

### Gebündeltes Know-How für automatisierte Hygiene-Lösungen

Synergien: Drei eigensta?ndige Fachplaner und ausfu?hrende Fachfirmen bu?ndeln ihre Expertisen fu?r sichere, effiziente und nachhaltige Hygienelo?sungen in der Lebensmittelindustrie, die auf automatisierter Desinfektion basieren.



Dennis und Tobias Lißner, Gescha?fsfu?hrer von Lißner Engineers + Architects. © Beigestellt

@]» bYf '9b[]bYYfg'/ '5fW ]hY Whg'\ Uh'g]W\ 'gY]h'%-,, 'Ui Z'X]Y
: UW\ d`Ubi b['j cb'6Yhf]YVYb'Ui g'XYf'@YVYbga ]hhY`j YfUfVY]hi b[
gdYn]U`]g]Yfh" '8 Ug'l bhYfbY\a Yb'fYU`]g]Yfh'BYi VUi hYbž'l a VUi hYb
i bX'A cXYfb]g]Yfi b[Yb' 'j ca' < UbXk Yf\_gVYhf]YV'V]g'ni f
; fc» ]bXi ghf]Yž']bgVYgcbXYfY'Zi f'X]Y': 'Y]gW\k ]fhgW\UZh"'8Yf
5bgUhn. 'DfcXi \_h]cbgdfcnYggY'k YfXYb' j cb']bbYb'bUW\'Ui »Yb
[YghU`hYh' 'Yfgh'X]Y'cdh]a U`Yb'6Yhf]YVgUV`Ui ZYž'XUbb'X]Y
hYW\b]gW\Y'; YVUi XYUi gfi ghi b['fH; 5\L'i bX'XUg'; YVUi XY'f\b5l \L''

8 Y D b b g d c Z g g Y Y b a Y b Y b 5 i g h U i g W a h U b X Y f Y b 6 i g h U i g W a h U b X Y f Y b9 I dYfhYbži a '?bck!\ck 'Ui g'X]j YfgYb': UW\VYfY]W\Yb dfcY\_hVYnc[Yb'ni 'Vi bXY`b" Ni 'XYb'a c[']WXYb'?ca dYhYbndUfhbYfb'nU\'h'XUg : UWX i bhYfbY\a Yb'GhUX`Yf'; a V < Uig'DZUZZYb\Ui gYb"'GY]bY 9]bnY`i bhYfbY\a Yb'GhUX`Yf'=qcVUi 'i bX'GhUX`Yf'@iZh\_`]a U'Vf]b[Yb 9| dYfh|gY^|b^XYf^VUi^)WXYb^| a gYhni b[~jcb~< m[]YbYfUi a Ybž  $?i \land hYW b]_! ibX@iZhib[ggmghYaYb'Y]b"8Ug'lbhYfbY aYb$ VYhfYi h'BU\fi b[ qa ]hhY`i bhYfbY\a Yb']a '±b!'i bX'5i g`UbXž XUfi bhYfi ]Y`Y; fc»i bhYfbY\a Yb'Ui g'XYf'A ]`W\k ]fhgW\UZh" 9]b k Y]hYfYf?ca dYhYbndUfhbYfžXUq@Zh!ibX <m[]YbYZUWX]bgh]hi h'>i gh']b '5]f'Ui g'6fYa Ybž'j YfghY\h'g]WX'U`g ]bhYfX]gn]d`]bUfYf': UWXVYfUhYf"'; gh']b'5]f'UbU`mg]Yfh'X]Y  $\mbox{\em []Yb]gWX!}_{a} \mbox{\em [}Yb]gWX!}_{a} \mbox{\em []Yb]gWX!}_{a} \mbox{\em [}Yb]gWX!}_{a} \mbox{\em [}Yb]gWX!$ DfcnYggi a  $ZY^XZYbhk W Y^bbUWW U^h][Y^< m[YbYhYWwbc^c] Yb'i bX$ UfVY]hYh'Yb[ 'a ]h'6Y\cfXYb'i bX'XYf'K ]ggYbgW\UZh'ni gUa a Yb"

## : UWX\_ca dYhYbnVi bXY`i b[ 'gWX UZZh GmbYf[ ]Yb

8]Y'Ni qUa a YbUfVY]hž'\Yfj cf[Y[Ub[Yb'Ui g'Y]bYa : UWX gma dcg]i a ž'XYa cbghf]Yfhž'k ]Y'GmbYf[ ]Yb'YbhghY\Yb"'6Y]'XYf [Ya Y]bqUa Yb Dfc $\Upsilon$ \_hUfVY]h k YfXYb < m[]YbY\_cbnYdhY i bX hYWXb]gWXY'@cgi b[Yb'bU\h`cg']bhY[f]Yfh' 'Zi f'a Y\f'G]WXYf\Y]hž 9Z[n]Ybn'i bX'BUW\\U`h][\_Y]h"'@]» bYf'`]YZYfh'DfcXi\_h]cbg!ž'HYW\b]\_! i bX·6Ui d`Ubi b[ 'gck ]Y·I VYfk UWXi b[ 'XYf·6Ui Ui gZi \fi b[ "  $GhUX`Yf`ghY\h`ZifX]Y`VUi`]WXY`5igZi\fib[`jcb`<m[]YbYfUiaYb$ i b X '? `]a UhY W b ]\_" ' > gh ]b '5 ]f 'ghY i Y fh 'X ]Y 'b c hk Y b X ][ Y b '5 b U `mgY b  $ibX^9IdYfh]qYb^fibX^ia^X]Y^@YVYbqa^hhY^q]WXYfY^hVY^jz^X]Y^]b$ Yb[Ya Ni gUa a Yb\Ub[ a ]hXYa @ Zhi bX < m[ ]YbYa UbU[ Ya Ybh ghY\h"A ]h'XYf'i bUV\Ub[][Yb': UWX\_ca dYhYbn[fi ddY'gYhnYb'X]Y DUfhbYf'Ui Z'Y]bYb'gWXb]hhqhY``Ybi VYf[fY]ZYbXYb'5i ghUi gWX'ni a  $Zfi \ Ygha \ c[\ ]WXYb \ NY]hdi b_h \ VYfY]hg^]b^XYf^D`Ubi b[gd\ UgY^Y]bYg$ Dfc Y\_hg"BUW\hfu[`]W\Y'5bdUgqib[Yb'XYf'D`Ubib['k YfXYb XUXi fWX j Yfa ]YXYb i bX DfcXi \_h]cbgdfcnYggY \m[ ]Yb]gWX cdh]a U`  $[YghU^hYh'' 8Ug^Yf^c^hX]Y^DfcXi_hg]W^Yf^Y]h^ibX^V]YhYh^Ub^j]Y^Yb$  $GhY ``Yb '9]bgdUfdchYbn]U` ž'Yf_`Ufh'8Ybb]g'@]» bYfž'; YgWXUZhgZi \fYf$ VY] @| » bYf 9b[ ]bYYfg / '5fW ]hY Whg"

## <m[]YbYa UbU[Ya Ybh'a]h Cdh]a]Yfi b[gdchYbn]U`

8 Yf 'gYbg]V `Y '6YfY]W '< m[ ]YbYa UbU[ Ya Ybh'V]YhYh']b `XYf @YVYbga ]hhY`dfcXi \_h]cb bcW `F Ui a 'Z f'J YfVYggYfi b[ Yb"'9]b 6Y]gd]Y`. '8 Ug'Ui hca Uh]g]YfhY '8 Yg]bZY\_h]cbggmghYa '9G!gUZY 'YfgYhnh a Ubi Y``Y'W Ya ]gW Y'J YfZU\fYb'Xi fW 'J YfbYVY`i b[ 'Y]bYg bUhi f`]W Yb 'K ]f\_ghcZZg"'8]YgYf'k ]fX'i VYf'Y]bY 'Nk Y]ghcZZXi gY'Ui Z Y]bYa '? Ub]ghYf'cXYf'Ui hca Uh]gW ']b 'Y]bYb 'F Ui a 'Y]b[ YVfUW h"'9f k ]f\_h'[ Y[ Yb'6U\_hYf]YbZ'GW ]a a Y``i bX'J ]fYbZ']gh'i a k Y`hli bX a UhYf]U`gW cbYbX'i bX'fYXi n]Yfh'X]Y': Yi W hY`Ugh']a 'F Ui a 'Y]b J cfhY]``Z f'X]Y'9bYf[ ]YYZZ]n]Ybn'i bX'7 C &!6]`Ubn"'8Yf'[ Yf]b[ Y K ]f\_ghcZVYXUfZ'fWU"' &\$ 'a `#a ' Ł'gYb\_h'ni XYa 'X]Y'? cghYb"'8 Ug J YfZU\fYb 'gcf[ h'Z f'Y]bY'`i W\_Yb`cgY'8 Yg]bZY\_h]cb'U``Yf'6YfY]W Y i bX'Ybh'UghYh'XUg'DYfgcbU`"

#### 8 Y g ] b Z Y \_ h ] c b i V Y f X ] Y @i Zhi b [

8 | Y GhUX`Yf@ Zh\_`|a U; a V < | |bhY [ f | Y f hY XUg b Y i Y  $8 Yg]bZY_h]cbgiYfZU\fYb']b'gY]bY'@iZhib[ghYW\b]_ž'gU[h'\b\UVYf$ FiX][Yf'GhUX`Yf.' A]h'XYa '9G>9Hž'Y]bYa 'I a `i Zh\_i \`U[[fY[Uh'a]h 8 Y g]b ZY\_h]c b gY ]b \ Y ]hž'k ]f X '9 G! g U ZY 'Ui hca Uh]g W 'ni f  $JYfbYVY`ib[gYbh_Y]aib[']b'X]Y'FUiaY'Y]b[YVfUW\h'''8]Y$ @ Zhi b [ gUb`U [ Y 'ghYi Yfh'XYb 'DfcnYgg" '8 ]YgY '8 Yg]bZY\_h]cb 'YfZc`[ h hYa dcfUf'cXYf'XUi Yf\UZhž'; fYbnk YfhY'Zi f'?Y]a Y'k YfXYb  $ni \mid Yf'Ugg][Y]b[Y'U'hYb"'8Yf'bUhi f']WXY'K ]f_ghcZZ'VYY]bhfUWXh][h$  $X]Y @YVYbga ]hhY``b]W\h" \= bg[YgUa h'Yfa c[`]W\h'X]Y$  $I bhYf \ U^hgYbh_Y]a i b[ a ]hhY^gJYfbYVY^i b[ Y]bY^bUhi f^]WXY$  $< m[]YbYUVg]WXYfib[žX]YXYb8Yg]bZY_h]cbgUiZkUbXfYXin]Yfh$ i bX XUi Yf\UZh Zi f Y]b 'g]W YfYg Dfc Xi \_h]cbgi a ZY `X 'gcf[ h" I bhYfbY\a Yb'Ui g'XYf': `Y]gWk ]fhgW\UZhžX]Y'cZh'Ui g G[WXYfY]hg[fibXYb']YfY'FUia`iZhhYadYfUhif']b'XYf $: f]qWXZY]qWX | YfUfVY]hi b[ 'ni '_U`h'ZU\fYbž'_cbbYb'X]YqY'Yf\c\Yb"$ 8 Ug 'gd Ufh' 9b Y f[ ]Y 'Y ]b 'i b X 'gYb\_h' 7 C &! 9a ]gg]c b Y b ' 'VY]  $ibjYfUbXYfh^{c}Yf^{e}YVYbga]hhY^g]WXYfYY]h$  z'gU[h'FU^Z  $C \times a \cup bb\check{z}^*K \mid ggYbgW\&UZh\check{}\mid W\&Yf : cfgW\&ib[g`Y]hYf`VY]^* \downarrow gh`]b^*5]f"$ 

## BYi VUi hYb. Cdha U` [Yd`Ubhž'G]WXYf\Y]h Yf\c\h'i bX'?cghYb'[YgdUfh

XYf'Ni gUa a YbUfVY]h'j cb': UW\d`UbYfbž'Yf\c\h']b'6fUbW\Yb'k]Y XYf: Y]gWk ffgWk UZhX]Y DfcXi hg]Wk Yf Y]hi b X gd Ufh'? cghYb i b X gd Ufh' b X gFYggci fWb'Y]b"'6YfY]hg']b'XYf'D'Ubi b[gd\UgY'nY][h'g]W\'XYf Bi hnyb X]YgYf?ccdYfUh]cb. = a Yb[Yb 5i ghUi gWX XYf 9I dYfhYb k YfXYb 'nU\`fY]WXY 'k Y]hYfY 'GhY``gWXfUi VYb 'XYf'?cghYb! 'i bX 9ZZ|n|Ybncdh|a |Yfi b[ '[ Ybi hnh" 9|bY Zfi \nY]h][ Y '9|bd`Ubi b[ 'XYf Ui hca Uh]q]YfhYb'8Yq]bZY\_h]cb'a ]h\]`ZY'j cb'JYfbYVY`i b[ghYW\b]\_ VYY]bZi ggh'D`Ubi b[ i bX; YgUa h\_cghYb"'K ]fX g]Y X]fY\_h'VY] XYf ; YVUi XY! i bX @ Zhi b[gd`Ubi b[ VYfi W\_g]W h][hž``UggYb g]W  $_f]h]gWXYDfcXi_h]cbgVYfY]WXYa]h'\c\Ya'?cbhUa]bUh]cbgf]g]_c$ jcb:5bZUb[:Ub:cdh]a U`:Ui g`Y[Yb": Ac[`]WXYfkY]gY:`UggYb:g]WX GUi VYffUi a hYW b]\_'UbghY``Y'j cb'FY]bfUi a hYW b]\_'Yfn]Y`Yb" 8 UfUi g'Zc`[hž:XUgg:[Y[YVYbYbZU``g:5bZcfXYfi b[Yb:Ub:X]Y @ Zhi b[ghYWXb]\_[Yf]b[YfX]a Ybg]cb]Yfhk YfXYb \_cbbYbž kcXifW.bcWaU`g'=biYgh]h]cbg!'ibX'6Yhf]YVgcghYb'Y]b[YgdUfh 9b[]bYYfg:/:5fWX]hYWhg" 6Uq]q'jcb'h]YZ[Y\YbXYa': UW\k]qqYb'bcW\'YbhqW\Y]XYbXYf"'<]Yf nY][h'g]WX 'X]Y 'GhUf\_Y 'XYf'?ccdYfUh]cb 'XYf'i bUV\Ub[][Yb : UW\d`UbYf. '\rightarrow gh']b '5]f'Z| \fh'\m[]YbY\_`]a Uh]gW\Y'A Yggi b[Yb  $Xi\ fWX\ \check{z}"]XYbh]Z]n]Yfh"GWX\ k\ UWX\ ghY\ ``Yb"]a\ "6Yhf]YV"i\ bX"XYZ]b]Yfh"X]Y$ 5bZcfXYfi b[Yb'Zi f'HYW\b]\_'i bX'; YVUi XY"'8]YgY'8UhYb'Z]Y»Yb']b Zi b\_h]cbU`Y'@UghYb\YZhY'Zi f'@]» bYf'i bX'GhUX`Yf'Y]b"'Ni f 5Vq]W\Yfi b[ 'XYf' < m[ ]YbY']b'XYa 'VYhfYZZYbXYb'I bhYfbY\a Yb k U\fYbX`XYf`I a VUi d\UgY`\_ca a Yb`XUbb`Ui W\`a cV]`Y 8 Yg]bZY\_h]cbggmghYa Y'k ]Y'XYf'dcfhUV`Y'9G>9H'ni a '9]bgUhn" 6fUbWXYb'k]Y'X]Y': `Y]gWXk]fhgWXUZh'dfcZ[h]YfYb'jcb'X]YgYf ia ZUggYbXYb:: UWX\_ca dYhYbn. 8 ]Y'Y][YbghUbX][Yb'GdYn]U`]ghYb @|» bYf'9b[ |bYYfg'/ '5fWX |hYWhqž' > gh']b '5 |f'i bX'GhUX`Yf'fYU`|q|YfYb ]b:X]YgYf:VYgcbXYfYb:?cbghY``Uh]cb:a U»[YgW\bY]XYfhYž  $ni_i bZhgZU \setminus [Y < m]YbY cgib[Ybžk Y W Y X]Y 9ZZ]n]Ybnž$  $DfcXi _hg]WXYfY]h'i bX'BUWXYU`h][ _Y]h'ghY][ Yfbž'?cghYb'gYb_Yb$ i bX: UWX\_fUZhY'Ybh`UghYb"

# $6\,Y\,gi\,\,W\!\!X\,Y\,b\,\,{}^.G\,]Y\,{}^.i\,\,b\,g\,{}^.U\,i\,\,Z_.\,\,{}^.Z\,{}^.Y\,]g\,W\!\!X\,i\,\,b\,X\,W\!c\,{}^.U\,h$