h`Y`GY`Yf`gYbXg[ ccXg]hc`h`Y`6i nYf3

H]gs ei Ygh]cbs k Ugs Ubgk YfYXs Vns`YI ]gh]b[ sVUb\_ ]b[ sgnghYa sk \ ]W`sWYUHYXs`HFUXYsZ]bUbW`  
]bghfi a YbhgZ`\_Y`@/hYfgicZ7fYX]hUbX`6Ub\_ ; i UfUbhYg'

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WfH]bsg]nYzsk ]h scb`nsa ]X!fUb[ Yshcs`Uf[ Yfsd`UnYfgsVY]b[ sUW`YshcsUZcfXshfUXYsZ]bUbW`  
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HcXUmg`hfUXY`Z]bUbW`Vi g]bYgg`Ug`hc`ZUW`h`Y`Zc`ck ]b[ `\_YmVU`U`Yb[ Yg.

bWYUg]b[ sVtghsfYggj fY.s@/hYfgscZ7fYX]hgsf7g]sfYsUggcV]UHYXsk ]h s\ ][ \ sVtghsZcfS/cH`  
h`YsVUb\_s]UbXsW]Ybhgzs k \ ]YsX]gdi hYsfYgc`i h]cbsUbXs`ja ]hYXs`gW]YsWYUHYs`UXX]h]cbU`  
dfYggi fYgsXi YshcsUfYUhj Y`ns\ ][ \ szfUW]cbsscZsa Ubi U`sd fcvWgg]b[ sUbXsUsmYhsi bhUddYX`  
Wghca YfsVUgY"s`HFUXYsZ]bUbWsd fdcj ]XfYgsWbs[ U]bsghfUHY[ ]WUXj UbH]Ygs]Zsh Ymi  
gi WYXs]bsZ]bX]b[ sz bXUa YbH`nsbYk sJddfcUWYgshcsY`j Yf]b[ sh YsgYfj ]WshcsH Yf`  
W]Ybhg'

DccfsWghca YfsYI dYf]YbW`szfca sUsVUb\_ gsdcb]bhscZj ]Yk sh Ys\_YnsWghca YfgsYI dcfHYfgz`  
UbXsja dcfHYfgscZ]Ybsgi ZZYfsZfca sJsdccfsYbX!hc!YbXsWghca YfsYI dYf]YbW`sBchscb`nsXcYg`  
h`Ys]ggi UbWscZs@7!VUW`YXshfUXYsZ]bUbWshfUbUgUW]cbgsfYei ]fYs\ ][ \ sVtcfX]bUh]cbsYZcfhg`  
Ua cb[ sYI dcfHYfgzs]a dcfHYfgzsUbXs]ggi ]b[ sUbXsUXj ]g]b[ sVUb\_gzscZ]YbsfYdfYgYbHYXsVm  
]bX]j ]Xi U`sY[ U`sVti bgY`sh YsgYthYa YbhscZsh YsfUbUgUW]cbssZc`ck gscj Yf`nsVta d`]W]HYXsUbX`  
a Ubi U`sd fcvWggYgzs`cb[ sk U]h]b[ sh]a Ygsk ]h`s`ck shfUbUgdUfYbW]sUbXsUfYUhj Y`ns\ ][ \`  
fYg]Xi U`sgYthYa Ybhsi bWfH]b]hms: cfsYI Ua d`Yzs]a dcfHYfgsgh]`sZUWsh YsXY`j Yfmsf]g\_scZ  
ZfUi Xi `Ybhg`]da YbhgzsYj YbsZsh YsfUbUgUW]cbssgVUWYXsVnsUbs@7sUbXsUj YshcsdfcUW]j Y`m  
UbX`a Ubi U`mhfUW`U`ghU[ YgcZsh YU[ fYXX`XY`j YfmiHYfa g'

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## The solution proposed by ModulTrade

A cXi `HfUXY`UJa g'hc`Y`Ja ]bUHY`h`Y`a U]b`VUff]Yfg`Zcf`Ybhfmi]bhc`[ `cVU`HfUXY`Ug`k`Y``Ug`  
 Vf]b[ ]b[ `hc`[ YH`Yf`U`Vt`a`dfY`Ybg]]Y`fUb[ Y`cZgYfj`]Wg`Zcf`h`Y`Z` ``6&6`HfUXY`W`W`W`/  
 \Y`d]b[ sA`GA`9gsa`YYh`Vt`a`a`]hsUbXsYI`YW`hYshfUXYs[ `cVU`ns`YUg]`n`ns]bsUshfi`ghZ` `s`UbX`  
 YZ]W`Ybhma`UbbYf/UbX`  
 bhfcXi`V]b[ sh`Ysa`HFVt`A`cXi`HfUXYshc`\_YbtsUgsUbsYZ]W`Ybhs]bgfhi`a`YbhscZj`Ui`YsI`W`Ub[ Y`  
 ]b`A`cXi`HfUXY`YVt`gnghYa`"

A`J`9s`U`gcs`Ugd]fYgs`hcs`VYs`Ubs`]bbcj`Uhj`Ys[ `cVU`s`d`UhZcfa`sh`Uhs`k`]`s`YUg]`ns`Z`W`Y`]hUHY`  
 dUfh]W]dUbhgsUW`ggshcs`fXsdUfh]Ygsdfcj`]X]b[ sgca`Yscfsa`cfYscZsh`Yszc`ck`]b[ shfUXYsfY`UhYX`  
 gYfj`]Wg`  
 @c[ ]gh]Vt`  
 HfUXY`:`]bUbV]b[  
 HUI`UbX`Vcc`\_\_YYd]b[  
 bgj`fUbW`  
 7i`ghca`Vfc`YfU[ Y`

A`J`9s]Ja`gshcs/Ysh`Ysd`UWshcs/Ug]`nsXYj`Y`cdsbYk`sX[ ]hU`sgc`i`h]cbgsZcf`[ `cVU`shfUXY`zh`Ysa`cgh`  
 cVj`]ci`gi`gy`WgYg`VY]b[ .  
 Gi`dd`m`W`U]b`HfUW]b[ `cb`A`cXi`HfUXY`g`D`UhZcfa`  
 8[ ]hU`h`fYUX`Zcf`5XX]hj`Y`A`Ubi`Z`W`i`f]b[ `fB`H`5A`L`  
 cHgc`i`h]cbgsZcf`]bj`c]W`Z`W`tcf]b[ "

## A`cXi`HfUXY`UJa`J`U`i`Y`9`Wt`gnghYa`f`i`A`J`9`I`L`i`H`Y`Y`Wt`bca`]W`W`U`H`U`ng`h` Zcf`XYa`c`W`U`W`n]b[ `cVU`HfUXY`

@Y`YfU[ ]b[ scbsga`UfH`Vt`bhfUWt`a`c`W`W`U]b!`VUgYXsh`W`bc`c[ n`sa`cXi`HfUXYsk`]`s`i`]Xsdj`Ui`Y`  
 YVt`gnghYa`szcfs[ `cVU`shfUXYzs]`Y`sUsX[ ]hU`sbYhk`cf`\_YXsj`Ui`Ysgfhi`Vt`fYsh`Uhs]gsfYU`!h]a`Yz`  
 [ `cVU`zsVt`bbYVW`X`ZsX[ ]hU`sUbXsVt`ghYZZYVt]Y`Zsk`]h`szYUhi`fYgshcs`gi`ddcfhsZ`fh`YfsZ]bhYW`  
 gc`i`h]cbgsXYj`Y`cdYXsVnsh`]fXsdUfh]Yg`sh`]gsgc`i`h]cbbsk`]`sYbUV`Ysa`GA`9gshtcs]b`W`Y`UgYsh`Y]f`  
 fYj`Ybi`Ygsk` \ ]ghsfYXi`V]b[ sh`YsVt`ghgscZs[ `cVU`shfUX]b[ `s`hsk`]`sU`gcsYbUV`Ysh`]fXsdUfhmi`  
 XYj`Y`cdYfgs`#sgYfj`]Wsdfcj`]XYfgshcs[ U]bsUW`ggshcsUsk`]XYfshUf[ YhscZi`gYfgs`#sW]YbhgZsk` \ ]Y`  
 fYXi`V]b[ sXYj`Y`cda`YbhsUbXsi`gYfsUWt`i`]gh]cbbsVt`ghg`s`bsh`]gsZfUa`Yk`cf`\_zh`Ysa`HFVt`k`]`sVY`  
 i`gYXsUgsUs`\_YnsZcfsh`Ysi`gYfgshcsVt`bbYVW`shcs`Ys[ `cVU`shfUXYsbYhk`cf`\_sUbXshcsfUbgUWt]b`  
 A`cXi`HfUXY`YVt`gnghYa`"

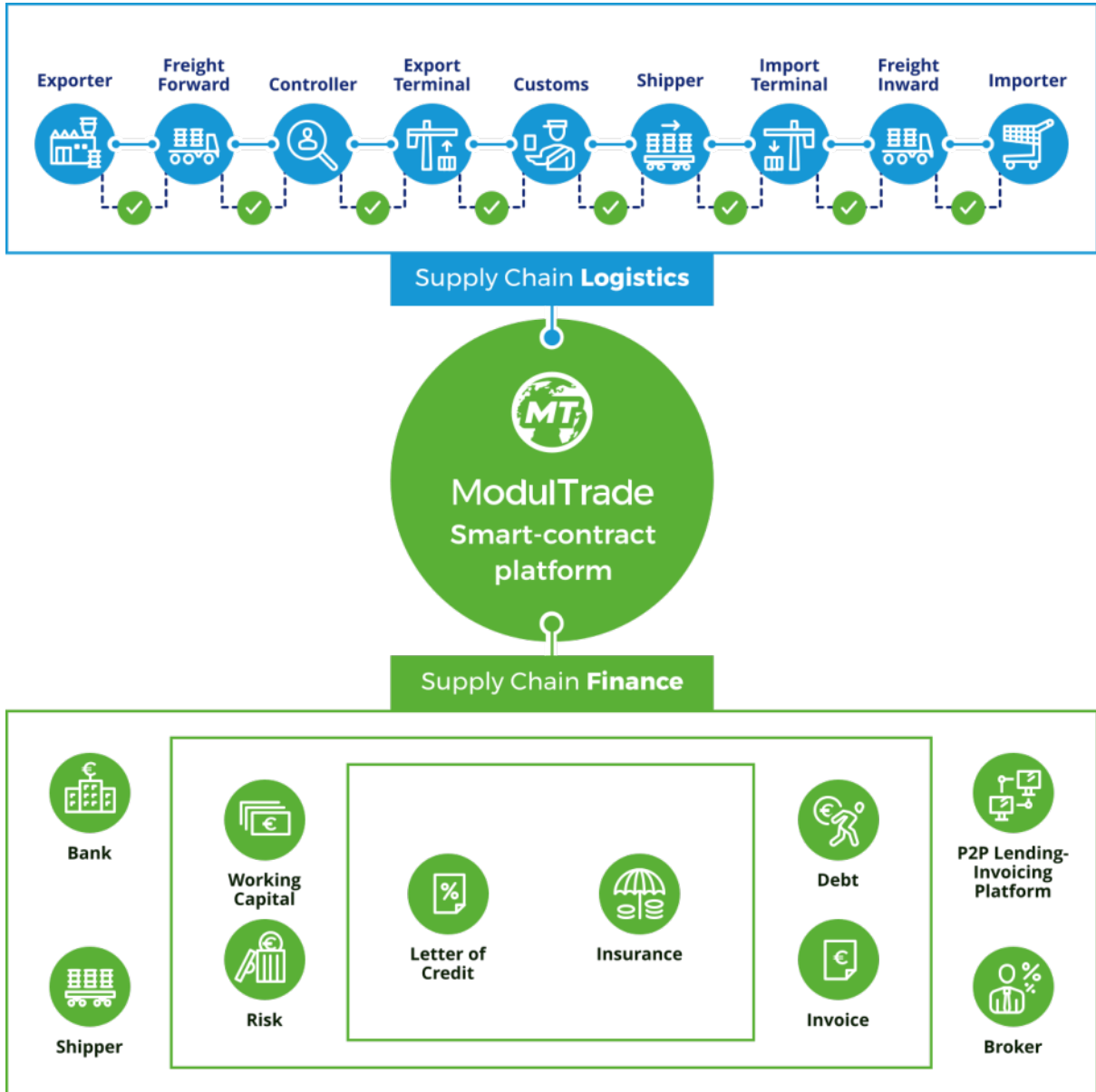
A`J`9`UJa`g`hc`Vt`bbYVt`dUfh]W]dUbhg`hc`HfUXY[ `cVU`mj`]U`Zci`f`a`U]b`Vt`a`dcbYbhg`

%`6`c`W`W`U]bsVUgYXsGa`UfH`Vt`bhfUWt`sa`i`h]g]XYXsd`UhZcfa`sfA`H`L`shcsfYd`]W`hYsVUb`\_g`  
 HfUXYsZ]bUbW`sjbgfhi`a`Ybhgsf`Y`hYfscZs7fYX]hsUbXs`i`UfUbhY`Yt`UbXshcs`cZ`YfsA`J`9sdUfh]W]dUbhg`  
 h`]gsYfj`]W`sjbsUshfi`ghZ` `sUbXsVt`ghYZZYVt]Y`Ysk`Uhs`k` \ ]YsU`gcsVt`bbYVt]b[ sh`Ya`shcs`ch`Yf`  
 gYfj`]Wg`\_`Y`c[ ]gh]WUbX`]bgj`fUbW`/  
 &`HfUXYsfY`UhYXsgYfj`]Wgsd`UhZcfa`shcs]ga`d`]ZnsHfUXYsYI`YW`h]cbbsj`]Us`fXsdUfhmsgYfj`]W`  
 dfcj`]XYfg`fY`[ ""dUma`YbhgZ`c[ ]gh]VtZ]bUbV]b[ zhU`zVcc`\_\_YYd]b[ L`



" HfUXYs/ sFYdi HUhjcbSbYHk cf\_ 'shcsZUVY]HUhY'sa cbYHfmsfhUbgUM]cbgscZsA J 9sdUfhjWjdUbhg' k ]h ]bsthY]fsfYdi HUhjcbSWd]hU'sVY]b[ sUsZi bW]cbScZsi gYfgsfYdi HUV'YsVt'UVcfUh]cbSk ]h ]b' hY'YVt'gngH'a /

(" A Uf\_Yhd`UWg shcsZ]bXsfY`]UV'YsVt'i bHfYdUfh]Ygs[ `cVU`nsUbXshcsa U\_Yscdhja U'sWc]WgscZ [ccXg/ `df]Wg"



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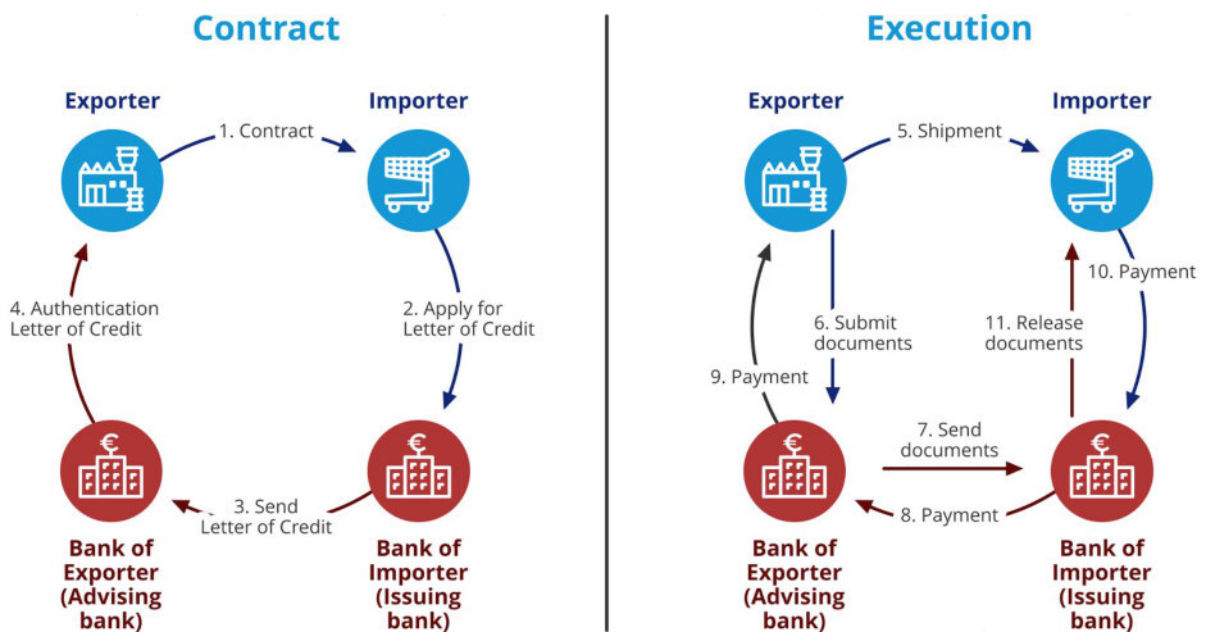


## AcXi`HfUXY ga UfHWbhfUWd`Uzfa fíAHDÎLÌ` H YVUW\_VcbY cZ AJ9

HAYsa U]bsZ bV]cbscZA HDsk j`š/YšcsfYd`jW]hYs/Ub\_gšfUXYSZ]bUbWš]bgrfi a Yb]rggi Wš]gšY/HYfgscZ 7fYX]hfr7E`UbX`6Ub\_ ; i UfUbhYg"

A HDsk j`šsdfcj ]XYsh ]gsZ bV]cbU`]ms]hcsA GA 9gsUhsUshY[ `]] ]V`Ysdf]WšfWšghscZsga UfHWbhfUWd` YI YW]h]cbscbsV`cW\_VW\_U]bts]ZšV`a dUfYXšcs(!%) i scZšhYšfUbgUW]cbSJa ci bhsWUf[ YXšVnsVUb\_gšUhi hY`a ca Ybh'

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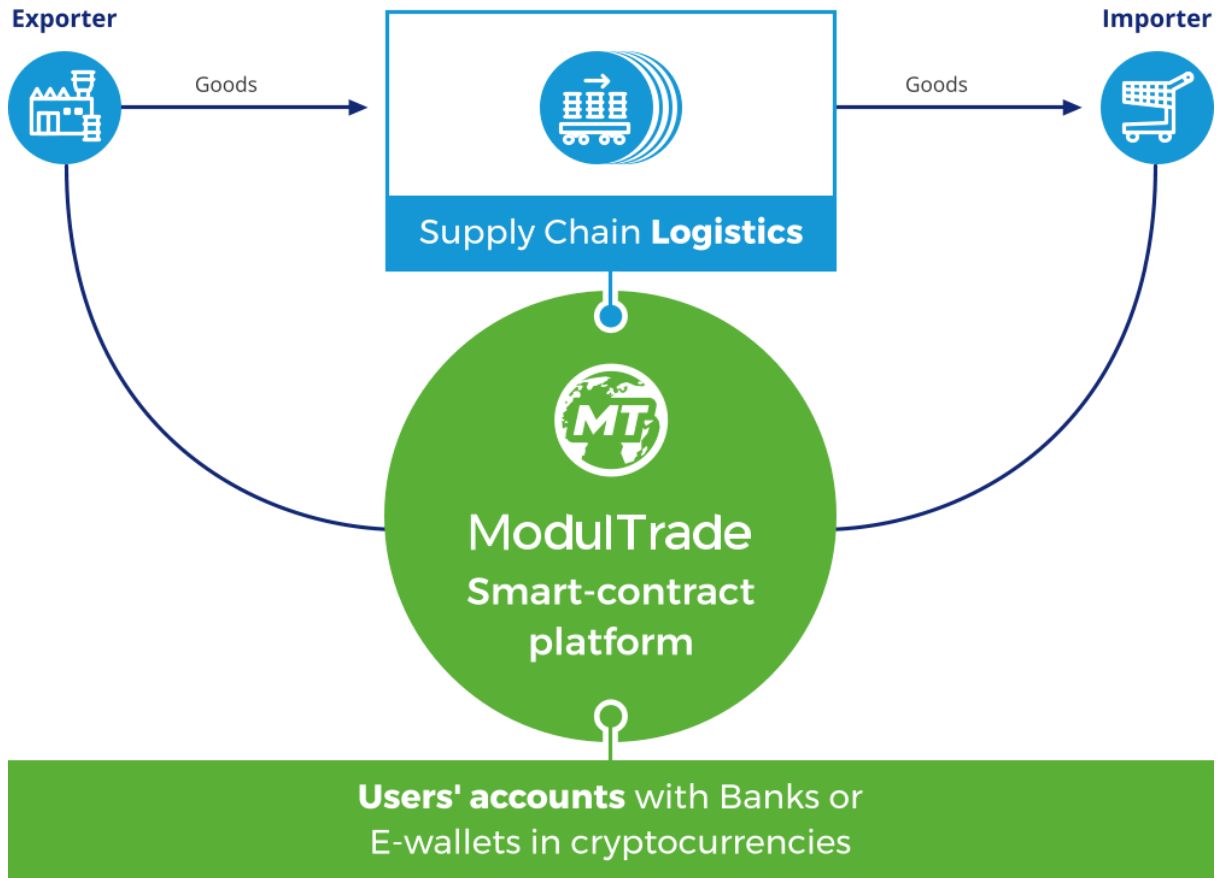


bsh ]gsYI Ua d`YscZšfUXYsdfcW]ggsVUb\_gšdfcj ]XYšfi ghs]b]hcs6&6šfUXYSW]Wš]gšUš fXšdUf]mšk ]h šhY` dfcj Yb šfYdi hU]cbSk \]WšV`a a i b]msWbšfi ghš6Ub\_gš i UfUbhYšhUš dcbš cXgšdUfYšY`j] YfYX` a cbYmk j`VY`dU]X`hc`hY`GY`Yf"

6Ub\_gHJ\_YWUf[YZcf`dfcj ]X]b[ `Hfi ghUbXZcfUj c]X]b[ `A Ub]di `Uh]cb"

V!æ^ ]Á[ &^•• •Á ] ] [!c^ Æ ÁVÚ •Á æd&[ } dæ&0

6cVWUjbgj YgH YdfcVYa cZa UbHf UHcbUbXhi gh' U]HU\_ '6i Hyf]bžA cgVtk ž&\$%&



FÈ 6i nYf'UbX'GY''Yf'U[ fYYg'cb'h'Y'hfUXY'UbX'WYUHY'U'Ga UfhVèbhfUVM]b'h'Y'A HD  
 GÈ A HD'V'cW'g'a cbYmcb'h'Y'6i nYfg'UW'èi bh'c[ i UfUbhYY'h'Y'dUna Ybhi dcb'XY'j] Yfm  
 æÈ A HD'jbgf'i Vtg'VUb\_'hc'fYgYfj Y'Zi bXg'cb'h'Y'6i nYf'UW'èi bh'7fYX]hWfX/CF  
 àÈ A HD'fYgYfj Yg'Zi bXg'j'b'Wmhc'WffYbWnk ]h]b'h'Y'ga UfhVèbhfUVM  
 HÈ H'Y'GY''Yf'gYbXg[ ccXg'j ]U''c[ ]gh]W'èa dUbmiUbX'gi Va ]hg'HfUW]b[ 'bi a VYf'hc'A HD  
 I È I dcbs6i nYfgsfYW]dhscZs[ ccXg'sfHfUW]b[ sXY'j] Yfmsa UH'WYgsh'YsUXXfYggscZsh'Ys6i nYf'  
 ]bX]WfYX ]b'h'Y'Ga UfhVèbhfUVM'èA HD'jbgf'i Vtg'fY'YUgY'cZdUna Ybh'c'h'Y'h'Y'GY''Yf

Òç[ |' ç[ } ]Á-ÁVÚ

H'YsbYI h'XYj Y'cda YbhghU[ Ygsk ]''s]bWl XYs]bhY[ fU]h]cbscZs' fXsdUfhmgYfj ]Wsdfcj ]XYfgscbsh'YsYj Y'  
 cZsUW]j YsdUfh]W]dUbhgscZsh'Ys/cW]WU]bshYk cf\_šcf\_YXs/nsA J 9'sh ]gs]bhY[ fU]h]cbk ]''s]bWl XY'  
 Zi bW]cbU''U[ Ybht'gi V'Ug  
 bgi fUbW'dfcj ]XYfg  
 HfUXY'Z]bUbV]b[ ''YbXYfg  
 @c[ ]gh]Vg'UbX'g\]da Ybhdfcj ]XYfg

## The MTRc

HkYsA cXi `HfUXYs7fndhcsHc\_YbsfA HFVZsUbs9F7!&\$shc\_Ybs]ggi YXscbs9hYfYi a žs]gsUs\_Ymi Y`Ya YbhscZshYsbYk sA cXi `HfUXY gs6&6sa i `h]g]XYXsd`UhZcfa žsh UhsYbUV`Ygs]hgsi gYfgshc` VZbbYVhlc`h`Y`A cXi `HfUXY`d`UhZcfa`UbX`]hgYVZgngYhYa`UbX`hc`YZZYVhHfUbgUM]cbg`

A HFVg\U`sVYsUdfYa`]bYXshc\_YbshUhk`j`sVYs]ghf]Vi hYXscb`nsXi f]b[ shYsdfY!gU`YsUjXshc\_YbgsgU`Y` Wla dU][bg`shYfYZcfYžhYsbi a VYfscZsA HFVhlc\_Ybgsk`j`sVYsZ] YXsgUfh]b[ sYbXscZBcj Ya VYfž&\$%+` k\]W`k`j`VY`[i UfUbhYX`Vmh`Y`hc\_Yb`ga UfhVZbhfUVM`

8Ya UbXsZcfsA HFV]gsYI dYVhYXshcsVYsXf]j YbsVnsA J 9sUbXsVnsA cXi `HfUXYsbYhk cf\_s[ fck h`sh`Y` a cfYshfUXYshfUbgUM]cbgsUfYsVWff]YXsci hshfci [ \shYsA cXi `HfUXYsbYhk cf\_žshYsa cfYsA HFW XYa UbX`k`j`]bWYUgYžh`i g`ja dfcj ]b[ `h`Y`HfUXY`Zck`gYgfj YX`k`]h`]b`A`J`9`

Hk9A HFWK Hk B`A`J`9`		
Fc`YÁ	MBS	: YUhi fYg
J U`i Y`YI WUb[ Ys	M\$	` hYbUV`Yg`hc`YI WUb[ Y`j U`i Y`fYU`!h]a Yž[ `cVU`mUbX` ]b`U`VZghYZZYVh]j Y`k Um
7i ffYbVms	M\$	` h]g`U`dUna` YbhUbX`HfUbgUM]cb`i b]hk`]h`]b`A`J`9`
: i bVh]cbs	M\$	` h]g`h`Y`_Ymhc`VZbbYVhlc`h`Y`[ `cVU`HfUXY`bYhk cf_` UbX`hc`HfUbgUM]b`A`J`9`fU`ZYyg`cb`HfUXY`VZbhfUVM]g`]b` A cXi `HfUXY`g`d`UhZcfa`k`j``\Uj`Y`hc`VY`dU]X`]b`A`HFVZ` h]bWb]h]j`jNyg`A`HGD`i`gU[ Y`UbX`HfUbgUM]b[ `k`]h`]b` A`J`9`
Hc`s	M\$	` hk`j`VY`i`gYX`Zcf`W`Uf[ ]b[ `i`gU[ Y`ZYyg`Zcf`h`]fX` dUfh]Yg`gc`i`h]cb`Vi`j`hUfci`bX`A`HGD`
F][\h#9Ufb]b[ gs	Bs	` A HFVg[ ]j`Y`bc`f][ \hg`]b`h`Y`VZa` dUbmiUbX`Xc`bch` fYdfYgYbhdUfh]VdUh]cb`fYei`]hmc`f`ch`Yfk`]gY]b`h`Y` VZa`dUbn`

## FYdi HUh]cb BYhk cf\_/\_ FYdi HUh]cb 7 Ud]HJ

5sFYdi HUh]cbU`SBYhk cf\_sk`j`sVYsZcfa YXsk`]h`]bsA`J`9`scbs`h`Ys/Ug]gscZUsbYhk cf\_sU[ [ fY[ Uh]b[ ` fYdi HUh]cbsWd]HJ`scZsi gYfgsUM]cggsa i `h]d`YsZcfa gscZsVZ`UVcfUh]j YsVZbgj a dh]cbsk`]h`]b` A`J`9`

FYdi HUh]cbs7Ud]HJ`s]gsUsei Ubh]HUh]j Ysa YUgi fYscZsUsi gYfgsfYdi HUh]cbU`s]j U`i Ys]bsA`J`9` XY`j` YfYXsVnsA cXi `HfUXY`gsFYdi HUh]cbsGngYhYa žk \]W`sfYdfYgYbhdUscZfa scZfYa i bYfUh]cb` Zcf`h`Y`i`gYfg`YZZcfhgž[ YbYfUh]b[ `hfi`ghUbX`fYgdYVh]k`]h`]b`A`J`9`

I`gYfgsFYdi HUh]cbs7Ud]HJ`sk`j`sXf]j YshYšj U`i YscZsfUXYs[ i UfUbhYXs` sZ]bUbVb[ s]bYsUj U]UV`Y` ]bsA`HFVZcfsYUW`si`gYfsdfcj`jYXsVnsFYdi HUh]cbU`SBYhk cf\_shcshYsi`gYfshcs[ i UfUbhYXs]hg` cV][ Uh]cbg`k`]h`]b`HfUXY`HfUbgUM]cbg`

FYdi HUh]cbU`SBYhk cf\_sk`j`sVYs]b]h]U`nsZcfa YXsUbXsgj ddcfhYXsVnsA cXi `HfUXYsUbXsA HFW \c`XYfg`UbX`i`gYfg`UhU`UHf`ghU[ Y`

## HfUXY [i UfUbhYY/ ZjbUbWjb[ ]b A HF W

CbYscZhYsa U]bScVghUWgshcdUfh]VdUHYs]bsfUXYs]gshYsbYYXsZcfSZ]bUbWjb[ žVch\scbsgY`dJbXs/i mi g]XY"s; `cVU`ms) \*i scZsA GA 9sfUXYsZ]bUbWsd fcdcgUgsUfYsfY`VWYXšVta dUFYXshcscb`ms+ sZcf` a i`h]bUh]cbU`VdfdcfUh]cbg"<sup>9</sup>

HcsZUWY]hUHYSfhfUXYshfUbgUW]cbSk ]h]bsA J 9sA cXi`HfUXYsUXXfYggYgshYsYI ]gh]b[ sbYYXscZ ga U`sYbhYfdf]gYgsj ]UsFYdi HUh]cbUsBYhk cf\_`s: i bXgsUbXs[ i UfUbhYgsk ]`sVYs[ fUbhYXshc` A GA 9g]b`A HF Wcb`h Y`VugY`cZh Y]f`FYdi HUh]cbU`7Ud]HU`Zcf`h Y`dYf]cX`cZi d`hc` \$XUng` 7fYX]hs]bYgsJbXsfY`UHYSZYgsk ]`sVYsYghUV`]g\YXscbs\YsfYdi HUh]cbS/Wd]HU`S/i ]hS/nshYs/bhYfdf]gYg` flk \]W\sb]hgsi fbs]gsZ bW]cbScZhYsbYhk cf\_sfYVta a YbXUh]cbgZsUgsUggYggYXsVmsA cXi`HfUXY g` FYdi HUh]cb`GngHYa E`

Yj YfmbYk`i gYf`k \]W`[ chfYVta a YbXUh]cbgZfca`+ fYdi HUV`Y`YghUV`]g\YX`A J 9` dUfh]VdUbhg`"

H\Y`Ua ci bhicZWYX]h`]bYg`k ]`VY`U`Z bW]cb`cZ

Udd`]W]h]cb`cfXYf`fUW`fX]b[ `hc`h`Y` ZfghVta Yfg[ Yhia cfY`df]bW]d`YŁ

i gYf`gFYdi HUh]cb`7Ud]HU`

9j YfmA HF W`c`XYf`k ]`VY`UV`Y`hc`i gY`FYdi HUh]cbU`BYhk cf\_]bZfUghfi W`fY`hc`dfcj ]XY`A HF WZcf`U` ZY`Y`hc`[ i UfUbhY`UbX`ZjbUbW`h`Y`hfUXY`]b`A J 9`"

## A HF W]ei ]X]hm

HcsGj ddcfhsA HF W`]ei ]X]msUbXshi fbcj Yfsk ]h]bsA J 9sA cXi`HfUXYsk ]`sYghUV`]g\sgYj YfU`s`Yj Y`g` ]bZfUghfi W`fY`k \]W`k ]`]bW`XY

6UbV`f`dfchcV`ta YWU]ga`%

A HF WYI WU]b[ Y`VmiA cXi`HfUXY

A HF Wd`UW`a Ybhk ]h`YI ]gh]b[`Wmdhc!YI WU]b[ Yg

I`gYs`cZs 6UbV`fs`dfchcV`s`k ]`s`YghUV`]g\`s`A HF W`]ei ]X]ms`]bs`UXj`UbW`s`hcs`]hgs`UddYUfUbW`s`cb` Wmdhc!YI WU]b[ Yg`"

## Technical description

### HYW b]WU VēbWdhēZAcXi `HfUXY ğc`i ħcb

5'ġla d`jZYX`@Hf`cZ7fYX]hdfchcVē`

HfYsdi fdcgYscZUsA cXi `HfUXYsga UfhVēbhfUWdhēZAcXi bXgsZfca sUsi nYfslbXsfY`YUgYshYa šcsl`  
GY`Yf`i dcb`XY`j YfmcZU`DfcXi Vēhc`hY`'6i nYf`

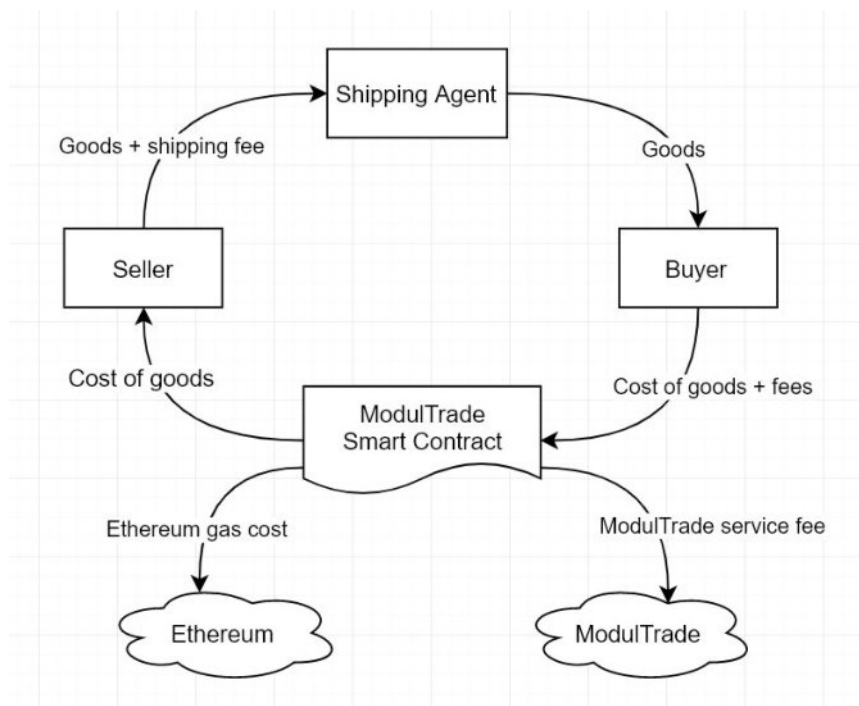
HfY'ġla d`jZYX`k cf\_Zck`cZhY`VēbhfUWdhēZAcXi`g`Ug`Zc`ck`g`

FD HfY`6i nYf`XYdcg]hġZ`bXg]bhc`hY`'ga UfhVēbhfUWdhēZAcXi`Vēhc`hY`'6i nYf`XYdcg]hġZ`bXg]bhc`hY`'ga UfhVēbhfUWdhēZAcXi`b]`fY`YUgY`VēbX]h]cbg`UfY`'a YH`

&Ł : i bXg`UfY`cW\_YX`j]b`hY`'ga UfhVēbhfUWdhēZAcXi`b]`fY`YUgY`VēbX]h]cbg`UfY`'a YH`

'Ł : i bXg`UfY`fY`YUgYX`hc`hY`'GY`Yf`i dcb`gi VēggZ``XY`j Yfm]b`U`gdYVWZYX`hja Y`c]ncb`

(Ł : i bXg`UfY`fY`YUgYX`hc`hY`'6i nYf`jZbc`XY`j YfmcVēfg]b`U`gdYVWZYX`hja Y`c]ncb`



bsVēbX]h]cbgsk`YbsZ`bXgsUfYsV`cW\_YXs]bsUsa UfhVēbhfUWdhēZAcXi`Vēhc`hY`'6i nYf`XYdcg]hġZ`bXg]bhc`hY`'ga UfhVēbhfUWdhēZAcXi`b]`fY`YUgY`VēbX]h]cbg`UfY`'a YH`  
i`hja UHs[cU`sCZsHfYsdUfh]YgsVYVēa YgsHcsfY`YUgYsHfYsV`cW\_YXsZ`bXgsZfca sHfYsVēbhfUWdhēZAcXi`  
hY`'ga gY`j YgsUsgc`cbsUgshYmsVch`su[ fYysH`UshHfYsfUXYs`UgsVYYbsgi VēggZ`"s bsh`]gsVWgYzh`Y`  
A cXi `HfUXYsga UfhVēbhfUWdhēZAcXi`UngsUsc`YscZhf ghYXsa ]XX`Ya Ubs`Y`d]b[ šcsl`ja ]bUHfYsVēbhfUWdhēZAcXi`  
Vēi bhYfdUfhmāsfHfUX]h]cbU`māsfUsVUb`scf`Usa Uf\_Yhd`UW`su[ Ybh's`<ck Yj Yfz]bsHfYsUVgYbWscZsU`  
a ]XX`Ya Ubs]h]gs`cb`msHfYsVēi bhYfdUfh]YgsHfY`ga gY`j Ygsk`csc`bck s]Zsh`Y]fs]bHfYfghgs`Uj YsVYYb`  
fYgdYVWZYX`sh`]gsVf]b[ gsUbi a VYfscZsVēi bhYfdUfhmāsf]g\_gsk`Vēsg`ci`Xs/YsUbs`YXsUWdhēZAcXi`b[`n'scf`  
Yl Ua d`Yž

FD 8Ydcg]hZfca`hY`'6i nYf`k Ug`fYW]j YXzh`Y`G\`dd]b[`5[`Ybh`fYW]j YX`hY`dfcXi VēVi`hZU]YX`  
hc`XY`j Yf`h`hc`hY`'6i nYf`cb`hja Y`cf`UhU`

GD 8Ydcg]hZfca`hY`'6i nYf`k Ug`fYW]j YXzh`Vi`hHfY`GY`Yf`X]Xb`hgYbX`hY`dfcXi Vēcb`hja Yž`  
X]Xb`hgYbX`]hUhU`cf`gYbhU`k fcb[`dfcXi Vē

HD HfY`6i nYf`WUja g`hU`hY`cf`g`Y`fYW]j YX`k fcb[`#a`dfcdYf`dfcXi Vēk`VēhY`GY`Yf`  
g\`ddYX`hY`dfcdYf`dfcXi Vē

K \csg\ci `XsfYWJj Ysk \Uhs]ZscbYscZsh YsUvcj YsWUgYgshU\_Ygsd`UW`sXi YshcSjbs b]bhYbh]cbU`S`ffcfscf`  
 ]bhYbh]cbU`ZfUi X3K \c`XYW]XYg`cb`h`Y`ZU]f`ci`h`W`a`Y3

b]h]U`n`za cXi `HFUXYsgs[c]b[ shc`sa ]a ]W`h`Ysc[ ]W`c`ZUsYHfYfscZsWYX]hUbxgshgscf]] ]bU`sfUXYsW`bhfUW`h`  
 k ]`sYbgi fYshUhsY`YfgsUfYs[ YH]b[ sdU]Xs b`YggshYnsW`bh]bi ci g`nsa ]gVY\Uj YsUbxshY]f`sfYdi Huh]cb`  
 gi`a`dg``: i fhYfZY`UVcfUH`dfchcW`g`VUgYX`cb`a`i`h`U`W`bgYbgi`g`ci`h]bYX`VY`ck`k`j`VY`UXXYX"

## 5`ZJa ]`mcZW`bgYbgi`g`VUgYX`dfchcW`g`

; YbYfU`nsgdYU`]b[ ]h]h]gscb`nsdcgg]V`YsZcfsh YsdUfh]Ygshc`sk ]h`XfUk`sz`bXgsZfca`sh`YsW`bhfUW`h` \Yb`  
 W`bgYbgi`gsUvc`i`hsh`YsZU]f`sdUmc`i`hgs\Ugs\YfYbsfYUW`YX`"sG]bW`scb`nsdUfh]Ygsh`Ya`gY`j`Ygs`bck`sjZsh`Y]f`  
 ]bhYfYghgs\Uj`Ys`VYbbsfYgdYW`h`Xs`]h`]gsh`Ya`sk` \csg\ci` `XsfYUW`h`W`bgYbgi`g`"sh` ]gsdfcW`ggsW`b`  
 bUhi`fU`nsh`UddYbsc`Zi`W`U]b`scfscb!`W`U]b`Zi`i`hsh`YsfYgc`i`h]cb`dU`k`Ungs`UddYbgs`cb!`W`U]b`sk` \Ybs`ch`  
 dUfh]Ygs`gi`Va` ]hscb!`W`bhfUX]W`cfnsdUmc`i`hW`U]a`gshcsh`YsW`bhfUW`h`'s`ZsU`sdUfh]YgsVY\Uj`Ys`cbYghn`z`  
 h`YnsU`sk` ]`sdUddfcj`YsW`ffYV`h`k` ]h`XfUk`U`gshc`sUW`sc`h`YfsUbxsh`YsW`bhfUW`h`k` ]`sh`fa` ]bU`hYsW`ffYV`h`m`  
 UbXsk` ]h`snYfcsVU`UbW`"s`ZscbYscZsh`YsdUfh]Ygshc`XcYgsbchsdUddfcj`Ysh`YsZU]f`sk` ]h`XfUk`U`sUdd`j`W`V`Y`  
 Zi`bXgs`gU`"sVYs`cW`YXsi`bh]`sh`YnsfYUW`h`SbsU[`fYYa`Ybh`sh`YsdUfh]YgsUfYsa`chj`U`hYXshc`sfYUW`h`SUb`  
 U[`fYYa`YbhsUgsh`Ynsk` ]`s`cgYsa`cfYsch`Yfk` ]gY`ZsVYW`i`gYscZsh`YsfYdi`Huh]cbU`SXYdcg]hgsd`YX[`YXsUg`  
 XYgW]VYX`VY`ck`"

Gi`W`sd`fchcW`d`UW`gs`ch`dUgs]bW`bhj`Yshc`sVY\Uj`Ys`cbYghn`SubX`dUgsU`X`YHfYfYbhsZcf`sVY\Uj` ]b[`s`b`ghn`  
 H` ]gsdfchcW`Z`s`ck`Yj`YfZ`XcYgsbchsfYgc`j`YsU`sdchYbh]U`sa` ]gVY\Uj` ]ci`fgsUbxS`Uvi`gYg`"sA`cXi` `HFUXY`  
 U]a`gshc`sfYgc`j`Ysg`i`W`sW`UgYgsVnsYi`hYbX]b[`sh`Ysd`fchcW`sk` ]h`sfYdi`Huh]cbU`SXYdcg]hgs` \ ]W`sdUfh]Yg`  
 \Uj`Yshc`sd`UW`SXYdYbX]b[`scbsh`Y]f`sfYdi`Huh]cb`sgW`fY`"sh` ]gsk` ]`sz` fhYf`sbW`bhj` ]nYsZU]f`saVY\Uj` ]ci`fsc`Z`  
 h`Y`dUfh]Yg`"

K` ]h`sfYdi`Huh]cbU`SXYdcg]hsh`YsdUfh]Ygsf` ]g`s`cg]b[`sa`cfYs]Zsh`YnsVY\Uj`YsX]g`cbYghn`sk` \ ]Ys`cg]b[`  
 bch` ]b[`sch`Yfk` ]gY`"s`hs` ]gs`c[` ]W`sh`Uhs`ga`Ysa`UnsfY[`UFXsfYdi`Huh]cbU`SXYdcg]h`sgsUbsi`bk`Ub`hYXZ`  
 h`ci`[` \sh`Ya`dcfUfms`i`fXYb`"sGdYVW]Z]W`"nsh`ca` ]h[`U`hYsh` ]gsdYfW`dh]cb`Zcb`S`Uf`mg`hU[`YgZ`A`cXi` `HFUXY`  
 UbXs]hgsYW`gmghYa`sdUfhbYfgsUfYs[c]b[`shc`SUW`dUgs`i`UfUb`hcf`gsc`Zsh`i`ghYXshfUXYs`nsc`ZYf]b[`sdUfh]YgsUbx`  
 cdh]cb`h`c`a`U`Y`fYdi`Huh]cb`XYdcg]hZcf`h`Ya`Zcf`Ub`U[`fYXX`ZYY"

## HYW`bc`c[ ]W`U`gW`UW`j`hm`

A`cXi` `HFUXYsg`c`i`h]cb`sgshYW`bc`c[ ]W`"nsgW`UW`Y`"s`cb[`!hYfa`sd`UhZcf`a`sgW`UW`j`]hnsXi`Yshc`  
 W`ffYbshhYW`bc`c[ ]W`sW`bghfU]bhgsc`Zsh`YfYi`a`sgsUbs]gg`Ysh`UhsW`bs/YsUXXfYggYXsg]bsgYj`YfU`  
 k`UngsYUW`scZsk` \ ]W`s]gsZYUg]V`Y`ZsgYW`fYsUbxsfYU` ]gh]W`bs`sh`YsVj`Ybh`sh`Ysa`cg`h`Uddfcdf` ]U`hY`  
 a`Yh`cXsk` ]`s`VYsXYW]KXYsXYdYbX]b[`scbsh`YshYghgshc`SVYsW`ff]YXsci`hshc[`Yh`Yf`sk` ]h`sd]`ch`  
 W`ghca`YfgsUbxS`Z]fghsdUfhbYfgsUgsk`Y`sdUgsXYdYbX]b[`scbsh`Ysi`gYf`f`fck`h`sfU`hYsZ`hYfsh`YsZ]fgh`  
 fY`YugY"

CbYs`cZ`h`Ysa`U`cfs`W`ffYbhs`hYW`bc`c[ ]W`s`W`bghfU]bhgsc`Zs`Yj`Yfns`9h`YfYi`a`!VUgYX`sg`c`i`h]cb` ]g`  
 gW`UW`j`]hnsUhs`h`Ysa`ca`Ybhs`f`bYs&\$%+Zs9h`YfYi`a`sW`bs\UbX`YsZfca`s`+shc`%`shfUbgUW]cbgsdYf`  
 gYW`bXs]bsW`UgYscZsfY`Uhj`Y`ns]]` \hsga`UfhsW`bhfUW`g`"sh` ]gs]gsW`Uf`nsU`sc`hYbYVW`Zcf`dUbsUdd` ]W`h]cb`  
 h`UhsU]a`gsUhs[`fck` ]b[`shc`SUsW`bg]XyfUv`Ysbi`a`VYfsc`ZshfUbgUW]cbg`sh`YfYsUfYsW`fhu]bsUddfcUW`Yg`  
 h`UhsA`cXi` `HFUXYsW`bsYa`d`cnshc`S`UbX`Ysh` ]gs]gg`YsUbxsk`YsVY`jY`Ysh`UhsW`UW`j`]hsg`c`i` `Xsbch`SV`  
 fY[`UFXYX`Ug`U`gYf]ci`g`cVghUW`": i`fh`Yf`k`Y`Yi`d`U]b`k` \m`

bsW`UgYscZsA`cXi` `HFUXYsh`c`sa`Yhf]W`gsa`U`hYf`sa`cg`h`SUs`h`YsUj`YfU[`Ysbi`a`VYfsc`ZshfUbgUW]cbgsdYf`  
 gYW`bX`UbX`V`h`Y`a`U] ]a`i`a`fYUgc`bUV`Y`U`hYbW`hVY`k`Yyb`h`fUbgUW]cbg`c`Z`h`Y`gUa`Y`W`bhfUW`



HfUbgUVMjcbbsUHfYbVmsjgsbchsbbsjggi YsZcfSA cXi HFUXY"shYsmolYgscZsVebfUVMgshUshhYsdUHzcfa slg[c]b[ shcsjg ddcfhshml]WV`nsU`ck si dshtcs%6XUnsUHfYbVmsbsZ hi fYzk \YbsA cXi HFUXYshUdgs]bhc` a Uf\_YhgsUbsXsdfcWggYgshUshfYei JfYsZghYfsYI YWjhcbzsUHfYbVmsfYei JfYa YbhgsWbbsdcHfYb]U`nsVY` fUJgYXshcsjgYj YfU`s\ci fgZVi hsi b`\_Y`nshtcsjgb[ `Ysa ]bi hYg`shhJgsU`ck gsi gshcsYUgYsi dsdUHzcfa` fYei JfYa Ybhgc`b`hY`bi a VYf`cZgja i`HfUbcYci g`hfUbgUVMjcbg"

Zk YsKjgfY[ UfXsZcfshYsa ca YbhsA HFVhfUX]b[ scbsWmthc!YI VUUb[ YgsUgsh JgsUVMj ]hmsjgsYI hfYbU`shc` hYsdUHzcfa zk YsWbbsi gYshYsZc`ck ]b[ sZcfa i`UshcsYghja UHfshYsUj YfU[ Ysbi a VYfscZshfUbgUVMjcb` dYf`gYVebX"

5j YfU[ Y`HDG`1 i` gYfgt` VebfUVMjgdYf!i gYf` hfUbgUVMjcbg!dYf!VebfUVM#VebfUVM` ]ZY!hja Y`

5ggi a ]b[.

5shUf[ YhcsZs\$sa `bsi gYfgsVmsnYUfs\$shUsh gYSA cXi HFUXYsdUHzcfa scbsUfY[ i`Ufs/UgJgsf]Y"" YI YWjh]b[ `VebfUVMjdYf`k YY\_`cb`Uj YfU[ YL`  
 5Vci h`\$sHfUbgUVMjcbgsf]b]h]UjhcbzsZ bXgsHfUbgZYfgZsXY`j YfnsghUhi gsVWYWgZs]bgi fUbW` VebX]h]cbgVWYW`UbX`gc`cbEfYei JfYX`dYfYUWV VebfUVMicb`A cXi HFUXY"  
 7cbfUVM` ]ZYhja Y`Wb VY`Zca` %XUmhc`&k YY\_gZ]Y"fci [ \`m%k YY\_`cb`Uj YfU[ Y"  
 HfUbgUVMjcbgi b]Zcfa`mX]ghf]Vi hYX`cj Yf`hja Y"

HfYb.

5j YfU[ Y`HDG`1 i` gYfgt` VebfUVMjgdYf!i gYf` hfUbgUVMjcbg!dYf!VebfUVM#VebfUVM` ]ZY!hja Y`  
 1`\$sa `b`i` %VebfUVMjdYf`k YY\_`i` %\$HfUbgUVMjcb`dYf VebfUVM#%k YY\_` ]ZYhja Y`  
 1`\$sa `b`i` \$"%( `VebfUVMjgdYf`XUmi` %\$HfUbgUVMjcbg`dYf VebfUVM#+`XUmj`1`  
 1`W`&a `b`HfUbgUVMjcbg`dYf`XUmi1` W`&( `HfUbgUVMjcbg`dYf`gYVebX`

HJgsHDGsYghja UHfXsZcfshUf[ YhcsZs\$sa `bsUVMj Ysa cXi HFUXYsi gYfgsbmsnYUfs\$Zs]gsa cYshUbsk \Uhi 9h YfYi a` sgi ddcfhgshcXUnshU`ci [ \sh JgsV`ffYbhgWUUV` ]hmsVchYbYW`sgsYI dYVWXshcsYsfYgc`j YX` Vms9h YfYi a` s7ca a` i`b]hmsk ]h`slsfYUgcbUV`YsUj UbW`"s6YshUbs]bWYUgYsb] Ugs]a ]hisa ][ fUjhcbshc` dfccZcZghU`YscfslbchYfsja dfcj Ya Ybhsh]h]gs ]hU`ZcfshYsa YfYsYI ]ghYbWVscZs9h YfYi a` slgsUga Ufh VebfUVMdUHzcfa` "

B Yj YfhY`YggZsh YfYsUfYsUsVei d`YscZshYfYbUhj YgshUhsA cXi HFUXYs]gsUV`YshcsYa d`cns]bsWgYscZ YI dcbYbh]U`sf`ck h`slbXsk ]h`ci hsfY`JubWscbs9h YfYi a` "shYnsUfYsa ][ fUjhcbshc`slbchYfsV`cVWU]b` cfZU`hYfUbj Y`nzVf]b[ ]b[ `gca Y`Ygg`hfi ghW]h]WU`dUfhg`cZhY`ga UfhVebfUVMYI YWjhcb`cZVWU]b"

### A ][ fUjh]b[ `hc`UbchYf`V`cWVWU]b

HfYschYfsV`cWVWU]bsVei `XsVYsY]hYfsUsa cYshfUX]h]cbU`sd]j UHfscfsdi V`W`dYfa` ]gg]cbYX V`cWVWU]bsfY"[ `s<ndYf`YX[ YfscfsV`cWVWU]b!]bgd]fYXshVWbc`c[ ns`gi V`sUgs7cfXUzscfsUsbYk V`cWVWU]b`UfW`]hYVh`fY`k ]h`j Yfh]WU`UbX`cf]ncbHU`gWU]b[ `gi`W`Ug`9CG"

8YdYbX]b[ scbsshYsWcgYbsa Yh`cXZsA HFVhrc`Ybgsa ][ \hYfa`U]bscbs9h YfYi a` slbXslsWcgglVWU]b` [ UHfK UnsWbbs/YsXj Y`cdYXsZcfshYfcdYfUV`]hmsBcsUfXsZcf`scZsA HFVhVebfUVMk ci `Xs/YsbYXYX"" <ck Yj YfZs]shYsWcgYbsa Yh`cXsk ci `XsfYei JfYshfUbgZYfscZsA HFVhZ bXgsZca` 9h YfYi a` shcslbchYf` V`cWVWU]bsfi b`\_Y`nsVi hshYcfYh]WU`nsdcgg]V`YsYj YbhZsUsWfYZ` ``nsXYZ]bYXZscdYbsUbsj Yf]Z]UV`Y` dfcWggsk ]`sVYsi gYXshcsHfUbgZYfshYsZ bXgsUbsXsA HFVhZ bXgsk ]`sVebh]bi YsVY`cb[ ]b[ shcsshYf`ck bYfg"

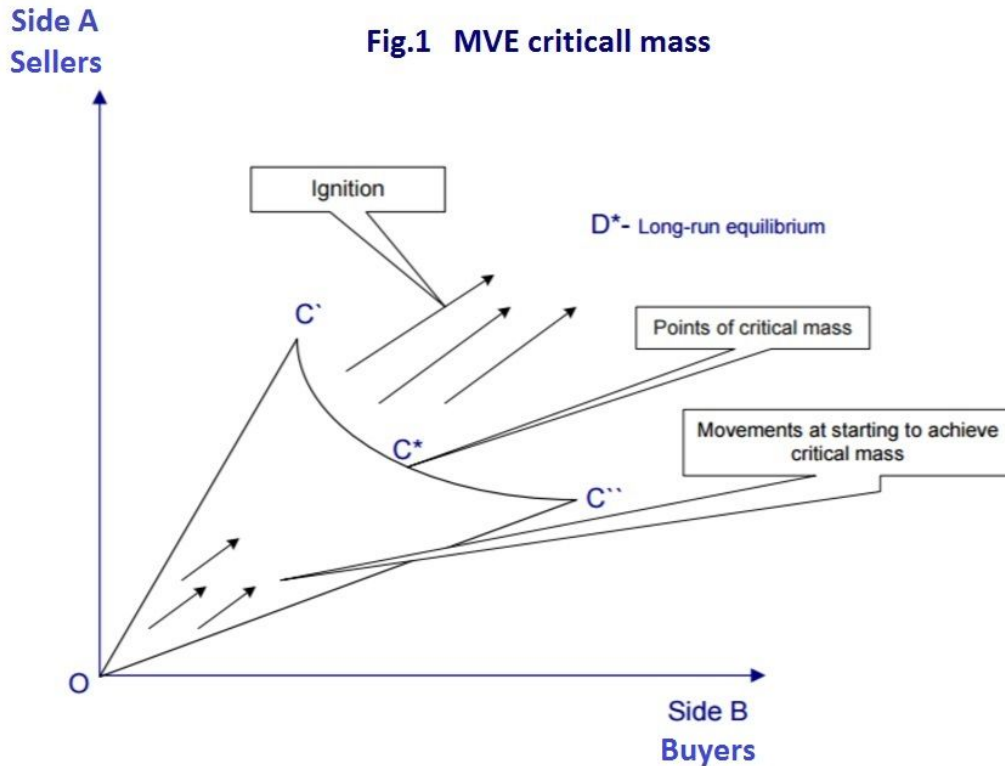
### 6f]b[ ]b[ `gca Y`dUfhg`cZhY`ga UfhVebfUVMicZZWU]b`

5bchYfsU`hYfUbj YscZsXXfYgg]b[ sgWUUV`]hmsdfcV`Ya`sgsVf]b[ ]b[ sWfU]bsYgggfi ghW]h]WU`sdUfhgscZ ga UfhVebfUVMk cf`szck scZsWU]b`s`cfYI Ua`d`YsVebfUVMbY[ ch]Ujhcb]sgshYsd]fa` UfnsWbX]XUshc` VYscZsWU]b`sh`JfXsdUfmsjYfj ]Wgsgj`W`slgs]bgi fUbWscfs]g`s`YX[ ]b[ sWbbs/YsdUfh]U`nscfsVea`d`Yh`mi cZZWU]bZcf`cb`UbchYf`V`cWVWU]b"



## Critical mass of users will create a network effect in MVE

H Ysdfjcf]hms[ cU scZsA J 9sbYhk cf\_sXYj Y cda YbhsZcfs&\$% !&\$s]gthcsfYUW sUsWjhW sa Ugg-scZ i gYfgsfZ[[ i fYsA J 9sWjhW sa Ugg s/Y ck bscsWYUHYsbYhk cf\_s/ZYVhk \jWk j`sdfcj jXYsA J 9 U'gY'Za UjbhU]bYX`[ fck h`hc ]hg'dfcZ]Ha Ul ja ]n]b[ 'dchYbhU"



Cb h`jgk UmA J 9Yj c`i h`cb k j`dUgg'hk c`ja d`Ya YbHU]cb`ghU[Yg

0ä•cāĴ |{ ^} cæĴ } •Äæ ^ ā!ā \* YÄEFİ ĒÖ€

A Hsk j`shUf[ YhshYsa cghsbYhk cf\_sWbbYVWXSdbXsj U'i YsUXX]b[ sY'Ya YbhgsfJ 9s sU'i YsY'Ya Ybhgk cZsA GA 9gsgj dd'nsWU]bg'sGi WsY'Ya Ybhk UgsjXYbhjZ]YXsb9l s]b]h]U'sa cXi `HfUXYsa Uf\_YhbsY]b[ sU' Vebghfi W]cb`UbX fY'UH'X]bXi ghfm'

A J 9Sk j`scbVcUfXs+\$!%\$\$\_sVebghfi W]cfsfG]XYs6ts]bs' s[Yc[ fUd\]YgsfthU'sbi a VYfs%a%) a` Vebghfi W]cbsYbhYfdf]gYgkZfca shcds) sVebghfi W]cbgsW'i bhf]Ygs]bs9l "s5bXs8!` \_sgj dd`jYfgsfG]XYs5E' hcsUj YsUbsYei j]jVf]i a scZsWjhW sa Ugg'shU'hk j`sfYdfYgYbhs+!%\$s sYbYhU]cb]bsgY'YVWXSbXi ghfm' k \jWks]gsYbci [\sZcfsUsW]hW sa Ugg'shYgYsbi a VYfgsUfYsVUgYXscbsShYsUbU'ngjgsXYHU]YXs]b` A cXi `HfUXY'W`ck`dUdf"

Hk c'a Ujb W]YbhgUddfcUWYgk j`VYi gYX'hc'UW]Yj Y'hY[cU'g'a Ybh]cbYX'Uvcj Y X]fYVW]Ybh'cbVcUfX]b[ ]b J 9 ]bX]fYVW]Ybh'cbVcUfX]b[ 'h fci [\`dUfHbYfg\jd k ]h` fX'dUfHm6&6'a Uf\_Yhd`UWg

F1 5WefX]b[ shcsShYs7UH'nmVb[ b]h'cbSdbXs7f]hW]sa UggsW'ebWdhsg\ck bscbs` : ][ i fYsA J 9sWjhW sa Ugg zhYfYsgsUfUb[YscZsa ]b]a U'sbi a VYfscZsWghca YfgsbsUWks fci dshUhsZsUW]Yj YXZdfcj jXYg' Ush]W'sYbci [\sa Uf\_YhscfsUsgj Z]WYbhms`jei jXsa Uf\_YhscsdYfa ]hsgj ghU]bUV'Ys[ fck h`scbW'sU' WUH'ngjgsUW]Yj YgsW]hW]sa Uggsbs7!7 zcfsYl Ua d`YzshWbs fck shcs]hgsdfcZ]Ha Ul ja ]n]b[ sdchYbhU' cZ8t ]b'hY`cb[ 'fi b"

A J 9sk J`šWbbYVbH Ya šcsA HDš bVjcbU`jmsUbXsA J 9šWcgg!VcfXYfšfUXYšYbUV`Yfgsgj Wšdg`  
`c[ ]ghVšfšZbUbVb[ "Šca YghjW fXšdUfmsa Uf\_Yhd`UWšfYdfYgYbghš YšUf[ YhšU X]YbW`  
]b h`jgY[a Ybh'

BYk l' gYfg UWš jfYXÁ				! Zca h Ya bYk 5 Wj Yl' gYfg		
MYUf	Öä^&Á [ ] à[ æää *	Qää^&c·Á HääÁ ] æc Á { æ\^q  æ^•	HcHU` fW a i `Uhj YL	Öä^&Á [ ] à[ æää *	Qää^&c·Á HääÁ ] æc Á { æ\^q  æ^•	HcHU` fW a i `Uhj YL
8\$%	J€€Á	GF €€€Á	8% - \$\$Á	I í €Á	F€IÁ€€Á	%(%&) \$
8\$%	ì F€€Á	ï î €€€Á	++* %\$\$Á	I €€ €Á	Hì IÁ€€Á	( & ( ) \$
8\$8\$	GE F€€Á	F Á ì €€€Á	%&* , %\$\$Á	F€€ €€ €Á	î GIÁ€€Á	+&( ) \$`

H`jgbi a VYfšZšWj YšWYbghš J`šW`ck šA cXi `HfUXYššf YbYfUhyšdšghj YšWg!Zck šghUfhb[ `Zca `h Y`gYVšbX nYUf`cZ]hg`cdYfUhcgbgUbX`hc VfyU\_!Yj Yb Xi f]b[ '8\$%!&\$"

Ü^&[ ] á æ ] | ^{ ^} cæ ] • Áæ ^ ·Á YÄGEGÉ

I dcbšUšWjWš sa UggsUhsJ 9š]gsUW]Yj YXšA J 9sk J`šhf[ [ YfsYI dUbg]cbšhššh Yf`  
Y`Ya Ybgh`cZ; `cVU`J U i Y`7\U]bg`fj J 7k

BYk cf\_sYZYVšk J`šW`ck šcsfYXi Wš757sf7i ghca YfsUWš ]gh]cbšWghgšUgsi gYfgsk J`šghUfhššc`b`  
A J 9šXfj YbšVšh Yš U i Yšh YmsfYW] YšZca šh YbYk cf\_š \ Ybšh Ymsc]bšA J 9`š757šUšh ]gšghU[ Yk J`  
VYsa U]b`msfY`Uhyšššh YšYVšb]W]sgWUUV]j]mscZšA J 9šh i gsXYWYUg]b[ šZcfšYUWšbYk šWYbghšK \]Y`  
k Y`YI dYVš`5FDI `fUj YfU[ Y`fYh fb`dYfi gYfšhc VY`ghU`Y`cf]bWYUg]b[ "

; fck h gWbUf]cg

GWbUf]c`	8 YgW]dh]cb`
K ]XY UWWdHbW` fVYghWUgYL	9I dcbYbhU [ fck h [Á-Á] } cáæ ^ Á æ Á æ*^c[Á-Á€ TÁÜT Ò • *Á àæ^ , Áæ F€Á ^ ^æ•
GHUXm[ fck h fVUgY WUgYL	GHd!VmghYd XYj Ycda YbhZ F€€H€€ [ÁÁ { ^, áæ ^ á • q { ^! • ]Á! ^Áæ , Áæ }ÁcÁ F€ ^Áæ•
@k gWUY fk cfghWUgYL	Gck [ fck h Á F€T áæ ^ á • q { ^! • Á , áæ F€ ^Áæ•

T XÒ ]Á[ á `&c[Á-! Á! ^Á!•

FÈ ; `cVUšdfYgYbWšh fci [ \šK 9šs šYj YfmsGA 9šWbšYVša Yš[ `cVUšVmsd`UW]b[ šhgšdšcXi Wg`  
UhA cXi `HfUXY YbUV`YX`a Uf\_Yhd`UWg

GÈ bgfhi a YbhZcf HfUXY k \ ]W`dfcj ]XYg`hfi gh

GY`Yf`Ug[ i UfUbhY`cZdUma Ybh]ZdfcdYf[ ccXgUfY`XY`j YfYX`hc `h Y`6i mYf  
6i mYf`dUng`cb`m]Z`Y fYW] YgdcdYf[ ccXg

' " HFUXY ZjbUbW`j]bY]b`A HF W

A cXi`HFUXYsk j`scdYbs\$! sWYX]hs`]bYgs]bsA HF W ZcfsU`sbYk si gYfgsZcfsZjbUbV]b[`  
HFUXY HFUbGUM]cbg]b`A J 9

I È BYk sdUna Ybhc dh]cbs sA HF W bW]cbU]msXcYgsbchfYei jFYscsUj YsUj/Ub\_sUWti bhtc`  
ghUfhYI WUb[ ]b[ ]j U i Y

Í È 9UgnsUWggshchfUXYsfY`UhYXsgYfj JWgs sfic[ ]gh]Ysk j`sYsJa cb[ shYsZfghcbYgksh fci [ \`  
VbbYV]b[ `hc`]bHY[ fUHYX`]b`A J 9" fX`dUfhmgYfj JW`dfcj jXYfg`d`UhZcfa`fB<@I DGZ` Ł

T XÒ]Á[ ă`&cqæ`^ ǻ! HÁa ]Áæc {Áæ\^q |æ&•

A J 9k j`sdfcj jXYsbYk j U i YsJXX]b[ sYbUVYfgsk \]W]sbHYbg]Zns gYfgsfUXYsfUbGUM]cbgsh i gsYUX]b[`  
hcs`j U i Ys ]bWYUgYs`cZs hYs`a Uf\_Yhd`UW"s 7i ghca Yfgs`cZs`a Uf\_Yhd`UWgs`k j`s UWWggs`Z` ``s A HD`  
Z`bW]cbU]hYg]bW X]b[`ZjbUbV]b[ ]b`A HF W HFUXY!fY`UhYX`gYfj JWg`UbX`U`FYdi fU]cb`6Ub\_"

H\YsdfcdcgU`sZcfsdUfhbYf]b[ sk ]h`s6&6sa Uf\_Yhd`UWgs]gsVUgYXscbscbYscZsh YsYI Ua`d`YgscZsh Y`  
HFUbGZcfa Uh]cbsgfUHY[ nscZsh YsYUX]b[ sYi fcdYUbsB M\U]bs s`]b[ Zg\ Yf"shfjdfcdcgYXsh UhsUf[ Ygh`  
Vbgbf i W]cb`gi dd`mWU]bgi bXYf[ c`hY`gUa Y`]ggi Yg`UbX`ZUW`g]a ]Uf`W`U`Yb[ Yg"

## Extra use cases

5sj U'i YsYVtgnghYa sk J`'sVYsVi J`hsUfci bXsh YsA HFVtUbXsA cXi `HFUXY gsv`cWVWUjblVUgYX`  
 d`UhZcfa žYbUV`jb[ šh JfXsdUfhjYgšcsVtbbYVtUbXsJbhy[ fUHYsh YJfsc k bszjbhYVsgc`i hJcbgšbhc`  
 Jhžh i gXfUa UhjW`mFYXi Vjb[ `h YJf XYj Y`cda YbhUbxWgca Yf`UWt i Jghjcb Vtghg`

9l Ua d`YgscZsdcgjV`Ysi gYsWgYgsjbW XYsH5A sf`Y`ššV`cWVWUjblVUgYXsJ[ Jh`sh fYUXšcfs5XXjhj Y`  
 A Ubi ZUMi fjb[ si bXYfdJbbjb[ sU`sh YshfUbgUMjcbgscWVffjb[ sh fci [ \ci hsh YsX][ Jh`sUbxsd`ngjWV`  
 `JZsVWVWsZcfsUXXjhj Ysa Ubi ZUMi fjb[ žšfUXYsZjbUbWsgc`i hJcbgsVUgYXscbs cH[ YbYfUHYXsXUHž  
 gi dd`mVWUjb X][ Jh`fUWVjb[ `UbX`ZcX`gUZYm`

Öä ää V@^ää Ä! Ääää^ Ää ~ -äc!ä \* ØVØE D[Ä ÄVÚ

7i ffYbhnžscf[ UbJnUhjcbgšUfYscc\_]jb[ šcs5XXjhj Ysa Ubi ZUMi fjb[ sf5A ššbscfXYfšcšfYgdcbXšcsšh YJf`  
 gi dd`nsVWUjbsUbxsa Ubi ZUMi fjb[ šVtbgfUj]bhg`sc ck Yj YfžZcfs5A šdfcWggYgšcsgWVYšUhtšh YšbXi ghfJU`  
 `Yj Y`žšUgYfJYgscZšVt a d`Yi žVtbbYVWVXžšUbxšXUH!Xfj Ybsj YbhgšYYXšcsWVf`sšsdcgjV`Ysgc`i hJcb`  
 k ci `XsVYšcsVi J`XsUsX][ Jh`sh fYUXscZsh Ys5A šdfcWggf8H5A žššjlb[ `YsgYUa `YggsgfUbxscZšXUH`  
 h UhgšfYhVWYgsZca šh YšbJhU`sXYg][ bšcsšh YsZjb]gY YXsdUfhžšcsdhja JnYs5A šdfcXi VhJcbsWdUVJ`hmž  
 Xfj] Jb[ s]bgj[ \hšZcfsVtbbh]bi ci gšdfcWggsUbxšdfcXi Všcdhja JnUhjcb`šGi VšsUsgc`i hJcbšVt i `XsVY`  
 gi ddcfHYXšVnsA cXi `HFUXY gsd`UhZcfa žk \JWšVt i `XsUgJ`nsž `Z`šh Ysdi fdcgYgscZš UJXUHjb[ šXUHšZcf`  
 fUWVUVJ`JmsUbxšWfhJZVWhJcbžšdfcHYVhJb[ šjbhY`YVh U`šdfcdYfmsUggYhgsUbxšXYg][ bszYgsh fci [ \ci h`  
 U`h Yd`UgYgcZhY`5A `dfcWggžk \JW`UfY.

JbWdhJcb XYg][ b`/ `UbU`ngJgcZhY X][ Jh`a cXY`/

Vi JXJb[ š/ ša cb]hcfjb[ sfVi JXsgja i `UhJcbžšdUfhšZUVfJWVhJcbšUbxsdYf!dUfhšdcghdfcWggjb[ `

UbX`Zjb]g\jb[ ž/  
 hYgh/ j UJXUHjcb fđUfh]bgdYVhJcbžXUHj YfJZVWhJcb/ `hk Jb]b[ ž//  
 XY`j YfmUbx`a UbUJ Ya Ybh`

H Ys8H5A sgYfj JWsk ci `XsVYsVUf[ YXšVnsA cXi `HFUXYsUgsUšZYšJbsA HFVš hcsšh YsVi mYfgscZš ccXg`  
 fYei Jfjb[ šh Ys8H5A šVfhJZVWhJcb`šh YsZYgsk ci `Xsh YbsVYšJWVYXJhYXšcsšh Ysh JfXsdUfhmsXYj Y`cdYfž  
 a Jbi gU`Vt a JggJcb`Zcf`hY`i gY`cZA cXi `HFUXY gsd`UhZcfa "

ØE ØV Ä!`Ä } Ä! Äc[ Ä^ Äc!ä \* [Ä ÄVÚ

A cXi `HFUXY gsd`UhZcfa šVt i `XsYbUVYsh YsYi VU Ub[ YššbfYU`šja YscZscHšXUHšfY`UHhYXšcsšh Ysd`ngjWV`  
 ghUhi gscZšUsVt a cXJmscfsUš[ ccXsVYhk YYbsVi mYfgžgi dd`JYfgšUbxscšh YfšdUfhjYgsh fci [ \ci hsh Y`  
 j U'i YsVWUjb`s bsh JgsWgYžsh YsV`cWVWUjblVUgYXsd`UhZcfa šVt i `XsY`dsJbž gYshfi ghš]bhcšh YsXUH`  
 Yl VU Ub[ Yžšbgi fjb[ šh YsUli h YbhJWVmscZsh YsYi VU Ub[ YXsXUHžšUbxš]hšVt i `XsU`gcšdfcj JYššbsUli XJh  
 fUJžZUWVJhUhb[ `h Y`fYgc`i hJcb`cZXJgdi hYgh`Uha UmUfJgY`a i V`a cfY YZJWVbhm`

: cfsJbgšUbxWššUsšh JfXsdUfhmsVt i `XsXYj Y`cdšcbsA cXi `HFUXY gsd`UhZcfa šUbs cH!VUgYXsJbj cJW`  
 ZUMVcfjb[ `gc`i hJcb`Uja YX`UhXYhfa Jb]b[ `k \YhYf`hY`Zi bXgZcf`U`fUbgUMVhJcb`g\ci `X`VY`fY`YugYX"

bsh YsZcbhsYbXžsh Ysgc`i hJcbšVt i `XshU`Ysh Ysg\UdYscZšUbsYl hYbgJcbsUbxšVYsJbhY[ fUHYXsJb`  
 A cXi `HFUXY gsd`UhZcfa "šbsh Jgsk UnžgY`YfgscbsA cXi `HFUXYsd`UhZcfa šVt i `XšVt bj YbJYbhmsgY`YVhsh Y`  
 a cgššddfcdfJUHššbj cJWšZjbUbVjb[ šUbxšJbgi fUbWšcdhJcbgžga i `UhJb[ šššUXj UbWsh YJfšVt bca JW  
 YZYWg i bXYf`gYj YfU`gWbUfJcg"

bsh YsdfcdcgYXšYl Ua d`Yžsh YscHšbj cJWšZjbUbVjb[ sgYfj JWsk ci `XšYšVUf[ YXšVnsA cXi `HFUXYšUgsU`  
 ZYšJbsA HFVš hcsšh YsZUMVcfjb[ šUbxšcfsJbgi fUbWššVt a dUbsi dcbsh YsgY`YfgsfYei YghšcZšgi V`  
 gYfj JWg`s H YsZYgsk ci `Xsh YbsVYšJWVYXJhYXšcsšh Ysh JfXsdUfhmsXYj Y`cdYfžš Jbi gšššVt a JggJcb`  
 Zcf`hY`i gY`cZA cXi `HFUXY gsd`UhZcfa "

## Token launch

### Öä d ä ~ ä } J Ä æ

H YfYsk J`SVYsU`ja JHXSgi dd`nscZ%\$\$sa J`]cbsA HFV]bschU`SDUfhscZ]hsk J`SVYsX]ghf]Vi HX`  
H fci [ \`DfY!gUY`UbX`Hc\_Yb`gUY`]b`&\$%+`

i d`hc`%\$Z\$Z\$Z\$Z\$Z`hc\_Ybg`k J`VY`X]ghf]Vi HX`Xi f]b[ `H`Y`DfY!gUY`

`\$Z\$Z\$Z\$Z\$Z`hc\_Ybg`k J`VY`X]ghf]Vi HX`Xi f]b[ `H`Y`Hc\_Yb`GUY`

Bc`a cfY`A HFVX]ghf]Vi Hcb`k J`VY`XcbY`UZhYf`H`Y`Hc\_Yb`GUY`YbXg`

H`Y`df]JW`cZA HFV]ggYhUgZc`ck g

DfY!gUY`df]JW.s` %A HFW!`%9H<`#+\$

Hc\_Yb`gUY`df]JW.s` k J`VY`bch`Ygg`h`Ub`%A HFW!`%9H<`#+\$`UbX`  
XYH`fa`]bYX`&k`YY`g`df]cf`hc`a`U]b`Hc\_Yb`GUY`

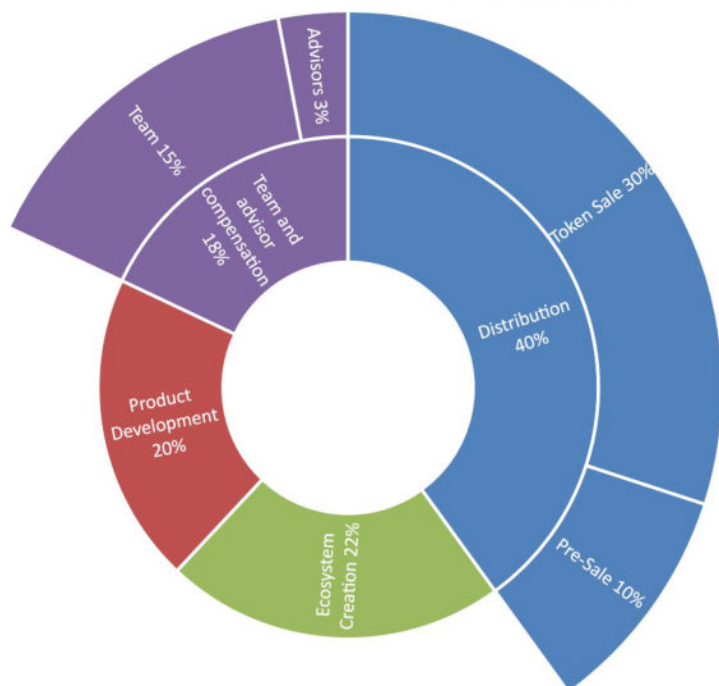
8i f]b[ `H`Y`gUY`dYf]cX`H`Y`Zc`ck`]b[ `df]M]b[ `a`YVU]b]ga`k`J`VY`Udd`JYX.

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Ú!^Eä^Á		I €Á Á	F€€€€€€Á	F€€€€€€€
V[ \ ^ } Á •ä^	Ú@^ ÄÁ	đ Á Á	î €€€€€€Á	fi €€€€€€
	Ú@^ ÖÁ	í Á Á	ï €€€€€€Á	G€€€€€€
	Ú@^ HÁ	F€Á Á	ì €€€€€€Á	H€€€€€€
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H`Y`Sbi`a`VYfscZ`hc\_YbgdJ`cW`H`YX`  
hc`s`YUW`s`gi`VgW]VYfs`k`J`s`VY`  
XYH`fa`]bYX`sUhs`H`Y`sYbXscZ`H`Y`  
Hc\_Yb`gUY`dYf]cX`

8i f]b[ `s`H`Y`s`Hc\_Ybs`gUY`s`A`HF`W`  
hc\_Ybgk`J`SVYsX]ghf]Vi HX`S]bsh`Y`  
Zc`ck`]b[ `sk`Ums8]ghf]Vi H]cbs`\$i`  
fDfY!gUY`!%\$i`Z`Hc\_YbsgUY`s`\$i`t`  
DfcXi`Vts`XYj`Y`cda`Ybhs`&\$i`/  
9Vt`gngH`a`S`WYU]h]cbs`&&`/H`Y`Ua`  
%i`S`f]i`sk`J`s`VYsX]ghf]Vi HX`  
k`J`H`]bs`\*`s`a`cb`H`gs`UZhYfs`H`Y`  
Hc\_YbsgUY`s]gs]b]g]YXZs`i`sk`J`  
VYsY`YUgYXZ`UZhYfs`H`Y`s]gh`Y`UfZ`  
)i`S`!s`UZhYfs`H`Y`s`&bXs`mYUf`/  
5Xj`]gcfm`i`"

Token Allocation



W^ ^ [Á-@ ]Á[ &^ ^•

H Y`dfcWYXgVt`YVMX Xi f]b[ `Hc\_Yb`gUY`k` j` VY`b] YghYX`b`XY` Y`cd]b[ `h`Y`A`cXi` `h`UXY`  
dfc`YVM]b`h`Y`Zc`ck`b[`k`Um

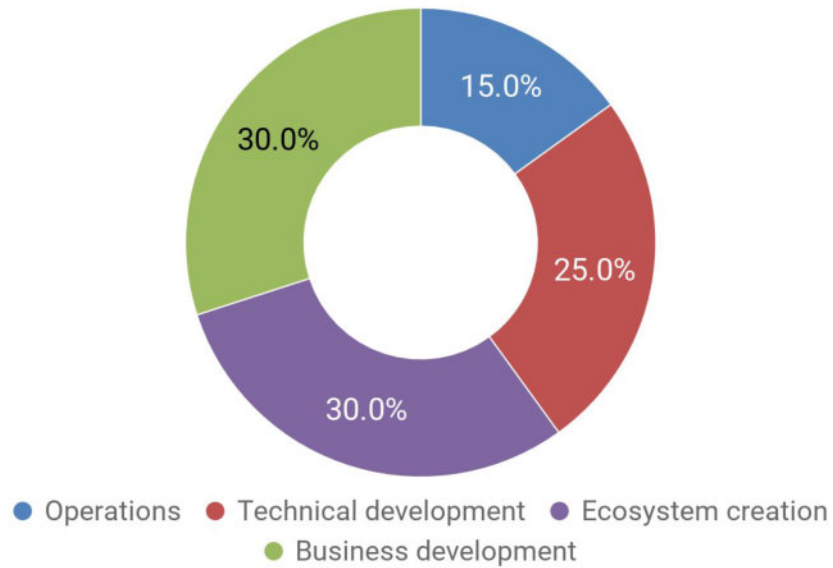
5gg`a`dh]cbg`cZ` : i`bX]b[` Ua`ci`bh`	HYWb]W` XY`Y`cda`Ybh`	9Vt`gngh`Ya` V`YU]cbS`	;`Yc[`fUd\`]W` Yl`dUbg]cb`
ZHc_Yb`gUY`jg` a`UXY`Uh`h`Y` : `ccf`Ua`ci`bh` %`_`9H`k`	A`J`D`XY`Y`cda`Ybh` G]a`d`Y`V`]UhfU`ga`Ufh` Vt`bfUWg` DUa`Ybhg]b`A`HF`WUbX` V`m`h`c`g` Gi`ddcfh]Zcf`a`U`cf` UWt`c`g]b`h`Y`Y`Vt`gngh`Ya` Ug`d`Ugg]`Y`U[`Ybhg`	!`h`UXY`/`F`Ydi`hU]cbU` VUb_]b`A`HF`WZcf`U` ]a`]hYX`bi`a`VYf`cZ` hUf[`YhYX`W]Ybhg` !`a`U]b`" `fX`d`Uf`hm` ]bhY[`fU]cb`f`ic[`]gh]Vg]/` Z]bUbV]b[`t`	` `9l` `Vt`i`bhf]Yg`
ZHc_Yb`gUY`jg` &`_`9H`k`z` Z`%\$`_`	5`c`Z`h`Y`U`V`c`j`Y`Z` 5Xj`Ub`WX`i`b`]UhfU` ga`Ufh`Vt`bfUWg`k`]h` gY`Y`V`h`Vt`i`bhYfdUfh]Yg` DUa`Ybhg]b`Z]Uhg`	Z` `fX`d`Uf`mgYfj`]Wg` ]bgi`fUbW`Z`hU`/` UWt`i`bh]b[`]gi`ddcfh`	Z` ` `Ya`Yf[`]b[` a`Uf`_`Yh` 9i`fcdY`
ZHc_Yb`gUY`jg` '`)_`9H`k`z` Z`%\$`_`	5`c`Z`h`Y`U`V`c`j`Y`Z` Ga`Ufh`Vt`bfUWg`k`]h` UXj`Ub`WX`gi`ddcfh`cZ` `cW`"Y[`]g`U]cbg` Gi`ddcfh]Zcf`a`U`cf` UWt`c`g]b`h`Y`Y`Vt`gngh`Ya` Ug`UW]j`Y`U[`Ybhg`	Z` `fX`d`Uf`mgYfj`]Wg` dUna`Ybhg`Z`W`gh`c`a` gi`ddcfh]Z`gh`c`fU[`]Y` Z` `h`UXY`Z]bUbW` gi`ddcfh]b`A`HF`WZcf` Ya`Yf[`]b[`]a`Uf`_`Yhg`]b` 5g]U`	Z` ` `a`Uf`_`Yhg`]b` 5g]U`
ZHc_Yb`gUY`jg` cj`Yf)`\$`_`9H`k`z` Z`%\$`_`	5`c`Z`h`Y`U`V`c`j`Y`Z` 8Yj`Y`cda`Ybh`cZ` XYX]W]hYX`A`cXi` `h`UXY` a`Uf`_`Yhd`UW`k`]h`U` gi`ddcfh]j`Y` UXa`]b[`]ghfU]j`Y`UbX` Z]bUbV]b[`]Z`Y`h`fYg`	Z` `h`UXY`Z]bUbW` gi`ddcfh]b`A`HF`WZcf` U`i`gYfg`k`]h` dcg]h]j`Y`WYX]h`fU]b[`]	;` `cVU`Vt`j`Yf` Z` `U` `9l` Vt`i`bhf]Yg` Z` `A`U]b`5g]Ub` a`Uf`_`Yhg`]b` ]bW`X]b[`]Z`d`Ub` Z` `bX]U` Z` `7\]bU` Z` `l`G5`

H`Ys`Hc\_Yb`sgU`Ys`Z`c`f`sUb`Xs]Wds]Ua`ci`b]hs]bs`DfY!`gU`Ys]Ub`Xs`Hc\_Yb`sgU`Ys`k`Yf`Ys`XYZ]b`YXs]UgYX`scb`  
]b]`Ygha`Ybh`b`YXXg`

H`Ys`Z`c`f`sUa`ci`b]hs]Vt`f`Yg`d`cb`Xg`sh`c`sh`Ys`XY`Y`cda`Ybh`sc`Z`sh`Ys`A`cXi` `h`UXY`sd`Uh`Z`cf`a`  
k` \]W`k`]`VY`Z`" `mcdYfU]cbU`Vi`h[`Yc[`fUd\`]W`"mXY`Y`cdYX`]b`" `Vt`i`bhf]Yg`  
H`Ys`7Uds]Ua`ci`b]hs]gs`VUgYX`scbs`X]ZZYfYbh`sgWbUf]cgs`]b`\_`YX`sh`cs`A`J`9sXY`Y`cda`Ybh`  
h]a`Y`]b`Ys]Ub`Xs]Vt`f`Yg`d`cb`Xg`sh`c`sh`Ys`Z`" `sXY`Y`cda`Ybh`sc`Z`sh`Ys`A`cXi` `h`UXY`sd`Uh`Z`cf`a`Z`  
]bW`X]b[`]UXX]h]cbU`Z`Y`U`h`fYg`UbX`k`]h`U`;"`cVU`[`Yc[`fUd\`]W`"XY`Y`cda`Ybh`

FJ V[ {Á} æ^ ^ ÁY lÁ\ Á } á• &[ ]&c`á`á`l`q`\* V[ \^ ) • &^ &[ ]á` Á\ &[ ] &c`á`á`l`q`\* c&[ ]&^ } &a`• &Á`  
@`á`^ ^ Ác`l`^ Ác`] ^} áã`l`^• Á` TÁXÓ`á`c`^[] { ^ } c&[ ]WUÉÁUÓÉÁOÉÁÁ&[ ] ÉÓ&[ ] ^c[Á]Á`É`^&^á`Á`  
&^`q`&[ ]&^ } & É

## Expenses Breakdown



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G VgWdhjcbgk j` VY'a UXY'h fci [ \ 'A cXi `HfUXY g'k YV'gjh! \ htdg##a cXi `hfUXY"jc#  
DUfhjVdUhcjb Wb VY'a UXY'jb 9H< / '6H7 / 'ZUhWffYbVjVg'

8i f]b[ sh Ysgj VgWdhjcbgdYf]cXsjZh YsWdsJa ci bhsgfYUWYXZh Yshc\_YbsgU'Ysk j`s/YsWcgYXsJbX`  
bc'bYk 'dUfhjVdUhcjb'k j` VY'dYfa j'hYX"

CbWsh Ysgj VgWdhjcbgdYf]cXsjgscj YfZh Ysbi a VYfscZshc\_YbgsU`cWjYXshcS'UW'sgj VgWjVYfsk j`s/Y`  
XYZjbYX'Ug'Zc`ck.g'.

!` H\Y'hcHJ`Ua ci bhW`YVW'X'k j` VY'W'W`U'hYX'jb 9H< "

!` H\Ysbi a VYfscZshc\_YbgsfYW'j YXsVnsYUW'sgj VgWjVYfsk j`sVYsXYZjbYXsVnsX'j jX]b[ sh Y  
gi VgWjVYfg'dUfhjVdUhcjb`Ua ci bhVmh Y'hc\_Yb'df]W"



## Roadmap

A cXi `hfUXYs]gshYsfYgi `hscZsUshYUa sWt`UVcfUj]cb"shYs( sA HshYUa sa UHysZci bXYfgsXYWjXYXshc` a cj YsZcfk UfXscbshYscf][ `]bU's]XYUscZshfUXYsZ]bUbW"sh\]gsXYWj]cbs[ Uj YsV]fh shc sA cXi `hfUXYs]b` 5df]'s&\$%+"s bshYsa YUb]a YZsUshYUa scZshYbHYXsUbXs\][ \`msig\_]`YXsdfcZYgg]cbU'gs'c]bYXshY` ghUfhi dslubXsWtbf]Vi hYXZk ]h sh YsZci bXYfgZ]bsg\Ud]b[ sh Ysj ]g]cbslubXsdi Hjb[ shc[ Yh YfsZci bX]b[ ` XcW a Ybhg'UbX'dfchcmY'hc'a cj Y'U\ YUX'k ]h 'h Y'jXYU"



## Governance & Safeguarding

H\YsA cXi `HfUXYshYUa shU\_YgshYsgUZY[i UFX]b[ scZsU`sdUfh]VdUbsWtbf]Vi h]cbgsgYf]ci g`msUbsXs\Ug`  
HJ\_YbshYsZc`ck ]b[ sghYdgs]bscfXYfshcsYbgi fYshYsVYghdcgg]V`Ys[ c] YfbUbWscZs]hgsHc\_YbsGU`YsUbsX`  
Vi g]bYgg[ c]b[ `Zcfk UFX"

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: fca shYsci hgYhsA cXi `HfUXYsYb[ U[ YXsFUa dUfhgs9 fcdYUbs@Uk s ]fa žUbs]bXYdYbXYbhs`Uk`  
Z]fa s/UgYXs]bs ]VfU`HfUbsXsHF J žVtbgj`hUbhg]bsH YsHc\_YbsGU`YsgdUW]bscfXYfshcsYbgi fY`  
hUhY`Y VtBWdhcZhY`Hc\_Yb`GU`Y`k Ug`dYfZcfa YX`i bXYf`hY`VYghdcgg]V`Y`[ c] YfbUbW"

V[ \ ^ } • Á q̇ ^

5bsUi X]hscZshYsHc\_YbsGU`YsdfcWggsVms]bXYdYbXYbhsUi X]hscf[ Ub]nUh]cbbsk ]`sVY`  
Wff]YXsci hsd]cfshcsH YsHc\_YbsGU`Y`sH ]g]bXYdYbXYbhsUi X]hscf[ Ub]nUh]cbbsk ]`sU`gcsfYj ]Yk`  
hY`d`fcWgg`Xi f]b[ `hY`Hc\_Yb`gU`Y`UbX`j U`]XUH`Y`H`  
5bs]bXYdYbXYbhs`gi dYfj ]gcs`k ]`s VYsUddc]bHYXs`hcs`j U`]XUH`Y`s`h`Uhs`XYj`Y`cda`Ybhi`  
Yl`dYbgYgs`]b\_YXshcsHc\_YbsGU`YsZ`bXgs`UFYs]bs`]bYsk ]h`sh`Ysd`Ub`sH`Ysei`UfhYf`mi`  
fYdcfh]b[ s]ggi YXscbsA cXi `HfUXY`Vt`a`sk ]`s]bWl`XYsUghUhi`gscbsYl`dYbgYgsV`UgYXscbsHc\_Yb`  
gU`Y`Z`bXg`UbX`U`ghUhi`g`cb`hY`W`b]W`UbX`[ Yc[ fUd\`W`A`cXi `HfUXY`XYj`Y`cda`Ybh`

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Bc`a`cfY`A`HF`Wt`\_Yb`k`]`VY`WY`UH`X`U`Z`Yf`Hc`\_Yb`gU`Y`  
5bs`A`HF`Wt`Vt`a`a`]hY`Ys`k`]`s`Ub`U`mm`Ys`h`Ys`A`HF`Wt`i`h`]nUh]cbbs`UbXs`k`]`s`dfcj`JXY`  
fY`Vt`a`a`YbXUh]cbgshcsH`Ys`Vt`a`a`i`b]msZcfS`fH`Yfs`A`HF`Wt`Yj`Y`cda`Ybhi`sgsh`Ys`A`HF`Wt`g`  
bY`Y`Y`X`Y`h`c`HfUXY`cb`A`H`d`U`h`Z`c`f`a`ž`hg`i`gU[`Y`cb`h`Y`d`U`h`Z`c`f`a``k`]`VY`Wt`gY`ma`cb]hc`fYX`  
5sei`UfhYf`nsfYdcfh]b[ scbsA`HF`Wt`fUH`Ys`UbXs`A`HF`Wt`i`h`]nUh]cbbsk ]`sVYsdi`V`]g\`YXscbsA`H`  
k`YVg]hY`"

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Dfc`Y`Wt`sfYdcfh]b[ sghY`Ya`dYf]cX]W]bHYfbU`sUbsXsYl`hYfbU`sYfYdcfhgscbsH`Ysdfc`Y`Wt`sgHUi`g`  
fH`Y`a`cbh`mYl`hYfbU`sYfYdcfhg`k`]`VY`di`V`]g\`YX`cb`h`Y`7`ca`dUbmg`k`YVg]hY`  
9`A`sf`bHYdf]gY`F`]g`\_`A`UbU[`Ya`YbHsZ`Ua`Yk`cf`\_`shcs]XYbh]Z`ms`cb]hcf`UbsXs`UbU[`Ysh`Y`  
\_`Ymsdfc`Y`Wt`]g`\_`sUWt`f`gs`Vi`g]bYggsUbsXsdYfUhi`cbU`UbsXshcsUggYggsH`Ysgj`ghU]bUV`]`]mscZsh`Y`  
UXcd`hY`g`h`fUH`[`]Yg`  
GfUH`[`]M5Xj`]gcfm6cUFX`h`gYhdfc`Y`Wt`[`i`JXY`]bYg`UbX`Vt`bfhc`g`"

H`F`J`\`Uj`Y`k`cf`\_`YX`k`]h`A`cXi`HfUXY`HYUa`]b`cfXYf`h`c`YghUV`]g\`h`Y`Zc`ck`]b[.]`

G`]HUV`]`]ms`ghUV`]g\`a`YbH`UbsXs`7`ca`d`]UbWsd`fcW`Xi`fYgsZcf`A`cXi`HfUXY`UbsXsh`YsHc\_YbsGU`Ys`  
XYhYfa`]b]b[`s`h`Ys`gi`]HUV`]`]ms`cZs`A`cXi`HfUXYs`Vi`g]bYggs`i`g]b[`s`V`c`W`W`U]bi``s`8YhYfa`]b]b[`s`h`Y`  
Uddfcdf]UHY`↑`f]gX]W]cb`Zcf`h`Y`h`c`\_Yb`gU`Y`"

7fYUH]b[ sh`YsHc\_YbsGU`Ysdfcdcg]h]cbi`sk`\]hYsdUdYfsf[i`jXUbW`UbsXsUddfcj`U`ti`svi`g]bYggsd`Ub`  
k`]h`sa`jYghcbYgs`UbXs`hY`W`bc`c[`ns`Vi`jXsd`fc[fUa`sg`W`YXi`Yi`sd`fc`Y`Wt`a`UbU[`Ya`YbHs`cZs`h`c`\_Yb`  
]ggi`UbW`]b`Vt`b`↑`bW]cb`k`]h`h`Y`A`cXi`HfUXY`hY`W`b]W`h`YUa`

×]bHsWtcfX]bUh]cbbscZs5bbci`bW`a`YbHsDfY!gU`YsUbsXs@Ui`bWscZshc\_YbsGU`Yi`sXfUk`Xck`bscb`  
h`c`\_Yb`#`Vt`]bsj`Ui`YsfU]gYXsV`UgYXscbsUa`jYghcbYsVt`a`a`]h`a`Ybh]bs7\`UfhYfscZsh`YsHc\_YbsGU`YsVt`a`dUbmi`  
fH`G7`ti`\_`A`Uf`\_Yh]b[`dUXj`]W]bscfXYfshcsYbgi`fYsh`Uh`H`YsHc\_YbsGU`YsZU`gsci`h`c`ZsgVt`dYsc`ZsgYW`f]h]Yg`  
fY[i`Uh]cb`"

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K cf\_]b[ sk ]h sF Ua dUfhgs9i fcdYUbs@Uk s ]fa sA cXi `HfUXYshYUa s\ UgsXYhYfa ]bYXshUhs ]VfU`hufsjg` hYsjXYU'st f]gX]V]cbbszcfs]hgsHc\_YbsGU`Y"s ]VfU`hufsk UgsY`YVW`XsXi Ystcshgs]bhYfbUhjcbU'sYdi hUhjcb` UgsUsfcW`sgc`]Xs'd`UW`s]bscfXYfsHcsdfchYV`sH`YsZi bXgscZsVch\sdUfh]V]dUbhgsUbXsHc\_YbsGU`Y` X]ghf]Vi hcfgs]bsUXX]h]cbsHcsH`Ys` f]gX]V]cbbsdfc[ fYggj] Ys`ghUbW`s`cbs`W`ndhcW`ffYbW`s`UbXs`]hg` fY[i `Uhjcb`f] ]VfU`huf`d`Ubghc`fY[i `UhY`8]ghf]Vi hUV`Y`@YX[ Yf`HYW`bc`c[ mUg`cZ`%Jbi Ufm&\$% £

A cXi `HfUXYs\ UgsZcfa YXsJsgdYV]U`sdi fdcgYj Y\ ]WVsZcfshYsdi fdcgYscZshYstc\_YbsgU`YsdshYstc\_Yb` GU`Y`7ca dUbmfmHG7£`k \]W`k ]`VY`hY`c`XYf`cZshY`Zi bXgfU]gYX`]b`dfY!gU`Y`UbX`Hc\_Yb`gU`Y"

T` |ãÜã } æ` !^ Yæ||^c

DUfh]V]dUbhgs]bsH`YsA HFV`hc\_YbsgU`Ysk ]`sgYbXshY]fsZi bXgshcsUsgYVW`fYzsUi X]hYXsa i `h]sgj[ bUhi fY` k U`Yhsk \]W`sg\U`sVYsV`bHfc`YXsVnsUsgj ]hUV`nsei U`]ZYXsYbh]msh`Uhsg\U`sYbgi fYsh`UhsZi bXgsUfY` cb`mXfUk b`Xck b`]b`UW`cfXUbW`k ]h`h`Y`dfcW`Xi fY`U[ fYfYX`df]cf`hc`h`Y`Hc\_Yb`gU`Y"

Ô^ à^! Ü&~ !æ

H`YsA cXi `HfUXYsHc\_YbsGU`YsDU[ YsUbXsU`s`chY`YfsdU[ Ygsick bYXsVnsA cXi `HfUXYs`cfs]hgsdUfhbYf` cf[ Ub]gUh]cbgs\Uj YsVYYbsZi ``nsUi X]hYXsVnsUshcdsW`VYfsgYVW`f]msdfcZ`gg]cbU`s]bscfXYfshcsfYXi W` f]g\_g"

## Conclusion

H\Ys\`cW\WU]bs\UgsU]XshYsZci bXUh]cbgscZcfX]gfi dh]b[ shYsfUXYsZ]bUbW]bXi ghfmzghfYUa `]b]b[ sU`  
 XUi bh]b[ sdfcWggSUbXsdfcj ]X]b[ sA GA 9gsUWVggshcs[ `cVU`sfUXYs]bsUbsYUg]YfsUbXsf] ghZ `sk Unf`  
 A cXi `HfUXYs]gsgY]n]b[ sh]gscddcfh b]msVmsY`ja ]bUh]b[ shYsfUX]h]cbU s/Uff]YfgscZcfS/bhfn]bshY`  
 [ `cVU`hfUXY`k ]h`h`Y`WYUh]cb`cZUj Ui Y`YVtgnghYa "

@j YfU[ ]b[ `cb`U`ga UfHfVbhfUWV`cW\WU]b!VUgYX`6&6`a i `h]g]XYX`d`UhZcfa `fA GDL`  
 (\$\$sa `bsa ]WcZga U`dUbXsa YX]i a s\bhYfdf]gYgs fA GA 9tk ]`s\YsUV`Yshcsa YYhZVta a ]hUbX`  
 YI YW\hYsfUXYs[ `cVU`msYUg]nzhfi ghZ `nsUbXsYZ]WYbhinzh i gsbWYUg]b[ shY]fYfYj Ybi YgsUbX`  
 fYXi V]b[ `h`Y`Vtghg`cZ[ `cVU`hfUX]b[ /  
 h]fX!dUfmsXYj Y`cdYfgs#sgYfj ]Wsdfcj ]XYfgsk ]`s\YsUV`Yshcs[ U]bsUWVggshcsUk ]XYshUf[ YhscZ`  
 i gYfg#WYbghZk \]Y`fYXi V]b[ `XYj Y`cda YbhUbX i gYfUWti ]g]h]cb`Vtghg"

CbYscZshYs`YnsY`Ya YbhgscZshYsbYk sA GDS]ghYsa cXi `HfUXYs7fnhcs`c`\_YbsfA HFVtUsc`\_Yb`  
 VUgYXscbsghYfYi a zk \ ]W`k ]`s\Ys`gYXsUgsU`\_YmsZcfshYs`gYfgshcsVtbbYWthcsYs[ `cVU`sfUXY`  
 bYhk cf\_`UbX`hc`hfUbguM]b`h`Y`A`cXi `HfUXY`g`J`Ui Y`YVtgnghYa `fA J`9L`h`Y`A`HFWk ]`.  
 YbUV`Y`]hg`dUfh]V]dUbhg`hc`YI`W`Ub[ Y`j`Ui Y`fYU!h]a YZ[ `cVU`mUbX`]b`U`VtghYZZYV]j Y`k`Um`  
 \Y`ds`gi`ddcfhsh`fXsdUfh]YgsUdd`]W]h]cbgzhsh i gsfY`YUg]b[ shYsZi `sdchYbh]U`scZSA J`9sUbX`  
 i `h]a Uhy`mXYa cWUh]n]b[ [ `cVU`Vta a YfW"

A cXi `HfUXYsk ]`sVtbfh]Vi hYshcsshYs[ fck h`scZsh ]gsj Ui YsYVtgnghYa sVmsUW]b[ sUgsUsZi ``mi`  
 ]bhY[ fUHYXs YbX!hc`YbXs 6&6s a Uf\_Yhd`UWZs Vns ]bWYUg]b[ s`h`Ys`dfYgybW`scZs h`fX!dUfhmi`  
 XYj Y`cdYfgsUbXsgYfj ]Wsdfcj ]XYfgsUbXsVns fYUW]b[ sUsV]h]W]sa UgscZsi gYfgscZcfshYsa cgh`  
 fY`Yj Ubh`a Uf\_YhgY[a Ybhg"

A cXi `HfUXYsUgd]fYgshcsUWVggSUs i [ YsdchYbh]U`sa Uf\_Yhgf(\$\$sa sA GA 9gs` s`~\*"+s`hshi fbcj Yf`  
 Vm&\$&\$L`h`fci [ \ `h`Y`bYhk cf\_`UbX`h`W`bc`c[ nzk \ ]W`k ]` \Y`d`hc`fY]bj YbhshY[ `cVU`hfUXY`"  
 A GA 9gsk ]`sZ]bXsbYk sUbXsYUgsk UmghcsdfUbgyZf[ ccXgsUbXsgYfj ]WgZfYg\Ud]b[ shY]fj Ui Y`  
 W`U]bgzhsh i gsbWYUg]b[ sfYj Ybi YgsUbXsgUj ]b[ sh]a YzhfUbguM]cbSVtghgZfYd`UW`a YbhsVtghg`  
 UbX`h`Y`VtghcZf]g\_`]b`Ub`i bdfYWXYbHYX`k`Unf`  
 K`Y`b`UXcdhYX`h`Y`A`HFWk ]`gYfj Y`h`Y`i bVUb\_YX`]b`h`Y`Ya Yf[ ]b[ `a Uf\_Yhg"

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## Disclaimers

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Bch`]b[`s]bsh`]gsK`\]hYs`DUdYfs`g`U`sVYsXYYa`YXshcsVtbg]h`hYsUdfcgdYVh`gscZsUbmsgcfhscfsU`gc`]Vh]Uh]cbcsZcfs]bj`Ygra`YbhscbcsXcYgs]hs]bsUbmsk`UmsdYfHU]bshcsUbcsZYZf]b[`scfslsgc`]Vh]Uh]cbcsZsUb`cZYZfshcsVi`msUbmsgYW`f]h]Ygs]bsUbms`f]gX]Vh]cb"sH`]gsXcW`a`Ybhs]gsbchsvta`dcgYXs]bsUWtfxUbW`k`]h`ZsUbXsgsbchsg`i`V`YVh`cZsUk`gscfY`[i`Uh]cbgscZsUbms`f]gX]Vh]cbk`\]Vh`dYfXYg]]`bYXshcsdfchYVh`dUfh]VdUbhg`"

7YfHU]bs`ghUH`Ya`Ybhgs`Ygh]a`UhYgs`UbXsZ]bUbVU`s`]bZcfa`Uh]cbshVtbbHU]bYXs]bsh`]gsK`\]hYsDUdYf`Vtbg]h`hYsZcfk`UFX!`cc\_]b[`s`ghUH`Ya`Ybhgscfs]bZcfa`Uh]cb"sGi`Vh`sZcfk`UFX!`cc\_]b[`s`ghUH`Ya`Ybhgscf`]bZcfa`Uh]cbsh]bj`c`j`Ys`\_bck`bs`UbXsi`b`\_bck`bs`f]g`gs`UbXsi`bWfHU]bh]Ygsk`\]Vh`sa`UmsVWi`gYsUVM`U`Yj`YbhgscfsfYgi`hgs`hcsX]ZZYfsa`UhYf]U`msZfca`sh`YsYgh]a`UhYgscfsh`YsfYgi`hgs]a`d`jYXscfsYi`dfYggYXs]b`gi`Vh`Zcfk`UFX!`cc\_]b[`ghUH`Ya`Ybhg`"

H\]gs9b[`\]g`sUb[`i`U[`Ysk`\]hYsDUdYfs]gsh`Ysdf]a`UfmscZZ]VU`sgci`fW`scZs]bZcfa`Uh]cbshUvci`hsh`Ysa`HF`W`Hc\_Ybs@Ui`bW`sH`Ys]bZcfa`Uh]cbshVtbbHU]bYXs`YfY]bsa`UmsZfca`sh]a`Yshcs]a`YsVsfUbg`UhYXs]bchscsh`Yf`Ub[`i`U[`Ygscfsi`gYXs]bsh`YsVti`fgYscZsk`f]hYbcsfcsj`YfVU`sVta`a`i`b]Vh]cbgsk`]h`sYi`]gh]b[`s`UbX`dfcgdYVh]YsV`ghca`YfgZdUfhYfYgsYHh`bsh`YsVti`fgYscZsg`Vh`sfUbg`Uh]cbcsfshVta`a`i`b]Vh]cbsgca`Y`cZsh`Ys]bZcfa`Uh]cbshVtbbHU]bYXs`YfY]bsa`UmsVYscghZsVtffi`dHYXZcfsa`]gfYdfYgYbHYX`sh`YsUWV`fUVM`scZ`gi`Vh`sU`HYfbUh]YsVta`a`i`b]Vh]cbgshVbcbchsvYs[i`UfUbHYX"s`bsh`YsYj`YbhsicZsUbmsVtbbZ]Vh]gscf`]bVtbg]ghYbVYgs`VYh`YYbs`gi`Vh`s`HfUbg`Uh]cbgshUbXs`Vta`a`i`b]Vh]cbgsh`UbXs`h`]gs`cZZ]VU`s`9b[`\]g`\`Ub[`i`U[`Y`k`\]hY`DUdYfzh`Y`dfcj`]g]cbg`cZh`]g`9b[`\]g`\`Ub[`i`U[`Y`cf]]`]bU`XcW`a`YbhgU`dYfYj`U`"

## References

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Df]W]b[ sGrfUHY[ YgscZs9YVfcb]Wž6&6sA Uf Yhd`UWgsk ]h sHk c!GIXYXsBYHk cf s9i hYfbU`hYg`  
6m i b[`cchbs Mčžs J]XmUbUbXs 7\ci X\Ufnžs HfIXUgs A i \cdUX\ nUnžs: fUXi UHYs GWcc's cZ`  
bXi ghf]U's5Xa ]b]ghfUhcbš7UfbY[ ]YsA Y`cbš b]j YfglmžsD]hgv i f[ \žD5š% &% sVnccžj YYWYž`  
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x`bUh`Ubs5bca`U`ns8i`\_Ysl`\_b]j`Yfgl]ms`UbXsl`\_B7s7\`UdY`s<`\_`sGcVU`sD\`\_cgcd\`ns`UbXsDc`Vni`  
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## Definitions

**5D** ' '5dd`jW]h]cb`dfc[ fUa a ]b[ ' ]bhYfZUW"  
**5FDI** ' !Uj YfU[ Y`fYh fb`dYf`i gyf  
**6&6** ' '6i g]bYgg'hc`6i g]bYgg"  
**6`cWVWU]bs** scf][ ]bU`msV`cW\_sWU]bs s]gsUsX]ghf]Vi hYXsXUHUUVgYsh`Uhs]gsi gYXshc`sa U]bH]bsU`  
 V`b]bi ci g`m[ fck ]b[ ``]ghcZfYV`fXgZW``YX`V`cW`g"  
**757** ' '7i ghca Yf`UW`i ]g]h]cb`V`ghg"  
**7f]h]W`sa Uggs`** s5W`fX]b[ shcsh`Ys7UHU`m]V` [ b]h]cbsU`bXs7f]h]W`sa UggsV`bW`d]hsg\`ck bscb`  
 : ][i fYs%`zh`YfYs]gsUsfUb[ YscZsa ]b]a U`sb] a VYfscZsW`ghca Yfgs]bsYUW`s[ fci dsh`Uhs]ZsUW`Yj YXZ`  
 dfcj ]XgYsUsh`W`sybci [ \sa Uf\_Yhscfslsgj Z]W]Vbhns]ei ]Xsa Uf\_YhscsdYfa ]hgi ghU]bUV`Ys[ fck h`"  
 CbW`s Us WU`hngs UW`Yj Ygs`W]h]W`s a Uggs`cbs`7!7`ZsZfs`Yl Ua d`Ys` ]hs`W]bs [ fck`s`hcs` ]hg`  
 dfcZ]ha Ul ]a ]n]b[ `dchYbh]U`cZ8t` ]b`h`Y`cb[ `fi b`"  
**8H5A** ' '8][ ]hU`h`fYUX`Zcf`5XX]h] Y`A Ubi ZUW` f]b[ "  
**9!W`a a YfW`** ' '9YV`fcb]W`W`a a YfW`"  
 : ]bhYW` ' : ]bUbV]U`hYV`bc`c[ m`  
 ; J7` ' ; `cVU`JU`i Y`7\U]bg`  
 cH` ' `bhYfbYhcZ`h` ]b[ g`  
 @7` ' @YhYf`cZ7fYX]h`  
**A H** ' `A UggUW`i gYHtg`bg]hi hY`cZHYW`bc`c[ m`  
**A cXi`HFUXY`gsFYdi`HU]cbsGng]Ya`S`** sdfc[ fUa sU`ck ]b[ si gYfgshc`sfUHYsYUW`sch`Yfsk ]h` ]b`  
 A J9Z]b`cfXYf`hc`Vi ]X`fi gh`h`fci [ \`fYdi`HU]cb`"  
**A cXi`HFUXYS`Dfc`VW`Is** sdfc`YV`IsZcfsVi ]X]b[ sls] U`i YsYV`gng]Ya` sZcfs[ `cVU`sh`FUXYS`fh`Ysa J9Z`  
 VUgYX`cb`U`a i`h]g]XYXZ`V`cW`WU]b!VUgYX`ga UfhV`bhfUW`id`UhZcfa` `fh`Y`A`HDt`  
**A J9`** `A cXi`HFUXY`j`U`i Y`YV`gng]Ya` "  
**A H`** `A cXi`HFUXY`  
**A HD`** `A cXi`HFUXY`V`cW`WU]b`VUgYX`ga UfhV`bhfUW`id`UhZcfa` "  
**A HFW`** `A cXi`HFUXY`7fnd`hc`Hc\_Yb`  
**A GA9`** `a ]W`czga U``UbX`a YX]i a`YbhYfdf]gYg/  
**A GD`** `A i`h]g]XYX`d`UhZcfa` "  
**DG8&** `FYj ]gYX`DUma`YbhGYfj ]W`8]fYV]j Y  
**Ga UfhV`bhfUW`Is** sUfYsW`a di hYfsdfchcW`gs]bhYbXYXshc`sZUW`]hYhZsj Yf]ZhscfsYbZcfW`sh`Y`  
 bY[ ch]U]cb`cf`dYfZcfa`UbW`cZU`V`bhfUW`  
**Ga UfhV`bhfUW`sd`UhZcfa`S`** s]hsfYd`jW]hYgsh`UX]h]cbU`sh`UXYSZ]bUbW`s]bg]fi a`Ybhgsf`YhYfscZ`  
 WYX]h]UbX`VUB\_`[ i`UfUbHYE`UbX`U`ck`g`A`GA9`hc`YghUV`]g\`hfi`gh]b`h`Y]f`h`UXY`U[ fYYa`Ybhg`  
**GA9g`** `Ga U``UbX`a YX]i a`!g]nYX`YbhYfdf]gYg`  
**I gYfgs`sa** YUbgSA J9sdUfh]V]dUbhgs`sa ]W`czga U``UbXsa YX]i a`S`bhYfdf]gYgsk`c`d`i`ns`UbX`sgY``  
 [ ccXg`UbX`gYfj ]W`g]b`h`Y]f`XUmhc`XUmiVi`g]bYgg`UW]j` ]m`  
**J9`** ``JU`i Y`Y`Ya`Ybhg`