



The City of Cape Town July 2006 General Valuation

An audit of & comments on the City of Cape Town's valuation process
in terms of the Municipal Property Rates Act 6 of 2004

Annexure "A"

The GCTCA's analysis of the IPTI report
(see section 3 of the ratepayers' "audit")

INTRODUCTION

This analysis highlights the reasons for the statement in the Ratepayers' Audit Section 3 that the IPTI "audit" was not largely favourable to the City. There were obviously some favourable comments which are hereby acknowledged. However it is felt that this analysis should concentrate on what were obviously negative IPTI observations in order that the City can acknowledge its shortcomings and rectify same as soon as possible.

Notes:

- The following paragraphs are the measures the GCTCA believes the City must improve on and/or implement where applicable.
- The paragraphs in Roman are extracted from the IPTI audit.

The GCTCA's comments on the foregoing are in *Italics* type; where there are no comments, the extracts are deemed self-explanatory.

The GCTCA hereby seeks from the City answers to all of the points raised in this document.

GENERALLY

1. IPTI's mandate

§ 3 p 4: "... IPTI's mandate was, inter alia, to evaluate the employment of the "Sigma" CAMA System for the GV2006 with a prospective view for the future, rather than a retrospective results analysis"

GCTCA: As the audit is dated April 2007, the recommendations would not have been carried out and the GCTCA has to assume that any criticisms contained do indeed apply to the valuation roll as made public in March 2007.

2. The audit's modus operandi

GCTCA: The GCTCA has formed the impression that the IPTI audit broadly does eight things:

- a. *provides pats on the back where thought appropriate, though with many caveats such as “under the circumstances...”, etc.;*
- b. *highlights the “circumstances” that hindered a better performance;*
- c. *makes recommendations as to where improvements could or need to be made;*
- d. *lists scattered through the audit the “variables” used by the City which may help the GCTCA understand how and why it amended selling prices (see page 13, etc.);*
- e. *criticises the City’s reliance on subjective variables where objective ones should be used;*
- f. *questions (softly) the validity of the models used and the insufficient data base used;*
- g. *highlights the lack, or paucity where done, of proper validation of the data quality;*
- h. *points out the lack of time available to the City, the lack of adequate staffing and the lack of experience and insufficient training of the staff.*

3. More detailed comments

§2 p 1 : “However, the loss of several key staff and interruptions caused by withdrawal of some consultants compromised the implementation of the revaluation plan”

§4 p 1 : “However the interface between Sigma and the City’s LIS/deed processing and building permit systems needs to be automated”

§2 p 2: “The City succeeded in reinspecting almost 50% of properties over the past four years”

GCTCA: The GCTCA queries this statistic and seeks proof thereof. If it is correct, the GCTCA contends that this percentage is far too low. How can an accurate and up to date valuation be achieved with this low amount of inspections ?

The City Council’s claims that it was praised by the IPTI audit for having inspected 50% of Cape Town’s houses can only be viewed in the context that the 2006 exercise inspected a higher percentage than in 2000, the previous valuation date.

It might well be that one can get a “feel” for the valuation of 50% of houses by using statistical analysis, not physical inspection, but that view cannot and will never be the “amount the property would have realised if sold on the date of valuation in the open market by a willing seller to a willing buyer” [sec 46 Act 6 of 2004] because willing buyers are only willing after having inspected a property not before.

Faced with the frankly damning evidence of values which differ so dramatically from the actual sales price at the valuation date the Executive Mayor proclaims that the valuers “did not visit every house, as this would be logistically impossible” in her Budget Speech on 30 May 2007.

The GCTCA strongly disagrees with this contention. For Cape Town’s approximately 550 000 houses, it requires ± 22 teams of 10 at 10 houses per day for 245 days (one year). Tender inquiry documents from other municipalities require that all houses be inspected.

The question is therefore why does Cape Town offer a substandard valuation when everyone knows that an accurate Computer Assisted Mass Appraisal (CAMA) System can only assist a valuer to do the calculations. The computer cannot visit houses.

§4 p 2: “The lack of fulsome validation of sales is a serious shortcoming and should be addressed by regularly screening all sales and maintaining a valid sales database for future modeling and other CAMA purposes”.

§6 p 2: “...we are concerned about the reasonability and statistical relevance of the individual coefficients”. We recommend that modelers strive to improve the explainability and statistical reliability of model coefficients. On the whole, the quality of residential values appears acceptable”.

GCTCA: The GCTCA does not find the quality of residential values to be anywhere near acceptable on the whole. Were the members of the IPTI team aware of the residual variability left by the model (i.e. the overall inaccuracies generated)?

§2 p 3: “The commercial valuation got off to a slow start due to several key resignations and was further delayed due to a legal challenge to the process used to select contractors to complete the work. We believe that the methodology used to value commercial property for GV 2006 was as good as could be implemented under the circumstances. (*GCTCA: not good enough?*) However, several serious shortcomings are noted”.

GCTCA: Better preparations for the valuation of commercial property should be made for the next valuation, including the development of more in-house staff expertise in the valuation of commercial properties.

The circumstance and quality of a valuation are absolutely determined by the resources which the City commits to the job. However sufficient resources must be deployed to satisfy the law – ie. the Rates Act, Sec 45, states that “Property must be valued in accordance with generally recognised valuation practices, methods and standards.”

IPTI have chosen the IAAO standards to be their criteria. Adverse circumstances and inadequate resources do not excuse the unsatisfactory results.

§3 p 3: “We conclude that the Valuation Department has done an acceptable valuation under difficult circumstances”.

GCTCA: This is not an enthusiastic or warm comment and sums up the whole situation regarding the City’s sub-standard revaluation.

The GCTCA contends that the “difficult circumstances’ were largely created by the City for itself and that, accordingly, this was not an acceptable valuation of the required quality.

However, the GCTCA has acknowledged that the Rates Act does not allow enough time for all the work which had to be done. Johannesburg solved this problem by publishing its valuation roll in November 2007 for April 2008.

§1 p 4: *The GCTCA requests an explanation of the various methodologies referred to here at the workshop requested in its Audit.*

§2 p 5: “ Mass appraisal utilises models that replicate the market for the type of property being valued in a defined area, based on specified variables”.

GCTCA: Please define the “specified variables” as well as as the criteria used to quantify these. Why were objectors not informed of these variables ?

Were these variables the same, for example, for the Cape Flats, Newlands, The Bo-Kaap and the Atlantic suburbs?

§3 p 5: “For single-family residential property, the best approach is a model based on sales”.

See GCTCA main audit, § 2.4

§2 p 7: “In IPTI’s 2002 report, we expressed concern about the apparent dictum in RSA case law that sale price is market value. However, the Endorsement of mass appraisal principles and standards in the law may go some distance in ensuring that rates are based on the typical expected market value, not individual sales prices, which vary somewhat randomly for similar properties. Of course, the Courts may interpret the new legislation otherwise”.

This is the most important paragraph in this IPTI audit as it places a serious query on the City-used “typical expected market values” in lieu of actual sales values and, therefore, on the integrity and accuracy of the whole valuation.

The GCTCA is advised that the requirements of the “Sigma” CAMA system do not conform to the Rates Act definition of “Market Value”. The City’s employment of the “Sigma” CAMA requirement to assess “typical expected market values” as opposed to the Rates Act Section 46 requirement that

“Market Value of a property is the amount the property would have realised if sold on the date of valuation in the open market by a willing seller to a willing buyer”.

brings the legality and validity of the whole valuation into question.

§4 p 8: “A new custom-designed Cape Town Sigma application became available in July 2005”

GCTCA: Were any teething or other problems experienced with this new system? If so what and how were they cured?

§10: “Substandard data collection forms (DCFs) and inexperienced data-collectors”

GCTCA: The Audit describes sub-standard DCFs and the unfortunate decision to use sub-standard, inexperienced data collectors due to staff limitations. If discrepancies were found, these inexperienced data-collectors were required to prepare a new sketch for the entire building – a somewhat advanced duty for such persons. Access was achieved to 50% of properties being valued – still, in the GCTCA’s opinion, not adequate, especially since the majority of unsuccessful attempts were high value properties.

The audit’s assessment is supported by the anecdotal but widespread experience from property-owners that data collectors were incompetent.

Consequently, if the data, for whatever reason, is of poor quality, then the entire modelling exercise becomes the unavoidable foundation of enduring errors.

§11 to 14: “Manuals for data collectors were deemed to be unsatisfactory as they:

- a. omitted important data criteria (year built),
- b. used condition ratings in lieu of construction/renovation dates which led to subjective judgements made by many different data collectors resulting in inconsistencies. Modellers reported that lack of an age variable and problems with the condition variable caused significant problems”

GCTCA: Remembering that the data collectors were inexperienced operators, it seems that to expect them to pinpoint the exact age of a property since construction or renovation is expecting too much of them. Conversely, to simply annotate each property as excellent, good, bad or very bad etc. is introducing a radical difference in subjective opinions by unqualified persons, thus introducing vast opportunities for valuation errors.

A new system of age/condition assessment must be found which can be used accurately by unqualified/inexperienced data collectors.

§11 to 14 (Continued)

- c. sought data deemed irrelevant by the auditors to the end value (number of bedrooms, studies, small elements, etc.).
- d. lacked sufficient photographic examples to guide data collectors who rated 80% of residences “conventional” in design.
- e. included confusing and mixed definitions in respect of types of architectural styles.

GCTCA: The above shows a lack of clarity in the City’s mind as to what was relevant and what was not to the end value.

The audit quotes Sigma’s highlighting of the difference between “quality” and “condition” of a property, and also refers to the City’s response that it lacks the appropriate adequately-trained data collectors to evaluate these two variables, which the audit suggests is part of the reason behind the valuation inconsistencies.

How can the City establish these two criteria without visiting all the properties to be valued?

It was acknowledged that lack of adequate training of data collectors was contributing greatly to inconsistencies in the correct assessment of “quality” and “condition”. The introduction of more objective criteria in this respect would also contribute to better assessments.

In any case, it is clear that more effective capture of quality and condition should be a priority for the next general valuation.

§1 p 12: ‘...because the CAMAsystem dos not contain year built. “condition” must be coded on an absolute basis...’

GCTCA: We need to know how “condition” was dealt with in the excercise. This single factor, which seems to have been inadequately catered for, coud have contributed a major share of the residual variations found.

What plans does the City have to mitigate this problem (a) in the current round and (b) to correct the error in the next one?

§2 p 13: ‘In 2002 (*our bold type*), we recommended that several of the subjective data elements on the DCF, specifying “quality” and “conditions” might benefit from a broader range of choices, particularly for the higher quality ratings. However, the only change made was to convert the codes from numeric to alpha choices to meet a system requirement;...’

GCTCA: What does the City plan to do about this in this round and for the future?

§1 p 15: *GCTCA: Sigma also recommended that the “security” variable be changed from judgemental quality levels (high, medium, low) to a set of observable features such as gated and guarded facility, solid fence, localised sensors and alarms, centralised sensors and alarms, etc.*

§2 p 15: *GCTCA: The issue of view is reviewed critically and IPTI concludes that the City’s inclusion of a seven choice definition variable is inconsistent and unreliable. Personal subjective opinions were taken as valid data where more objective ones could be taken. IPTI suggested that a specialist team of valuers should redefine view assessment criteria illustrated by photographs in the manuals for guidance.*

§1 p 16: *GCTCA: Bar coding of DCFs to facilitate data capture was suggested by IPTI but was resisted by the City, which puzzled IPTI.*

§2 p 16: Photographic records of properties are now being taken by valuation staff.

GCTCA: Various aspects of this need to be clarified with the City, in particular, confirmation must be given by the City that this does not imply photographic records of the interior of homes. There would be privacy and security issues in this respect which would need to be challenged in the Courts if necessary.

§3 p 16: “Concerns were expressed by some GV 2006 staff that the amount of information collected for higher priced properties was inadequate to accurately value many of these properties”

GCTCA: How does the City propose improving this shortcoming ?

§2 p 17: *GCTCA: IPTI considers that the commercial DCF attempts to do too much – gather data on the buildings and, in addition, record gross and net rentals as well as details of monthly expenses. These two processes should be executed separately.*

§3 p 17: *GCTCA: IPTI recommends that a coding system be developed to record factors which are more geared to commercial properties (eg. corner location etc).*

§1 p 18: *GCTCA: This paragraph possibly explains the huge mistake in the City’s sectional title valuations resulting in the recall of ± 70 000 such valuations. Has this problem been solved to avoid it happening again ? This was a system/procedure error of massive proportions.*

IPTI “...underscores the importance of checking data for completeness and internal consistency”

§3 p 18: IPTI recommends that the practice of sending data collectors out to inspect properties in pairs should cease, because often the data collectors differed with each other in their assessments of properties.

GCTCA: This is a major flaw in the system used by the City and is greatly condemned by the GCTCA. Single data collectors in a particular zone (e.g. a street) are recommended.

§2 p 19: *GCTCA: At an average of 20 inspections a day, each inspection visit had to be done within 20 minutes including traveling between properties, establishing an entry, doing a thorough inspection and noting down the details, possibly resketching the whole property and having lunch !*

This statistic is somewhat suspect...

If it is correct, it fully explains the valuation inaccuracies which have occurred. Then again, some valuers were seen doing their “inspections” from the outside of closed garden gates, sometimes with and sometimes without the owner. This is a major weakness in the valuation process. How does the City intend rectifying this defective process ? It must surely employ a vastly greater, better trained and more experienced data-collecting force.

§ 5 p 19: IPTI has reiterated its previous suggestion that DCF s should be machine-readable documents and scanned for more efficient use.

§ 3 p 20: *GCTCA: There appeared to be some uncertainty about the total number of inspections conducted by contract data collectors, contract sales investigators and City staff. “...This error rate is potentially exacerbated by the subjective character of*

some of the most important variables ... overall the quality of the data collected is reasonably good”.

The GCTCA is of the opinion that this is where the valuation was of a substandard nature and “reasonably good” is actually somewhat of an indictment of what could be termed an unsatisfactory overall general revaluation.

§2 p 21: “... The use of supplementary valuations must be a high priority to avoid the loss of potential new revenue”.

This programme should continue and also be linked to building permits and zoning and use-changes to ensure that notice of all required inspections is given automatically to Valuers so as to assist with the identification of omitted new construction and renovations for supplementary valuations in 2007/8 and future taxation years.

GCTCA: This is a very important statement. Regular and accurate supplementary valuations are essential to the ongoing process, particularly, in this instance, to properly correct undervalued valuations in order that additional rates moneys can be recouped as soon as possible, to lessen undue future increases in the future and to enable capping of the annual rates increases to keep within statutory limits.

§1.2 p 22: *GCTCA: The problems the City has with Deed Office data seems to be more with the “legal description” part of the properties than the recorded selling price, contrary to an emphasis on the second aspect.*

§1 p 23: *GCTCA: Shared information respecting newly issued building permits with the Valuation Department no longer occurs and this should be reconstituted on an electronic data basis.*

§1, p 23: *GCTCA: There were problems with making different programmes work together and the “workaround” ad hoc systems. How did these influence data treatment and models designed for that purpose?*

§3 p 23: *GCTCA: The issue of local transfers and sales being recorded in Deeds Office elsewhere in S.A. complicates matters*

§2 p 24: *GCTCA: There seem to be potential problems with the recommendations of the audit. The idea of using the GIS contour lines to evaluate distance from a property to the sea or mountain and building heights to assess views is fraught with risk: in no way does proximity to the sea guarantee that a property has indeed a view. Only an on-site visit will confirm a view or not.*

§2 p 25: *There was less than 10% response for income and expense information and four reasons are given as to why this must be improved as soon as possible – even for supplementary valuations. IPTI has supplied sample forms for this purpose.*

§3 p 26: *GCTCA: Only 12 000 single family residential property sales were verified with DCFs being audited for accuracy. The GCTCA considers this amount to be too low.*

§4 p 26: *GCTCA: The audit indicates that the number of validated residential sales used for modelling (8.000) was well below the minimum deemed adequate (10.000 minimum). See also §2 of p. 28 on same issue.*

That same paragraph returns to the problem of inadequate interface between the programmes used which left many sales out of the modelling pool.

§1 to §4 p 27: GCTCA: *The City failed to use a control group of data, something which is a signal omission in any statistical verification.*

It also appears not to be sure of how many sales took place during the 36 months considered, which makes some claims in terms of % suspect.

Better tracking of sales is essential. IPTI considered this a serious shortcoming. It also did not support the mass screening of sales used and only accepts that it "was the best under the circumstances", hardly an endorsement of the methodology.

§2 p 28: *About 50% of residential sales from 2003, 2004 and 2005 were used to develop models.*

GCTCA: In a study of all the Deeds Office registered sales in the whole Unicity in July 2006, the ratio of City valuations to actual Deeds Office registered sales varied from minus \pm 75% to plus \pm 325%, which variation the GCTCA considers to be vastly unsatisfactory and is an indictment of the systems and methodology used.

§3 p 28 to §3 p 29: *GCTCA: Objectors were never informed of the criteria listed here as having been used by the modelers, thus being deprived of the ability to submit technically valid objections which could only be based on comparative actual nearby sold properties, the details of which were not given to objectors. This fact alone raises the whole question of the validity of this valuation which must, therefore, remain suspect.*

Elsewhere in this report, IPTI avers that these criteria were not of great importance anyhow, which seems strange. It was noted that land characteristics were not included in the land value which also appears to be a shortcoming.

§2 p 30: *GCTCA: IPTI seemed to detect a lack of experience/expertise in the modeling team.*

§3 p 30: *GCTCA: Indicates that sales prices were not adjusted for the time between sale date & valuation PRIOR to modelling, but rather adjusted by the models themselves that included a time variable.*

The same § uses the word "obfuscate" to describe the result of that approach. It explains why the Valuation Department would/could not give the GCTCA the "time adjustment %" between sales dates and 2nd July 2006 when it asked for same. There were not any that they could provide as they are buried into a formula.

The audit recommends that a transparent approach be used next time around, with adjustments made prior to models being "calibrated"... This is critical issue.

§2 to §4 p 31: *GCTCA: IPTI is critical of the techniques used here, which the City acknowledge, together with the acknowledged lack of time available (dealt with elsewhere).*

The audit confirms that the City made "extensive changes to values...", which the GCTCA are well aware of but need to be challenged for a proper explanation. The GCTCA wishes to know how these values were arrived at.

The coefficients of dispersion given are more or less what the GCTCA has picked up (18 to 25%). These are deemed acceptable by the audit only due to the circumstances.

In other words, such variations would not be acceptable elsewhere... which is not exactly an endorsement.

Consequently, IPTI 's comment that results were as good as could be attained under the circumstances cannot be equated to a stamp of quality, only a measure of quality achieved.

It is, in fact, a criticism, as is the whole page 31 of its audit, and the last line of that page qualifies the whole Valuation 2006 exercise.

Moreover, it is the GCTCA's contention that the last sentence of that page (p.31) is ambiguous and that the results are in fact nowhere near an acceptable and sound basis for taxation.

§1p 32: 'We recommend ...and 'after the fact' ratio study...'

GCTCA: Has this been carried out? What were the findings?

§2 p 32: *GCTCA: This explains why the Sectional Title valuations were initially so incorrect. Expediency was substituted for proper data collecting. The audit is less ambiguous here in its criticism of the process. There were no sales verifications of any sectional title sales and no assessment-to sales ratio analysis. IPTI suggested a better review of value results the next time.*

pp 33 to 37: IPTI is very critical of the City's commercial valuations, the main reasons, termed "serious shortcomings" being the limited income and expense data collected, the lack of field reviews, the use of outdated statistics from 2000, the extensive use of factors rather than newly constructed models and the absence of a final value review due to lack of time before the final publishing thereof.

GCTCA: This probably explains the presence of undervalued properties in the commercial sector which put an undue upward pressure on residential property rates.

The GCTCA requests that it be shown sample valuations of some large commercial properties which it has been informed have been considerably undervalued.

Again, this must be corrected in the first and subsequent supplementary valuations.

IPTI concludes this section by stating that "better preparations be made for the next valuation" and that key property data be revisited and reviewed." "In particular, tenant appeal ratings must be re-determined incorporating newly collected income data and/or site inspections. Sales and income data must be validated prior to valuation analyses. Appropriate valuation models, emphasizing the income and market, should be specified and calibrated from contemporary data. Adequate time must be provided for value review".

pp 39 to 41: While acknowledging that certain advances had been made in the Citys CAMA software, IPTI have listed an extensive list of further recommended improvements which in many ways demonstrates the reasons for the City's sub-standard valuation.

GCTCA: All these suggestions should now be acted upon and the GCTCA would appreciate a statement from the City as to how it intends going about this. It would also appreciate the opportunity to monitor the improvements recommended in this entire GCTCA audit.

p 42: IPTI makes further recommendations on this page, some of which go to the very core of the reasons for the lack of quality of this valuation.

GCTCA: These should be carefully studied and acted upon in order that the accuracy of the next valuation can be vastly better than this last one. IPTI contends that the next commercial valuation must be better planned and organized and should be done by qualified staff or contract Valuers.

Conclusions:

As has been stated before, the IPTI “audit”, while acknowledging that certain progress has indeed been made in the City’s GV2006 valuation as compared with its GV2000 valuation, makes the very firm set of statements and analyses to the effect that there is a vast amount of improvements which are absolutely essential to the procedures, methodology and interpretations used by the City in their formulation of a general revaluation in terms of the 2004 Rates Act.

IPTI made it obvious, with low-key comments, that they were of the opinion that the required standards were, in their opinion, not achieved by the City in their GV2006 valuation - and this is a cause of great concern to the GCTCA.

It is patently obvious that the City simply did not have the time to achieve a valuation of an internationally-acceptable quality. Seeing that all the other municipalities in South Africa are only issuing their new rates invoices based on their present valuations, the question as to why the City chose to execute their valuation from July 2006 to July 2007 must be asked.

The other reason for the contended under-quality valuation is that the City’s Valuation Department was under-staffed (and probably under-budgeted) for this valuation and that the staff used were too few and in many cases too inexperienced to achieve acceptable results. Too many shortcuts due to inadequate time and finance were taken and the valuation and certain ratepayers are, as a result, suffering.

The GCTCA hereby requests that the City carefully examines the contents of the IPTI and the GCTCA “audits” and answer the assertions made therein in writing and sends these answers back to the GCTCA in order that rectifications can be made timeously before the commencement of the next supplementary and general valuations in collaboration between the City and the GCTCA.

The question remains : In the light of the very many shortcomings expressed in the GCTCA and IPTI ‘Audits’, how does the City intend rectifying them all satisfactorily enough to achieve an accurate and equitable revaluation next time and in what manner will the GCTCA be given the opportunity to monitor this “correction” process before and after the next revaluation.

Many of the shortcomings addressed in these two ‘Audits’ need to be addressed immediately in order that the lack of time is not again used by the City as an excuse for a possible repeat substandard performance in the next valuation.

The City’s answer to this question needs to be particularly addressed in the City’s written answer to this ‘ Audit’.