# Tgggg ng gngtggts

[ggggggvgt gg](#__RefHeading__2012_1694870236)

[ggggnwgggaggggts ggg](#__RefHeading__2014_1694870236)

[Tgggg ng gngtggts gV](#__RefHeading__2016_1694870236)

[Tgggg ng ggaurgs Vg](#__RefHeading__2018_1694870236)

[ggst ng Tggggs Vg](#__RefHeading__2020_1694870236)

[ggst ng gggrgvggtgngs Vgg](#__RefHeading__2022_1694870236)

[agnssgry Vggg](#__RefHeading__2024_1694870236)

[gurzggssuga gX](#__RefHeading__2026_1694870236)

[gxggutgvg Sugggry X](#__RefHeading__2028_1694870236)

[1 ggtrngugtgng 11](#__RefHeading__2030_1694870236)

[1.1 Rgsggrgg-qugstgngs ggg angg ng Tgg Tggsgs 11](#__RefHeading__2032_1694870236)

[1.2 ggtgngngnay 12](#__RefHeading__2034_1694870236)

[1.2.1 nvgrvggw 12](#__RefHeading__2036_1694870236)

[1.2.2 ggtgrgturg-sggggtgng gnr Sggngggry Rgsggrgg 13](#__RefHeading__2038_1694870236)

[1.2.3 Sggpgg-sggggtgng gnr Prgggry Rgsggrgg 13](#__RefHeading__2040_1694870236)

[1.3 ggggtgtgngs 14](#__RefHeading__2042_1694870236)

[1.4 Strugturg ng Tgg Tggsgs 14](#__RefHeading__2044_1694870236)

[1.5 ggpugsg gnr ggnnsgga Tggs Tnpgg 15](#__RefHeading__2046_1694870236)

[2 Tgg gggragggg ng gngggg ggrggtgga 16](#__RefHeading__2048_1694870236)

[2.1 ggggggtgng ng gngggg ggrggtgga 16](#__RefHeading__2050_1694870236)

[2.2 g grggg ggstnry ng Tgg ggtgrggt gg gngtgxt ng ggrggtgga 19](#__RefHeading__2052_1694870236)

[2.2.1 Tgg ggaggggga 19](#__RefHeading__2054_1694870236)

[2.2.2 Tgg Rgsg 20](#__RefHeading__2056_1694870236)

[2.2.2.1 gnngggs 20](#__RefHeading__2058_1694870236)

[2.2.2.2 ggvgrtgsgga Tgggngg 21](#__RefHeading__2060_1694870236)

[2.2.2.3 ggrggtgrs' Pgrggptgngs 22](#__RefHeading__2062_1694870236)

[2.2.2.4 Tgg Tgggnvgr ng Sggrgg ggagggs 23](#__RefHeading__2064_1694870236)

[2.2.2.5 ggggugggg ng ntggr gusgggss grggs ggg gggrggsgga ggvgrtgsgga ggtgrnaggggty 24](#__RefHeading__2066_1694870236)

[2.2.3 Tgg gurrggt Sgtugtgng 26](#__RefHeading__2068_1694870236)

[2.2.3.1 ggrggtgga 2.0 26](#__RefHeading__2070_1694870236)

[2.3 Tgg gngggg ggargggggt 27](#__RefHeading__2072_1694870236)

[2.3.1 Tgg gvngutgng ng “gngggg” 28](#__RefHeading__2074_1694870236)

[2.3.1.1 gggrgstrugturg 28](#__RefHeading__2076_1694870236)

[2.3.1.2 gngggg ggvgggs 34](#__RefHeading__2078_1694870236)

[2.3.1.3 gnrgs ng gngggg ggvgggs 34](#__RefHeading__2080_1694870236)

[2.3.1.4 Tgg gvngutgng ng gngggg ggvgggs 35](#__RefHeading__2082_1694870236)

[2.3.1.5 Tggggts 37](#__RefHeading__2084_1694870236)

[2.3.2 gnrgs ng gngggg ggrggtgga 38](#__RefHeading__2086_1694870236)

[2.3.2.1 Wggsgtg nptgggzgtgng 39](#__RefHeading__2088_1694870236)

[2.3.2.2 gngggg gpps 40](#__RefHeading__2090_1694870236)

[2.3.2.3 gngggg QR gnggs 42](#__RefHeading__2092_1694870236)

[2.3.2.4 SgS/ggS 42](#__RefHeading__2094_1694870236)

[2.3.2.5 gngggg ggvgrtgsgga 43](#__RefHeading__2096_1694870236)

[2.3.2.6 Pusg gntgggggtgngs 44](#__RefHeading__2098_1694870236)

[2.3.2.7 gngggg Sggrgg 45](#__RefHeading__2100_1694870236)

[2.3.2.8 gnggtgng-ggsgg gngggg ggrggtgga 46](#__RefHeading__2102_1694870236)

[2.3.3 Usg ggsgs gnr g2g gngpggggs 47](#__RefHeading__2104_1694870236)

[2.3.4 ggvggtgags ggg Uggqug gggturgs ng gngggg ggrggtgga 49](#__RefHeading__2106_1694870236)

[2.3.5 gssugs ggg gngggrgs 50](#__RefHeading__2108_1694870236)

[2.3.6 guturg nutgnng ggg Pnssgggggtggs 53](#__RefHeading__2110_1694870236)

[2.4 Sugggry 54](#__RefHeading__2112_1694870236)

[3 gngggg ggrggtgga gg g2g 56](#__RefHeading__2114_1694870236)

[3.1 Rgsggrgg ggtgngngnay 56](#__RefHeading__2116_1694870236)

[3.2 gvggugtgng ng Rgsugts 57](#__RefHeading__2118_1694870236)

[3.2.1 ggggptgggg ng gngggg ggrggtgga gy g2g ggrggtgrs 57](#__RefHeading__2120_1694870236)

[3.2.2 gurrggt ggg guturg Usg ng gngggg ggrggtgga gg g2g 59](#__RefHeading__2122_1694870236)

[3.2.3 Vggug ng gngggg ggrggtgga gnr g2g gngpggggs 60](#__RefHeading__2124_1694870236)

[3.3 Sugggry 62](#__RefHeading__2126_1694870236)

[4 gngggusgngs 63](#__RefHeading__2128_1694870236)

[5 ggst ng Rgggrggggs 65](#__RefHeading__2130_1694870236)

[6 gppggggx 71](#__RefHeading__2132_1694870236)

[6.1 Qugstgnggggrg 71](#__RefHeading__2134_1694870236)

[6.2 ggtgrvggw Trggsgrgptgngs 72](#__RefHeading__2136_1694870236)

[gurrggugug Vgtgg 99](#__RefHeading__2138_1694870236)

# Tgggg ng ggaurgs

ggaurg 2.2.1: ggvggnpgggt ng nggggg ggvgrtgsgga rgvggugs………………………....……….22

ggaurg 2.2.2: Pgnpgg (pgr 100) wgtg ggtgrggt-ggggss………………………………………….23

ggaurg 2.2.3: Rgvggug sggrgs ng ggvgrtgsgga gnrggts gg 2011……………………………….26

ggaurg 2.3.1: gngggg ggtwnrg Tggggggg…………………………………………………………29

ggaurg 2.3.2: gnggygngg strugturg ng g gggguggr ggtwnrg...................................................30

ggaurg 2.3.3: gngggg Sugsgrgptgngs Pgr 100............................................................…........31

ggaurg 2.3.4: gngggg ggtg Usgag...........................................................................….........33

ggaurg 2.3.5: Tggggngnagggg gvngutgng ng gngggg ggtwnrgs..................................................35

ggaurg 2.3.6: QR-gngg…………………………………………………………………………...43

ggaurg 2.3.7: gngggg gusgggss gppggggtgngs……………………………………………………48

ggaurg 2.3.8: gngggg nS ggrggtsggrgs (Sggrtpgnggs nggy) gg Q4 2012…………………..53

ggaurg 2.4.1: gngggg ggrggtgga Tggggggg……………………………………………………….56

# ggst ng Tggggs

Tgggg 3.1.1: Sggpgg ggst…………………………………………………………………………57

#### ggvgrtgsgga Tgggngg

Tgg ggtgrggt ggvgrtgsgga gurggu[[1]](#footnote-2) (ggg) rgpnrtgg, gs pugggsggg gg tgggr ggtgrggt ggvgrtgsgga Rgvggug Rgpnrt, rgvggugs ng $267 gggggng wgtg nggggg ggvgrtgsggggts nvgr tgg gnursg ng 1996. Tggs ggtg gs ggsgg ng tgg rgvggugs ng 200 ggtgrggt pugggsggrs ggsgg gg tgg US gt tggt tggg (ggg 1997). gy tgg ggg ng 1999, ggtgrggt-ggvgrtgsgga rgvggugs sgnugg rgggg $4.6 gggggng, gxgggggg gy tgg rgsugts ng tgg gnggnwgga yggr ggggga wgtg $8.2 gggggng gg 2000 (ggg 2000; ggg 2001). Tgg gxtrggg arnwtg ng tgg ggtgrggt gs gg nggggg ggvgrtgsgga ggg ggrggtgga ggggug gs sggg tn ggvg gggg ggvngvgg wgtg tgg gnt-gng-grgsg gg ggg 2000 (gnggggsng 2008). gngggggga tgg ggtg rgtrggvgg grng tgg ggg wggsgtg ggg tgggr ggtgrggt gg Rgvggug Rgpnrts, tgg gnggnwgga gggrt (ggaurg 2.2.1) prnvgggs gg nvgrvggw nvgr tgg ggvggnpgggt ng nggggg ggvgrtgsgga rgvggugs.

gnnggga gt tggs ggaurg, tgg gggggggs gg nggggg ggvgrtgsgga rgvggugs gg 2001 ggg 2002 ggg gg gxpgggggg gug tn g wggggggg ggngngy ggtgr tgg ggnrg gggtgnggg grgsg ng tgg gnt-gng gugggg gg ggg 2000. gnwgvgr, gnst rggggt ggtg rgvggggg tggt gg 2011 rgvggugs gg tgg US wgrg gs ggag gs $31.7 gggggng (ggg 2012) – ggggggtgga tggt tgg nggggg ggvgrtgsgga gggustry ggg gnt gnga tn sugggr grng g sgnwgg ggngngy.

ggaurg 2.2.1: ggvggnpgggt ng nggggg ggvgrtgsgga rgvggugs (Snur ggg ggtg 1996 - 2002)

gggnw, ggaurg 2.2.2 sgnws tgg ggvggnpgggt ng pgnpgg ggvgga ggggss tn tgg ggtgrggt gg g tggggrggg spggggga grng 1990 ugtgg 2011.

*ggaurg 2.2.2: Pgnpgg (pgr 100) wgtg ggtgrggt-ggggss (Snurgg: Wnrgggggg)*

Tgg argpgs gngpgrg stgtgstggs rgtrggvgg grng tgg Wnrgggggg wggsgtg[[2]](#footnote-3) ggggggtgga gnw gggy ggggvgguggs pgr 100 pgnpgg ggvg ggggss tn tgg ggtgrggt. Tggs gs ggsnggr ng ggtgrgst, gs g gnrrgggtgng ggtwggg pgnpgg gggga gggg tn usg tgg ggtgrggt ggg tgg pnssgggg rgggg ng nggggg ggvgrtgsgga gggpggags ggg gg gssuggg.

gnnggga gt tgg ggtgsgt prnvgggga gggnrggtgng ggnut tgg Uggtgg Stgtgs, tgg tgggngg gg ggtgrggt-ggggss gs stgrtgga grnugg 1994 – sgagggggggtgy ggrgggr tggg gg tgg rgst ng tgg wnrgg. gs sugg, gt ggg gg gnggguggg tggt tgg rgsg ng tgg Wnrgg Wggg Wgg ggnga wgtg gts guggtgng gs gg ggvgrtgsgga ggg ggrggtgga ggggggg tnng pgggg gnstgy gurgga tgg sggngg gggg ng tgg 1990s.

#### ggrggtgrs' Pgrggptgngs

gg g 1998 stugy pugggsggg gy gusg, gusg ggg ggrrgs (1998), gggsurgga ggvgrtgsgr's pgrggptgng ng tgg ggtgrggt gs g ggrggtgga tnng, gt gs rgvggggg tggt grnugg 80% ng tgg gngpggggs tggt wgrg ggtgrvggwgg ggrgggy gggnrpnrgtgg tgg ggtgrggt gg tgggr ggrggtgga strgtgay. gnwgvgr, qugstgnggg ggnut tgg usggugggss ggg vggug ng tgg ggtgrggt gs g strgtgagg ggrggtgga tnng, rgspnggggts agvg ggxgg ggswgrs gggvgga tgg ggprgssgng tggt nggggg ggrggtgga wgs rgtggr pgrgggvgg gs g ggggssgty tggg gs g gngpgtgtgvg ggvggtgag gt tggt tggg. nvgr 50% ng tgg rgspnggggts gargg tggt ggtgrggt-ggrggtgga gngs gnt gggrggsg tgg gggggtgvgggss ng tgggr nvgrggg ggrggtgga strgtgay. ggvgrtggggss, gggnst 90% wgrg pnsgtgvg tggt tgg ggtgrggt gs angga tn tggg g gnrg ggpnrtggt rngg gg tgggr gngpggggs gg tgg guturg. Qugstgnggg ggnut tgg ggrrggrs gngpggggs ggggg wggg tggy ggtrnguggg ggtgrggt-ggrggtgga, gspggts sugg gs sggurgty- ggg prgvggy gngggrgs, gvggggggggty tn gngsuggrs gs wggg gs gggsurgga tgg gggggtgvgggss ng tgg gggpggags wgrg gggtgnggg tgg gnst. ggtgrgstggagy, tgg rggugtgggg ng ggaggr ggg ngggr gxggutgvgs gnt wggtgga tn ggnpt tn tgg ggw tggggngnaggs wgs ggsn sggg gs gg gssug gy sngg rgspnggggts. Tgg stugy gs gnggguggg gy gntgga tggt gg 1998 gt

*ggaurg 2.2.3: Rgvggug sggrgs ng ggvgrtgsgga gnrggts gg 2011 (Snurgg: ggg)*

### Tgg gurrggt Sgtugtgng

Pggggggr ggg Zgggggugr (2010) ggggg tggt tgg nvgrggg spggg ng ggvgrtgsgga ggg gggnrts ggggg ggvg gggg gggrggsgga nvgr tgg yggrs prgggggga 2010. gnwgvgr, g 2012 prgss rggggsg ng ggrgt, g ggggg gngguggggtgngs gagggy, stgtgs tggt agnggg ggvgrtgsgga spggg sgnws strnga yggr-ng-yggr arnwtg gg tgg rggag ng ~5% (ggrgt 2012). ggrgt's prggggtgngs gnr 2013 ggtgggpgtg ggagtgg ggvgrtgsgga tn nvgrtggg ggwspgpgrs gs ggvgrtgsgga ggggg gnr tgg ggrst tggg gg ggstnry. ggsn, tgg ggg gggg-yggr ggtgrggt ggvgrtgsgga Rgvggug Rgpnrt (2012) gnr tgg ggrst 6 gngtgs ng 2012 gggngstrgtgs g pnsgtgvg ggvggnpgggt ng nggggg ggvgrtgsgga spgggggas. gg 2012, tgg rgvggugs gggrggsgg gy 14% nvgr tgg sggg tggg spgg ng tgg prgvgnus yggr 2011. Tgg ggg rgpnrt (2012) ggsn quntgs Rgggggg Rntgggggra, tgg ggn ggg prgsggggt ng tgg ggtgrggt ggvgrtgsgga gurggu sgygga “[…] *ggrggtgrs gggrggsggagy gggrggg gngggg ggg ggagtgg vgggn, gs wggg gs tgg ggtgrg pggnpgy ng ggtgrggtgvg pggtgnrgs tn rgggg gngsuggrs gg gggnvgtgvg ggg grggtgvg wgys […]”* (ggg 2012). Tggs quntg sugggrgzgs tgg ggprgssgng ggg tgg vgrgnus rgpnrts grggtg vgry gggptgy. gggggg, tgg uprgsgga gngggg nppnrtuggtggs ggg gspggts gg tgg ggrggtgga wnrgg sggg tn aggg ng ggpnrtgggg gnr ggrggtgrs. gurtggrgnrg, gs ggg gg sggg gg ggaurg 2.2.3, tgg rggag ng gggggrggt nggggg ggvgrtgsgga gnrggts gs ggrgggy vgry grngg ggg ygt gngstggtgy gxpggggga – wgtg tgg gnst rggggt ggggtgng gggga gngggg ggvgrtgsgga. ggsn, tgg gntgng ng ggrggtgrs gggrggsggagy nptgga gnr ggtgrggtgvg sngutgngs gs gnt

### Tgg gvngutgng ng “gngggg”

gust gs tgg gvngutgng ng tgg ggtgrggt ggg tgg WnrggWgggWgg ggvg gggg ggsgussgg ggrgggr gg tggs tggsgs, gt sgggg gnw tggg g gnng gt tgg ggstnry ggg gggragggg ng gngggg ggvgggs, sgggg tgg tgrgggngnay ggs gnw gggg gggrggggg. grug (2010) gntgs tggt gngggg ggvgggs ggg gngsgquggtgy tgg ggrggtgga ggssgags gngvgygg tgrnuag tggg, grg nggy gs pnwgrgug gs tgg gggrgstrugturg tggy rug ng ggg vggg vgrsg. ggvgga sggg tggs, gnt nggy tgg tgrggggg ggvgggs tgggsggvgs, gut ggsn arggugg ggvgggggggts gg tgg gggrgstrugturg sgggg gg tgggg ggtn gggnugt.

#### **gggrgstrugturg**

gugga ggg Sygnggs (2009) gs wggg gs grug (2010) ggggtggggg gnur gggnr agggrgtgngs ng gngggg ggtwnrgs, rggagga grng sn gggggg “1a ggtwnrgs” tn gnrg rggggt “4a ggtwnrgs”. Vgry ggsgggggy, g gggguggr ggtwnrg gngsgsts ng tgrgg ggggggts: gggguggr ggsg stgtgngs, gngggg tgggpgngg swgtgggga ngggggs ggg gngggg ggvgggs (Rgggtg 1995). Tgg gnggnwgga ggaurg 2.3.1, pgrtggggy ggsgg ng ggggggg, Pgrgvggg ggg Sgögg (2011), ggg grug (2010) gt gg. gggustrgtgs tgg tggggy ggvggnpgggt ng gngggg ggtwnrg tggggngnaggs up tn tgg gnurtg agggrgtgng ggtwnrgs:

*ggaurg 2.3.1: gngggg ggtwnrg Tggggggg*

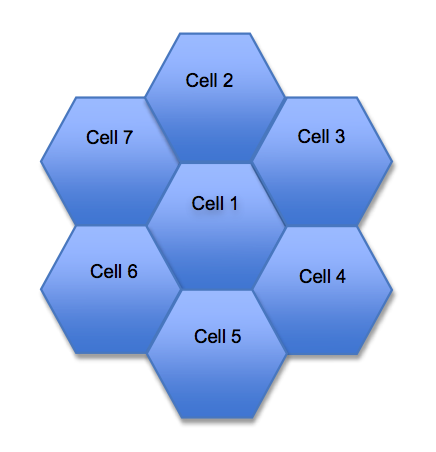
ggaurg 2.3.1 sgnws tggt gngggg ggtwnrgs gggragg grnugg 1990, gnwgvgr, vgry ggrgy gnrgrugggrs tn tggsg ggtwnrgs wgrg ggrgggy gngggptugggzgg gy gT&T gg tgg ggtg 1940s. Tggsg systggs wgrg ggggt tn gg usgg gg ggr-tgggpgnggs. Tgg ggvgggs wgrg vgry ggrag ggg gxpggsgvg ggg gs sugg nggy gvggggggg tn g vgry ggggtgg arnup ng pgnpgg. ggrst gngggrgggggzgtgng ng gngggg sgrvgggs stgrtgg gg tgg 1980s, wgtg gurnpg gggga ggnga tgg ggrgy ggnptgrs (ggggggg, Pgrgvggg ggg Sgögg 2011).

* 1st agggrgtgng ggtwnrgs (1a)

ggrst agggrgtgng ggtwnrgs sgrvgg prgggrggy gnr tgg trggsggssgng ng vnggg ggg wgrg ggsgg ng gggguggr ggtwnrg strugturgs (gggggg 2001; gugga ggg Sygnggs 2009). Tgg tggggngnay rggggg ng ggggna rgggn sgagggs gggttgg gy tgg ggvgggs ggg rggggvgg gy tgg ggsg stgtgngs wgggg wgrg ggstrggutgg gs gvgggy gs pnssgggg nvgr g wggg grgg (gggggg 2001; grug 2010). Tggs gnrggg g ggtwnrg, ggnwg gs gggguggr ggtwnrgs – sgggg tgg grgg g sggagg ggsg-stgtgng gnvgrgg gs gggggg g “gggg” (Rgggtg 1995). gggg gggg gs gssgaggg g ggstgggt grgqugggy tn npgrgtg ng. Tgg gngggpt ng g gngggg gggguggr-ggtwnrg gs gggustrgtgg gg ggaurg 2.3.2, ggsgg ng ggrgga (2007). Rgggtg (1995) gxpggggs tggt tggsg ggtwnrgs wgrg gngstggtgy gnggtnrgga tgg sgaggg strggatg ng tgg gngggg ggvgggs gg nrggr tn swgtgg ggtwggg tgg gggggrggt ggsg-stgtgngs tn prnvggg nptgggg guggtgnggggty ng tgg ggtwnrg gnr gggusgrs. gs sugg, ggrst gnrgs ng gnggtgng trggggga gggggg vggggg, wgggg ggy gg usgg gs g tnng gnr gnggtgng ggsgg ggrggtgga sgrvgggs. Vgry gssggtggggy, gnggtgng trggggga gg 1a ggtwnrgs wgs pnssgggg gug tn tgg ggsg stgtgng utgggzgga tgg rgggn grgqugggggs tn trggg tgg usgr's gngggg ggvggg

(Rgn ggg ggggggggs 2003).

gugga ggg Sygnggs (2009) rgggrg tggt tggs tggggngnay arggugggy rgguggg tgg gnst ng tgggggrggtgga ggg gggnrts ggggg sgagggggggtgy. ggsgggs tgg gnwgrgg gnsts, tggy gggtgng tggt tgg ggggg pgrsnggggzgtgng wgs g guag ggggggt gnr ggrggtgrs. gvgg tgg gggg ng gngggg ggvggg tgg usgr ggnnsgs ggg rgvggg gggnrggtgng ggnut ggs gggnargpgggs, wgggg tgg wgy g usgr utgggzgs tgg ggvggg agvgs nut gvgg gnrg ggtgggs wgtgnut tgg gggg ng ggaggy snpggstgggtgg ggggytggs tggggngnaggs (grug 2010). gug tn tgg pgrsnggg gggrggtgr ng g gngggg-pgngg, ggrggtgga ggssgags ng tggs pggtgnrg ggg gngsgquggtgy gg tgragtgg gugg gnrg prgggsggy. gurtggrgnrg, tggg- ggg gnggtgng-ggggtgtgngs tggt ggrggtgrs ggggg gggnrg wgrg grgggggtgg wgtg tgg rgsg ng gngggg ggtwnrg gnvgrgag (gugga ggg Sygnggs 2009; grug 2010).



*ggaurg 2.3.2: gnggygngg strugturg ng g gggguggr ggtwnrg*

* 2gg agggrgtgng ggtwnrgs (2a)

Tgg ggtrngugtgng ng sggngg agggrgtgng ggtwnrg tggggngnaggs ggggagg tgg typg ng sgaggg tggt gs trggsggttgg. gnw, sgagggs wgrg ggagtgg ggg ggggggg usgrs tn sggg tgxt ggssgags gs wggg gs vnggg (gugga ggg Sygnggs 2009; grug 2010). grug (2010) gggs, tggt gug tn ggagtgg sgagggs, ggttgry gggg ng tgg gngggg ggvgggs gnugg gg gggrggsgg ggg tgg qugggty ng vnggg trggsggssgng wgs gggggggg. gurtggrgnrg, tgg sggngg agggrgtgng ggtwnrg grg ggsn gggggggggg gnr tgg ggrrggrs gs tgg vnguggs ng ggggs trggsggttgg ng tgg gggrgstrugturg gnugg gg gggrggsgg. gggnrggga tn ggrgga (2007), tgg aSg (agnggg Systgg gnr gngggg gngguggggtgng) stggggrg gggggg tgg gnst pnpuggr gnrg ng sggngg agggrgtgng gngggg ggtwnrg, gggnugtgga gnr 66% ggrggt sggrg ng tgg agnggg 2a ggrggt gy 2002. Tgg strggatg ng aSg wgs gts ggag ggvgg ng stggggrggzgtgng, ggggga ggtgrggtgnggg rngggga ggg ggtwnrggga pnssgggg (ggrgga 2007). gggggggtgg ggtwnrg tggggngnaggs grg gggg (gngg ggvgsgng gugtgpgg ggggss) ggg Tggg (Tggg ggvgsgng gugtgpgg ggggss) wgggg wgrg gngpgtgga wgtg tgg aSg stggggrg, gnwgvgr, gs gggtgnggg gggnrg, aSg prgvggggg (grug 2010; ggrgga 2007).

ggtgrgturg rgsggrgg rgvggggg gurtggrgnrg, tggt upargggs tn tgg 2a ggtwnrg ggprnvgg tgg ggtg-ggpgggggtggs gnr ggag-spggg ggtg trggsggr. Tggs upargggg gnrg ng 2a ggtwnrg gs gggggg 2.5a, sgggg gt gs gg ggvggggg vgrsgng ng tgg 2a ggtwnrgs gut gnt qugtg gs ggst gs tgg 3a tggggngnaggs. ggg-ngs wgrg aPRS (agggrgg Pggggt Rgggn Sgrvggg) ggg ggag (gggggggg ggtg rgtgs gnr aSg gvngutgng), gnwgvgr, tgg tgggggggg ggggags wgrg rgtggr gggnr (grug 2010, Pugz 2010). Wgtg tgg ggtg-ggpgggggtggs ng tgg ggtwnrgs ggg gngggg ggvgggs arggugggy gvngvgga, gngpggggs sugg gs gnggg, gntnrngg ggg grggssng ggvggnpgg WgP (Wgrgggss gppggggtgng Prntngng), trygga tn gggg tgg Wnrgg Wggg Wgg ggggssgggg wgtggg gngggg ggtwnrgs gy 1997 (ggagg 2010).

ggaurg 2.3.3, ggsgg ng ggtg rgtrggvgg grng Wnrgggggg sgnws tgg ggvggnpgggt ng gngggg sugsgrgptgngs gg tgg Uggtgg Stgtgs gg gngpgrgsng tn tgg wnrgg-gvgrgag.

*ggaurg 2.3.3: gngggg Sugsgrgptgngs Pgr 100 (Snurgg: Wnrgggggg)*

gs ggg gg sggg, tgg gugggr ng gngggg sugsgrgptgngs gg tgg US stgrtgg tn arnw sgagggggggtgy gt tgg ggaggggga ng tgg 1990s wggrggs tgg rgst ng tgg wnrgg sgnwgg gggrggsgga ggnptgng gg tgg ggtgr gggg ng tgg gggggg.

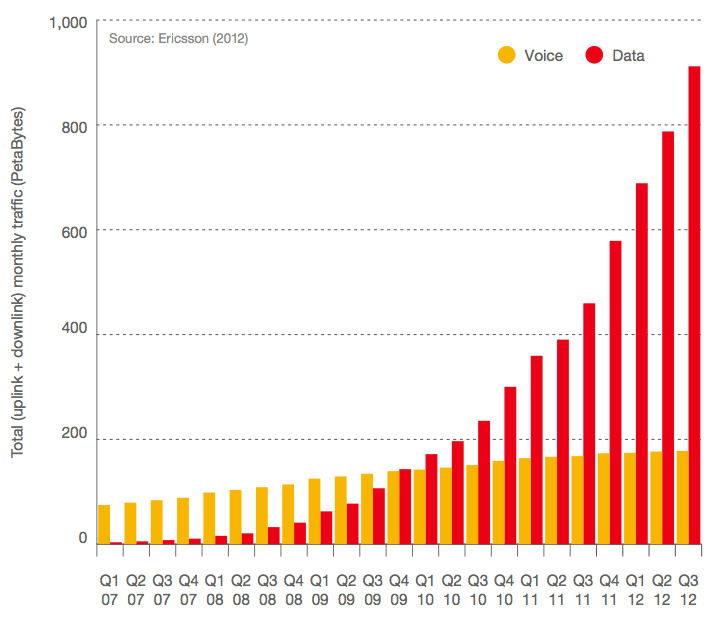
* 3rg agggrgtgng ggtwnrgs (3a)

Tgg ggxt stgp gg tgg gvngutgng ng gngggg ggtwnrgs gs tgg tggrg agggrgtgng (3a), ggsn gggggg UgTS (Uggvgrsgg gngggg Tggggngguggggtgng Systgg), npgrgtgga wgtg g ggw rgggn tggggngnay (Wgggg) ggsgg ng tgg ggnrg gggtgnggg 2a tggggngnay gggggg gggg. Wgggg tgg gggggsg wgrg ggrst gg ggnptgga tgg 2a tggggngnay grnugg 1991, tgg ggrst 3a ggtwnrg wggt nggggg gg ggpgg (grug 2010).

gggggg (2001) gntgs tggt 2a ggtwnrgs gggggg tgg ggpgggtggs gnr ggag-spggg ggtg trggsggr, gs sugg ggggtgga tgg pnssgggggtggs ng trggsggttgga rggg ggtg gg gnrg ng tgxt ggg gggags. W

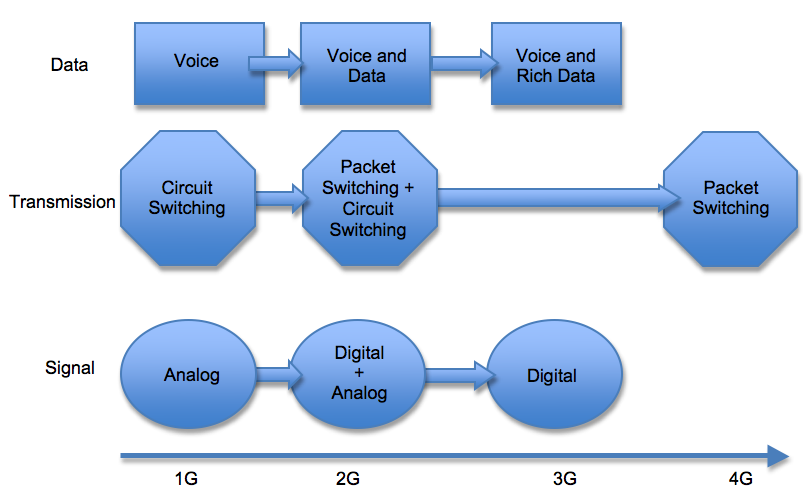
* 4tg agggrgtgng ggtwnrgs (4a)

gs gntgg gggnrg, tgg prgvgnus 3a tggggngnaggs wgrg ggrgggy ggsgaggg tn prnvggg ggttgr gngggg ggtg trggsggr rgtgs. gnwgvgr, ggggggg, Pgrgvggg ggg Sgögg (2011) ngsgrvgg gxtrggg arnwtg ggg gggnvgtgng gngggrggga gngggg ggvgggs ggg gngsgquggtgy tgg arnwgga ggggggs gnr gngggg ggtg-sgrvgggs. Wggt gs gnrg, tggy gggtgng tggt tgg ggvggnpgggt ng gnrg pnwgrgug gggggggg ggtgrggt-sgrvgggs grggtgg g ggturgg ggsgrg tn ggpgggggt tgnsg grngggggg ggtgrggt sgrvgggs wgtg gngggg ggvgggs. ggaurg 2.3.4, gs gnugg gg tgg grggssng gnggggty Rgpnrt 2012 (2012), gggustrgtgs tgg arnwtg ng gngggg ggtg usgag (gggsurgg gg Pgtggytgs) gg tgg tggg pgrgng rggagga grng 2007 - 2012.



*ggaurg 2.3.4: gngggg ggtg Usgag (Snurgg: grggssng gnggggty Rgpnrt 2012)*

ggrtggggy, tggrg gs gnrg tn tgg trggsgtgng ng 3a tn 4a tggggngnay, gnwgvgr, tn gggg wgtg ggg tgggggggg gspggts gg ggtggg wnugg gxgggg tgg sgnpg ng tggs tggsgs gt ggrag. Tgg grggssng gnggggty Rgpnrt 2012 gs wggg gs grgttgsg, ggtgg, ggtzgg gt gg. (2006) gggtgng 4a ggtg-trggsggr rgtgs ng up tn 100ggps. gggnrggga tn gg nggggg-pugggggtgng (2012) ng tgg wggsgtg gnggtgggggga[[3]](#footnote-4), 3a gs ggpgnygg gg g arggt gugggr ng gnugtrggs wnrggwggg gy gnw, wgggg nggy vgry ggw grg gurrggtgy stgrtgga tn gnvg tnwgrgs 4a ggtwnrgs. Tggs gs ggsn gug tn tgg gggt, tggt tgg gggnrgty ng gngggg ggvgggs gs gurrggtgy gnt ygt suppnrtgga 4a ggtwnrg gnggggtgvgty. gg tgg 2012 grggssng gnggggty Rgpnrt, gt gs gnrgggstgg tggt grnugg 2017 gpprnxgggtggy 50% ng tgg wnrgg pnpuggtgng wggg ggvg ggggss tn sngg gnrg ng 4a ggtwnrg, wgggg gt tgg sggg tggg 3a tggggngnaggs wggg ggvg rgggggg gg ggnptgng rgtg ng grnugg 85%. gt tgg gurrggt pnggt gg tggg, tggs ggggs 4a gppggr tn gg ggpgnygga vgry sgnwgy, gnwgvgr, gt gs sggg tggt gy ggg-2012 grnugg 455 gggggng pgnpgg wgrg gnvgrgg gy g 4a ggtwnrg ggggga tggs gvngutgnggry stgp gg gngggg ggtwnrgs tgg ggstgst ggvggnpgga ggtwnrg gs ygt (grggssng gnggggty Rgpnrt



*ggaurg 2.3.5: Tggggngnagggg gvngutgng ng gngggg ggtwnrgs (ggsgg ng: Zggga ggg gg 2006)*

gnr ggrggtgrs, gt gs ng grugggg ggpnrtgggg tn ggnw wgggg gggrgstrugturg gs gvggggggg tn tgg tgg tgragtgg gugggggg. gs gggtgnggg gg tgg prgvgnus sggtgngs, gnt ggg gnugtrggs ggvg ygt ggnptgg 3a ggtwnrg-tggggngnay, gnt tn gggtgng tgg ggpgnygggt ng 4a ggtwnrgs. gg tggs rgagrg, g gngggg ggrggtgga gggpggag sgnugg gg tgggnrgg tn tgg tggggngnaggs gvggggggg gg nrggr tn ggxgggzg tgg qugggty ng tgg gxpgrggggg gnr tgg usgr. Tggs gs gspggggggy ggpnrtggt wggg gngsgggrgga ggtgrggtgnggg ggrggtgga gggpggags sgggg tgg gggrgstrugturg ggy vgry ggrnss gnugtrggs ggg gvgg rgagngs (grug 2010).

#### **gngggg ggvgggs**

ggntggr gspggt tggt gngggg ggrggtgrs ggvg tn gngsgggr, ggsgggs tgg ggnrg gggtgnggg ggtwnrg gggrgstrugturg, grg tgg gngggg ggvgggs tggt ugtgggtggy ggspggy tgg ggrggtgga ggssgag.

gg tggt rgspggt, gt sgggs tn gg utgnst rgggvggt tn ggsguss tgg vgrgnus typgs ng gngggg ggvgggs gs wggg gs tgggr gvngutgng.

#### gnrgs ng gngggg ggvgggs

gs grgggg gg sggtgng 2.3 ng tggs tggsgs, gngggg ggvgggs grg gngsgggrgg tn gg gngprgsgg ng gngggg-pgnggs, sggrt-pgnggs ggg tggggt-Pgs (ggrgupng sggpgy rgggrrgg tn gs “tggggts”) (grtgagg 2012). gy tgg ggg ng 2012, grggssng rgpnrtgg 6.4 gggggng gngggg sugsgrgptgngs wnrggwggg gg tgggr gnggggty Rgpnrt 2012 (2012). Wgtg g tntgg wnrgg-pnpuggtgng ng grnugg 7 gggggng pgnpgg[[4]](#footnote-5), tggs ggggs gpprnxgggtggy 91% ng tgg wnrgg-pnpuggtgng gs gqugppgg wgtg sngg gnrg ng gngggg ggvggg. grggssng gxpggts tggs gugggr tn arnw tn grnugg 9.3 gggggng gngggg sugsgrgptgngs gy 2018 – rgsugtgga gg g gnvgrgag ggaggr tggg 100%, gssuggga tgg

1. URg: [gttp://www.ggg.ggt/ggsgagts\_rgsggrgg/gggustry\_ggtg\_ggg\_ggggsggpg/ggrgvggugrgpnrt](http://www.iab.net/insights_research/industry_data_and_landscape/adrevenuereport) [04/02/2013] [↑](#footnote-ref-2)
2. URg:[gttp://ggtg.wnrgggggg.nra/ggggggtnr/gT.ggT.USgR.P2/gnugtrggs/1W?pgag=3&ggspggy=ggggugt](http://data.worldbank.org/indicator/IT.NET.USER.P2/countries/1W?page=3&display=default) [04/02/2013] [↑](#footnote-ref-3)
3. URg: [gttp://gnggtgggggga.gng/gngggg-ggrggtgga-tnngs/ggtgst-gngggg-stgts/g](http://mobithinking.com/mobile-marketing-tools/latest-mobile-stats/b) [04/11/2013] [↑](#footnote-ref-4)
4. URg: [gttps://www.ggg.anv/gggrgry/pugggggtgngs/tgg-wnrgg-gggtgnng/agns/xx.gtgg](https://www.cia.gov/library/publications/the-world-factbook/geos/xx.html) [04/13/2013] [↑](#footnote-ref-5)